



THE YEAR IN RETROSPECT

This report presented as required under Section 37 (i) of Chapter VI of the Cochin University of Science and Technology Act, 1986 covers the activities of the University during the period from April 1st, 2007 to March 31st, 2008.

The year under report witnessed steady progress in the effort of various University Departments / Schools / Institution towards higher level of excellence in teaching and research and in organising a series of academic activities.





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AIMS AND OBJECTIVES

The University of Cochin came into being on July 10th, 1971 by an ordinance which was replaced by the Cochin University Act 1971. The University of Cochin was reorganised and converted into a full-fledged University of Science and Technology by the Cochin University of Science and Technology Act, 1986 for the promotion of graduate and post graduate studies and advanced research in Applied Science, Technology, Industry, Commerce, Management and Social Science.

The University shall have the following objectives

- i. to prosecute and promote research in Applied Science, Technology, Industry, Commerce, Management and Social Science for the advancement of knowledge and for the betterment of society.
- ii. to provide facilities & offer opportunities for graduate & post-graduate education in Applied Science, Technology, Industry, Commerce, Management and Social Science by Instruction, Training, Research, Development and Extension and by such other means as the University may deem fit.
- iii. to devise and implement programmes of education in Applied Science, Technology, Industry, Commerce, Management and Social Science that are relevant to the changing needs of society in terms of breadth of diversity and depth of specialization.
- iv. to serve as a centre for fostering co-operation and exchanging of ideas between the academic and research community on the one hand and industry on the other.
- v. to organise exchange programme with other institutions of repute in India and abroad with a view to keeping abreast of the latest developments in relevant areas of teaching and research.



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The University's basic philosophy and goals find eloquent expression in its coat of arms emblazoning the motto Tejasvi navadhitamastu. In essence it means May learning illumine us both (the teacher and the taught). The rising sun together with the coconut palm represents the birth of a new centre of learning in the land of Kerala. The book represents learning the factory its application and the transmission tower its centre of learning, that of fostering study and research in Applied Science, Technology, Industry, Commerce, Management and Social Science and the transference of such knowledge for the betterment of humanity.

* * *



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UNIVERSITY AUTHORITIES

VICE CHANCELLOR

Prof. (Dr.) P.K. Abdul Azis (upto 11-06-07)
Sri. P.J. Thomas (12-06-07 upto 13-11-07)
Sri. T.K. Jose (14-11-07 upto 15-01-08)
Sri. K.M. Abraham (16-01-08 upto 03-02-08)
Dr. Gangan Pratap (04-02-08 onwards)

PRO-VICE-CHANCELLOR

Dr. N.D. Inasu

REGISTRAR

Dr. A. Ramachandran

FINANCE OFFICER

Sri. Sebastian Ouseph



MEMBERS OF THE SYNDICATE

1. **Vice Chancellor**
2. **Pro Vice Chancellor**
3. **The Director of Technical Education**, Directorate of Technical Education, Padmavilasom Road, Thiruvananthapuram.
4. **The Principal Secretary to Government**, Higher Education Department, Government Secretariat, Thiruvananthapuram - 695 001
5. **The Secretary to Government**, Finance Department, Government Secretariat, Thiruvananthapuram - 695 001
6. **The Executive Vice President**, Kerala State council for Science, Technology and Environment, Sasthra Bhavan, Pattom P.O., Thiruvananthapuram – 695 004.
7. **Dr. K.N. Chandrasekharan Pillai**, Director, Indian Law Institute, Bhagwandas Road, New Delhi - 110 001.
8. **Dr. V.P.N.Nampoori**, Prof. & Director, International School of Photonics, Cusat, Kochi - 22
9. **Dr. Joy Job Kulavelil**, HB 48, KKP Nagar, Union Christ College P.O., Aluva-2
10. **Adv. K.Mohanachandran**, H.No. XXXII/36, Chitrakalalayam Road, Edappally Toll, Kochi - 682 024
11. **Sri. Baby Chakrapani**, Lecturer, Department of Atmospheric Sciences, Cusat, Kochi - 16
12. **Prof. P.O.J. Lebba**, Yakeen, Asramam, Kollam - 691 002
13. **Dr. I.S.Bright Singh**, Professor & Director, School of Environmental Studies, Cusat, Kochi - 22
14. **Shri. N.K.Vasudevan**, H.No. III/354, Sindooram, Adarsh Lane, Thrikkakara, Kochi - 682 021
15. **Shri. C.M.Dinesh Mani**, M.L.A., Chanthuruthil Veedu, Vennala, Kochi - 682 028
16. **Shri. Alphons Kannamthanam**, M.L.A., Fathima Church Road, Elamkulam, Kochi - 682 020
17. **Dr. Achuth Sankar S.Nair**, Hon. Director, Centre for Bio-Informatics, University of Kerala, Kariavattom P.O., Thiruvananthapuram - 685 581
18. **Dr. S.Salim**, Kudumbasree Mission, Civil Station, Kakkanad, Ernakulam.
19. **The Chairperson**, Cochin University Union, Cusat, Kochi - 22





MEMBERS OF ACADEMIC COUNCIL

EX-OFFICIO MEMBERS

1. **The Vice Chacellor**
2. **The Pro-Vice Chancellor**

NOMINEES OF VC'S OF OTHER UNIVERSITIES

1. **Dr. V.Krishna Kumar**, Dean, Faculty of Science, University of Calicut, Calicut University P.O. - 673 635
2. **Dr. D. Damodaran Namboodiri, Dean I/C**, Faculty of Fisheries, College of Fisheries Panangad, Kochi - 682 506.

MEMBERS OF THE SYNDICATE

3. **The Director of Technical Education**, Directorate of Technical Education, Padmavilasom Road, Thiruvananthapuram
4. **The Secretary to Government, Higher Education Department.**, Government Scretariat, Thiruvananthapuram
5. **The Secretary to Government, Finance Department**, Government Scretariat, Thiruvananthapuram
6. **The Executive Vice President**, Kerala State council for Science, Technology and Environment, Sasthra Bhavan, Pattom P.O., Thiruvananthapuram – 695 004.
7. **Dr. K.N. Chandrasekharan Pillai**, Director, Indian Law Institute, Bhagwandas Rd. New Delhi-1
8. **Dr. V.P.N.Nampoori**, Prof. & Director, International School of Photonics, Cusat, Kochi - 22
9. **Dr. Joy Job Kulavelil**, HB 48, KKP Nagar, Union Christ College P.O., Aluva-2
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12. **Dr. I.S.Bright Singh**, Professor & Director, School of Environmental Studies, Cusat, Kochi - 22
13. **Prof. P.O.J. Lebba**, Yakeen, Asramam, Kollam - 691 002



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14. **Shri. N.K.Vasudevan**, H.No. III/354, Sindooram, Adarsh Lane, Thrikkakara, Kochi - 682 021
15. **Shri. C.M.Dinesh Mani**, M.L.A., Chanthuruthil Veedu, Vennala, Kochi - 682 028
16. **Shri. Alphons Kannamthanam**, M.L.A., Fathima Church Road, Elamkulam, Kochi - 682 020
17. **Dr. Achuth Sankar S.Nair**, Hon. Director, Centre for Bio-Informatics, University of Kerala, Kariavattom P.O., Thiruvananthapuram - 685 581
18. **Dr. S.Salim**, Kudumbasree Mission, Civil Station, Kakkanad, Ernakulam.

DEANS OF FACULTIES

1. **Prof. P.O.J. Lebba** (Dean Faculty of Engineering, (Former consultant AICTE & Former Principal, TKM College of Engineering, Kollam) Yakeen, Asramam, Kollam - 691 002
2. **Dr. I.S.Bright Singh** (Dean, Faculty of Environmental Studies), Professor & Director, School of Environmental Studies, Cusat, Kochi - 22
3. **Dr. V.P.N.Nampoori** (Dean, Faculty of Technology), Prof. & Director, International School of Photonics, Cusat, Kochi - 22
4. **Dr. A.Aravindakshan** (Dean, Faculty of Humanities), **Professor**, Dept. of Hindi, CUSAT, Kochi - 22.
5. **Dr. V. Unnikrishnan Nayar** (Dean, Faculty of Science), Puthenpura, TC XV/1351(2), Gandhi Nagar, Union Christian College P.O., Aluva - 2
6. **Dr. D.Rajaseenan** (Dean, Faculty of Social Sciences), Professor, Department of Applied Economics, Cusat, Kochi - 22
7. **Dr. K. Mohankumar** (Dean, Faculty of Marine Sciences), Professor, Department of Atmospheric Sciences, CUSAT, Kochi - 16
8. **Dr. P.S.John** (Dean, Faculty of Medical Sciences), Professor & Head, Department of Orthopedics, Government Medical College, Gandhi Nagar P.O., Kottayam - 686 008
9. **Dr. K.N. Chandrasekharan Pillai** (Dean, Faculty of Law), Director, Indian Law Institute, Bhagwandas Rd. New Delhi-1

CHAIRMAN BOARDS OF STUDIES

1. **Dr. M.I.Thampan** (Engg. UG), Mannaraprayil, Meenkunnam P.O., Arakuzha (Via), Muvattupuzha - 686 672
2. **Dr. Kailaschandra Bhanu** (Medical Sciences), Professor of Paediatrics, Co-operative Medical College, HMT Colony, Kalamassery - 683 503.



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3. **Dr. C.G.Krishnadas Nair** (Aerospace Technology), Former CMD, Hindustan Aeronautics Ltd., Aeronautical Society of India Building, Suranjandas Road, Bangalore- 560 075.
4. **Dr. A.Krishnamoorthy** (Maths), Head and Professor, Department of Mathematics, Cusat, Kochi - 22
5. **The Head**, Department of Computer Application, Cusat, Kochi - 22
6. **The Head**, Department of Biotechnology, Cusat, Kochi - 22
7. **The Head**, Department of Instrumentation, Cusat, Kochi - 22
8. **Dr. Benny Mathews Abraham** (Engg PG), Professor of Civil Engineering, School of Engineering, Cusat, Kochi - 22
9. **Dr. I.S.Bright Singh** (EVS), Professor & Director, School of Environmental Studies, Cusat, Kochi - 22
10. **Dr. I.S.Bright Singh** (Marine Biotechnology), Professor & Director, School of Environmental Studies, Cusat, Kochi - 22
11. **Dr. Rani Joseph** (PS&RT), Professor, Department of Polymer Science and Rubber Technology, Cusat, Kochi - 22
12. **Dr. V.P.N.Nampoori** (Photonics), Prof. & Director, International School of Photonics, Cusat, Kochi - 22
13. **The Head**, Department of Statistics, Cusat, Kochi - 22
14. **Dr. M.R.Anantharaman** (Nanosciences), Professor, Department of Physics, Cusat, Kochi - 22
15. **Dr. K.Vasudevan** (Electronics), Professor, Department of Electronics, Cusat, Kochi - 22
16. **Dr. K. Paulose Jacob** (Computer Science), Professor, Department of Computer Science, CUSAT, Kochi-22.
17. **Dr. K. P.Narayanan** (Ship Technology), Reader, Department of Ship Technology, CUSAT, Kochi-22.
18. **Dr. P.R.Wilson** (Business/Industrial Management), Professor, School of Management Studies, CUSAT, Kochi-22.



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19. **Dr. P. Sudarsanan Pillai** (Commerce), Professor, School of Management Studies, CUSAT, Kochi-22.
20. **Dr. Mariamma Vincent Panikulangara** (Foreign Languages), Professor & Head, Department of Culture & Heritage, CUSAT, Kochi – 22.
21. **Dr. A. Aravindakshan** (Hindi), Professor, Dept. of Hindi, CUSAT, Kochi - 22.
22. **Dr. N.S.Gopalakrishnan** (Law (PG)), Professor, School of Legal Studies, CUSAT, Kochi - 22.
23. **Dr. V.C.Kuriakose** (Physics), Professor, Dept. of Physics, CUSAT, Kochi - 22.
24. **Dr. K.K.Mohammed Yusuff** (Applied Chemistry), Professor, Dept. of Applied Chemistry, CUSAT, Kochi - 22.
25. **Dr. Saleena Mathew** (Industrial Fisheries), Director & Professor, School of Industrial Fisheries, CUSAT, Kochi - 22.
26. **Dr. A.N.Balchand** (Physical Oceanography), Professor & Head, Dept. of Physical Oceanography, CUSAT, Kochi - 22.
27. **Dr. H.S. Rammohan** (Atmospheric Sciences), Professor, Department of Atmospheric Sciences, CUSAT, Kochi – 16.
28. **Dr. N.R. Menon** (Marine Sciences), Professor (Retd.), Hon. Director, C-IMCOZ, School of Marine Sciences, CUSAT, Kochi – 16.
29. **Dr. K.T. Damodaran** (Marine Geology), Professor, Department of Marine Geology and Geophysics, CUSAT, Kochi – 16.
30. **Dr. D. Rajasenana**, Professor, Department of Applied Economics, CUSAT, Kochi– 22.
31. **Rear Admiral G. Kuruvilla, VSM (Rtd.)**, HB - 66, Panampilly Nagar, Kochi - 682 036
32. **The Director**, CIFNET, Kochi - 16
33. **The Director**, School of Legal Studies, Cusat, Kochi - 22

HEADS OF DEPARTMENTS / SCHOOLS

1. **The Principal**, School of Engineering, Cusat, Kochi - 22
2. **The Principal**, Cochin University College of Engineering Kuttanadu (CUCEK), Pulincunnoo,



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3. **The Director**, School of Legal Studies, Cusat, Kochi - 22
4. **The Director**, School of Management Studies, Cusat, Kochi - 22
5. **The Director**, International School of Photonics, Cusat, Kochi - 22
6. **The Director**, School of Environmental Studies, Cusat, Kochi - 22
7. **The Director**, School of Industrial Fisheries, Cusat, Kochi - 16
8. **The Director**, Kunjali Marakkar School of Marine Engineering, Cusat, Kochi - 22
9. **The Head**, Department of Hindi, Cusat, Kochi - 22
10. **The Head**, Department of Culture and Heritage, CUSAT, Kochi
11. **The Head**, Department of Mathematics, CUSAT, Kochi - 22
12. **The Head**, Department of Statistics, CUSAT, Kochi - 22
13. **The Head**, Department of Physics CUSAT, Kochi - 22
14. **The Head**, Department of Applied Chemistry, CUSAT, Kochi - 22
15. **The Head**, Department of Bio-Technology, CUSAT, Kochi - 22
16. **The Head**, Department of Applied Economics, CUSAT, Kochi - 22
17. **The Head**, Department of Ship Technology, CUSAT, Kochi - 22
18. **The Head**, Department of Electronics, CUSAT, Kochi - 22
19. **The Head**, Department of Instrumentation, CUSAT, Kochi - 22
20. **The Head**, Department of Polymer Science & Rubber Technology, CUSAT, Kochi - 22
21. **The Head**, Department of Computer Application, CUSAT, Kochi - 22
22. **The Head**, Department of Physical Education, CUSAT, Kochi - 22
23. **The Head**, Department of Marine Bilology, Micro Biology and Bio-Chemistry, CUSAT, Kochi - 16
24. **The Head**, Department of Marine Geology and Geophysics, CUSAT, Kochi - 16



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25. **The Head**, Department of Physical Oceanography, CUSAT, Kochi - 16
26. **The Head**, Department of Atmospheric Sciences, CUSAT, Kochi – 16.
27. **The Head**, Department of Chemical Oceanography, CUSAT, Kochi – 16.
28. **The Head**, Department of Computer Sciences, CUSAT, Kochi – 16.

THREE SENIOR PROFESSORS AND READERS NOMINATED BY VC

1. **Dr. P. Radhakrishnan, Professor**, International School of Photonics, CUSAT, Kochi-22.
2. **Dr. K. Sajan, Professor & Head**, Department of Marine Geology and Geophysics, CUSAT, Kochi-16.
3. **Dr. V.P. Jagathy Raj, Reader**, School of Management Studies, CUSAT, Kochi – 22.
4. **Dr. M.Chandrasekharan, Professor**, Dept. of Bio Technology, CUSAT, Kochi-22
5. **Dr. A. Vijayakumar, Reader**, Department of Mathematics, CUSAT, Kochi – 22.
6. **Smt. Preetha Mathew, Reader**, CUCEK, Kuttanad
1. **Dr. Sanjay G.Dhande**, Director, IIT Kanpur - 208 016
2. **Dr. A.Damodaran**, Vice Principal, Department of Computer Science and Engineering, J.N.Tech. University, College of Engineering, Kukatpally, Hyderabad - 500 072
3. **Dr. Jayarama Reddy**, Vice Chancellor, Venketeswara University, Tirupathy - 517 502.

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MEMBERS OF THE SENATE

1. **The Chancellor**
2. **The Pro-Chancellor**
3. **The Vice Chancellor**
4. **The Pro-Vice Chancellor**
5. **The Mayor**, Cochin Corporation
6. **The Deputy Director**, Collegiate Education, Ernakulam.
7. **The Deputy Director of Education**, Ernakulam.
8. **The Chairman**, State Advisory Board of Education, Thiruvananthapuram
9. **The Director of Technical Education**, Directorate of Technical Education, Padmavilasom Road, Thiruvananthapuram.
10. **The Secretary to Government**, Raj Bhavan, Thiruvananthapuram - 695 001
11. **The Private Secretary to the Minister of Education**, Government Secretariat, Thiruvananthapuram - 695 001
12. **The Principal Secretary to Government**, Higher Education Department, Government Secretariat, Thiruvananthapuram - 695 001
13. **The Secretary to Government**, Finance Department, Government Secretariat, Thiruvananthapuram - 695 001
14. **The Executive Vice President**, Kerala State Council for Science, Technology and Environment, Sasthra Bhavan, Pattom P.O., Thiruvananthapuram – 695 004.]
15. **Dr. K.Rajasekharan**, Professor, Department of Chemistry, University of Kerala, Thiruvananthapuram
16. **Dr. P.K.Radhakrishnan**, Professor & Director (i/c), School of Chemical Sciences, Mahatma Gandhi University, Priyadarsini Hills, Kottayam - 686 560
17. **Dr. N.Prasanth Kumar**, Head, Department of English & Director of the Main Centre, Sree Sankaracharya University of Sanskrit, Kalady - 683 574
18. **Sri. A.M.Yusuff**, MLA, Anapparambil, Mooleppadam, Kalamassery P.O.
19. **Dr. Gangadharan Nambiar C.G.**, Head, Department of Marine Geology & Geophysics, Cusat, Kochi - 16
20. **Dr. Muraleedharan Nair K.R.**, Head, Department of Statistics, Cusat, Kochi - 22
21. **Dr. Suresh Kumar P.**, Principal, College of Engineering, Ottapunna, Pallippuram P.O., Cherthala - 688 541



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22. **Dr. N.Chandramohana Kumar**, Head, Department of Oceanography, Cusat, Kochi - 16
- 23 **Dr. K.T.Damodaran**, Professor (Retd.), School of Marine Sciences, Cusat, Kochi - 16
- 24 **Dr. Shemim Aliyar P.A.**, Head, Department of Hindi, Cusat, Kochi - 22
- 25 **Sri. Babu Paul**, Member, Legislative Assembly, Vengansseril, Thrikkalathoor P.O., Muvattupuzha
- 26 **Prof. C.Raveendranath**, Member, Legislative Assembly, Lakshmi Bhavan, Panithalath Lane, Kanattukara, Thrissur
- 27 **Sri. M.K.Purushothaman**, Member, Legislative Assembly, Maratharaveedu, Edavanakkadu, Ernakulam
- 28 **Dr. Mohan Kumar K.**, Dean, Faculty of Marine Sciences, Prof. Department of Atmospheric Sciences, Cusat, Kochi - 16
- 29 **Dr. Bhasi M.**, Reader, School of Management studies, Cusat, Kochi - 22
30. **Dr. George Mathew**, Reader, School of Engineering, Cusat, Kochi - 22
31. **Sri. Joseph Alexander**, Reader, School of Engineering, Cusat, Kochi - 22
32. **Dr. Ramesh Babu T.**, Reader, Department of Physics, Cusat, Kochi - 22
33. **Sri. Sasi Gopalan**, Lecturer, School of Engineering, Cochin University of Science and Technology, Kochi - 22
34. **Dr. Sreekumar K.**, Reader, Department of Applied Chemistry, Cusat, Kochi - 22
35. **Sri. Thomas T.**, Lecturer, Cochin University College of Engineering Kuttanad, Pulincunnoo, Alappuzha
36. **Sri. Balanandan E.**, Ponnampkulathuveedu, Kalamassery P.O., Ernakulam
37. **Sri. Chandrasekharan Nair K.**, President, All Kerala Bank Employees Federation, Thiruvananthapuram
38. **Sri. Abdul Assiss K.K.**, Vehicle Supervisor, Administrative Office, Cusat, Kochi - 22
39. **Sri. Harilal**, Selection Grade Assistant, Administrative Office, Cusat, Kochi - 22
- 40 **Abdul Salam**, 3rd Sem., B.Tech. E & CE, College of Engineering, Perumon
41. **Abhilash Sasikumar**, 5th Seem., B.Tech., CE, School of Engineering, Cusat, Kochi - 22
42. **Deepak K.R.**, Research Scholar, Department of Hindi, Cusat, Kochi - 22
43. **Nikhil N.P.**, 3rd Sem., B.Tech., CE, School of Engineering, Cusat, Kochi - 22
- 44 **Nikhil Nan**, 3rd Sem., B.Tech, EE, Cochin University of Engineering Kuttanadu, Pulincunnoo
45. **Sreeranj K.P.**, 3rd Sem., B.Tech, ME, Cochin University of Engineering Kuttanadu, Pulincunnoo
- 46 **Vinay Kumar G.**, 3rd Year, MBBS, Co-operative Medical College, Kalamassery, Kochi
47. **Sri. V.Abdul Razak**, Chairman, Slippons India (P) Ltd., 7/330, V.K.C.Building, Kolathara P.O., Kozhikode - 673 655



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- 48 **Sri. T.N.Jayachandran**, C.I.C.C. Book House, Press Club Roiad, Kochi - 11
49. **Sri. Jose Joseph**, Managing Director, Mampampil Intermix (Pvt.) Ltd., Mampambil, Pizhaku P.O., Kottayam
50. **Sri. Paul Kokkad**, Kokkad House, Kallettukkara P.O., Thrissur
- 51 **Sri. Antony Thomas**, Joint Director (IIC), Office of the Director of Technical Education, Padmavilasam Road, Thiruvananthapuram - 695 023
52. **Sri. C.Sivasankara Pillai**, Lecturer in Civil Engineering, Govt. Polytechnic College, Kodumbu P.O., Palakkad
- 53 **Sri. Ananthanarayanan**, Director, National Physical & Oceanography Laboratory, Kochi - 21
- 54 **Dr. George Onakoor**, Former Director, The State Institute of Encyclopedia, "Sudarshana", Nalanchira, Thiruvananthapuram - 15
- 55 **Mr. S.Radhakrishnan**, Poomuttam, 25-A, Kesavan Nair Road, Poojappuram, Thiruvananthapuram - 12
- 56 **Sri. P.M.Kunjumoideen Kutty IPS (Retd.)**, DIG (Retired), Advocate, Padipurackal, Thrikkakara, Kochi - 21
57. **Dr. C.G.Krishnadas Nair**, Formerly Chairman, HAL, Aeronautical Society of India Building, Bangalore - 75
58. **Dr. V.V.Vasudevan**, (Former Regional Director Indian Gandhi National Open University), 29/1781, Kavka House, Perandoor, Elamakkara P.O., Kochi - 682 026
59. **Sri. M.R.Rajasekharan**, Maruthanand House, Kayamkula P.O., Alappuzha
60. **Sri.C.J.Chacko**, Chamakkalayil, Muthalakkodam P.O., Thodupuzha
61. **Dr. K.P. Varkey**, Government Engineering College, Thrissur
- 62 **Dr. K.N. Chandrasekharan Pillai**, Director, Indian Law Institute, Bhagwandas Road, New Delhi - 110 001.
63. **Dr. V.P.N.Nampoori**, Prof. & Director, International School of Photonics, Cusat, Kochi - 22
- 64 **Dr. Joy Job Kulavelil**, HB 48, KKP Nagar, Union Christ College P.O., Aluva-2
65. **Adv. K.Mohanachandran**, H.No. XXXII/36, Chitrakalalayam Road, Edappally Toll, Kochi - 682 024
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67. **Prof. P.O.J. Lebba**, Yakeen, Asramam, Kollam - 691 002
68. **Dr. I.S.Bright Singh**, Professor & Director, School of Environmental Studies, Cusat, Kochi - 22
- 69 **Shri. N.K.Vasudevan**, H.No. III/354, Sindooram, Adarsh Lane, Thrikkakara, Kochi - 682 021



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70. **Shri. C.M.Dinesh Mani**, M.L.A., Chanthuruthil Veedu, Vennala, Kochi - 682 028
71. **Shri. Alphons Kannamthanam**, M.L.A., Fathima Church Road, Elamkulam, Kochi - 682 020
72. **Dr. Achuth Sankar S.Nair**, Hon. Director, Centre for Bio-Informatics, University of Kerala, Kariavattom P.O., Thiruvananthapuram - 685 581
73. **Dr. S.Salim**, Kudumbasree Mission, Civil Station, Kakkanad, Ernakulam.
74. **Dr. Sebastian Paul MP**, Moonjappilly House, St. Francis Xavier Church Rd. Cochin-682 018
75. **Dr. S. Babu Sundar**, Professor & Head, Department of Computer Applications, CUSAT, Kochi - 22.
76. **Dr. Mariamma Vincent Panikulangara**, Reader and Head, Department of Culture and Heritage, CUSAT, Kochi – 22.
77. **Shri. K. Babu**, M.L.A. Kannuparambathu, Sanskrit College Road, Thripunithura - 682 301.
78. **Shri. Saju Paul**, M.L.A., Panthalingal, Vengoor P.O., Perumbavoor, Ernakulam-683 546.
79. **Shri. Zakkariya K.A.**, Lecturer, School of Management Studies, CUSAT, Kochi – 22.
80. **Dr. K. Vanaja**, Lecturer, Department of Hindi, CUSAT, Kochi – 22.
81. **Smt. Susamma Chacko**, Principal, College of Engineering, Kallooppa, Pathanamthitta.
82. **Sri. R.S. Sasikumar**, 'Nirmalyam', Nemom, Thiruvananthapuram - 20.
83. **Prof. A.Lopez**, Vadakkeparambil, Parumala P.O., Thiruvalla

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DEANS OF FACULTIES

1. **Engineering**
Prof. P.O.J.Lebba, (Former Consultant AICTE & Former Principal, TKM College of Engineering, Kollam Yakeen, Asramam, Kollam - 691 002
2. **Environmental Studies**
Dr. I.S.Bright Singh, Professor & Director, School of Environmental, CUSAT, Kochi – 22.
3. **Humanities**
Dr. A. Aravindakshan, Professor, Department of Hindi, CUSAT, Kochi – 22.
4. **Law**
Dr. K.N. Chandrasekharan Pillai, Director, Indian Law Institute, Bhagwandas Road, New Delhi - 110 001
5. **Science**
Dr. V. Unnikrishnan Nayar, Puthenpura TC XV/1351 (2), Gandhi Nagar Road 327, R.Suguthan Road, Vazhuthacaud, Thiruvananthapuram – 695 014.
6. **Social Sciences**
Dr. D.Rajaseenan, Professor, Department of Applied Economics, CUSAT, Kochi – 22.
7. **Technology**
Dr. V.P.Narayanan Nampoori, Professor & Director, International School of Photonics, CUSAT, Kochi – 22.
- 4 **Marine Sciences**
Dr. K. Mohan Kumar, Professor, Department of Atmospheric Science, CUSAT, Kochi – 16.
- 5 **Medical Science and Technology**
Dr. P.S.John, Professor & Head, Department of Orthoedics, Doctors' Garden, Gandhi Nagar P.O., Kottayam -686 008





DEPARTMENT OF APPLIED CHEMISTRY

Estd : 1976

The Department of Applied Chemistry was established in 1976 with the support of UGC to play an important role in the further development of the industrial belt in the Greater Cochin area by providing scientific support and trained personnel to the existing industries and by acting as a catalyst for the starting of new industries. The Department started an M.Sc. programme in Applied Chemistry in 1977. An M.Phil. programme in Chemistry was started in the year 1986. The Department has started an M.Tech. programme in Industrial Catalysis in 1996 which is approved by UGC and AICTE.

The Department has also served as a nucleus for starting the Department of Polymer Science and Rubber Technology and the Centre for Biotechnology by initiating B.Tech. and M.Sc. course in the respective areas. After the initial problems of infancy, the Department has grown and emerged as one of the best centres of Chemistry and has been fortunate to produce the first Bhatnagar Award Winner in Chemical Sciences in the entire State of Kerala. The UGC has identified it as one of the national centres to conduct refresher courses for University and College teachers in Chemistry.

The Department has been recently selected for the "Fund for improvement of S&T Infrastructure" (FIST) programme of Department of Science and Technology, Government of India and prestigious "special Assistance Programme" (SAP) of University Grants Commission. Only a few Chemistry Departments were conferred this distinction at National level.

The Department has carried out many research projects, supported by Central and State Government agencies such as DST, MHRD, UGC, AICTE, CSIR, DRDO and STEC. Thirteen research schemes stand completed, valued at Rs.69 lakhs.

The Department has conducted several national seminars/symposia, the major ones being, a seminar and Mass Education programme in Environmental Awareness (1988), the National Symposium on Current Trends in Co-ordination Chemistry (1995) MATCON (2001), CTRIC (2004) Frontiers in Chemistry (2006) and an International Seminar "MATCON (2007)." The Department has over 300 research publications to its credit during the last five years in addition to a few monographs. 70 students have taken their Ph.D. from the Department. Almost all the students who had successfully completed the M.Sc. course in Applied Chemistry have found employment in industries, R & D institutions or colleges, some of them have pursued a career in research and have been awarded Ph.Ds. A few of them have also gone abroad and are well settled in industrial establishments, universities and other institutions.

1. Programmes of Study / Research

1. M.Sc. (Applied Chemistry)
2. M.Phil. (Chemistry)
3. M.Tech. (Industrial Catalysis)
4. Ph.D.



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2. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr.K.K.Mohammed Yusuff	Professor	M.Sc., Ph.D.	Inorganic Chemistry & Catalysis
2	Dr.S.Sugunan	Professor	M.Sc., Ph.D.	Physical Chemistry & Catalysis
3	Dr.M.R.Prathapa-chandra Kurup	Professor	M.Sc., Ph.D.	Inorganic Chemistry
4	Dr.K.Girish Kumar	HOD & Reader	M.Sc., Ph.D.	Analytical Chemistry
5	Dr.K.Sreekumar	Reader	M.Sc., Ph.D.	Industrial Catalysis
6	Dr.S.Prathapan	Reader	M.Sc., Ph.D.	Organic Chemistry
7	Dr. N.Manoj	Reader	M.Sc., Ph.D.	Organic Chemistry
8	Smt.P.M.Sabura Begum	Lecturer	M.Sc.,M.Phil	Organic Chemistry
9	Dr.P.V.Mohanam	Lecturer	M.Sc., Ph.D.	Analytical Chemistry
10	Dr.P.A.Unnikrishnan	Lecturer	M.Sc., Ph.D.	Organic Chemistry

3. Visiting Faculty

Sl. No.	Name	Qualification	Specialization
1.	Dr. M. Raveendranathan	M.Sc., Ph.D.	Catalysis

4. Research Staff

Sl. No.	Name	Designation	Qualification	Specialization
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5. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1.	Annu Anna Varghese	CSIR	Dr.K.K.Mohammed Yusuff	Coordination chemistry & catalysis
2.	Arun.V	Cochin University	Dr.K.K.Mohammed Yusuff	Coordination chemistry & catalysis
3.	Robinson P. Ponminissary	—	Dr.K.K.Mohammed Yusuff	Heterogenous Catalysis



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Sl. No.	Name	Funding Agency	Guide	Area of Work
4.	P.M.Sabura Begum	UGL	Dr.K.K.Mohammed Yusuff	Elastomer composites
5.	Manju Sebastian	KSCSTE	Dr.K.K.Mohammed Yusuff	Coordination chemistry & catalysis
7	Leeju.P		Dr.K.K.Mohammed Yusuff	Coordination chemistry & catalysis
8	Varsha.G	Cochin University	Dr.K.K.Mohammed Yusuff	Coordination chemistry & catalysis
9	Digna Varghese	CSIR	Dr.K.K.Mohammed Yusuff	Coordination chemistry & catalysis
10.	Ajitha.S	FIP	Dr.S. Sugunan	Enzyme Catalysis
11.	Ambili V.K.	UJRF	Dr.S.Sugunan	Catalysis by mesoporous silicates
12.	Bolie Therattil	CSIR	Dr. S. Sugunan	Catalysis by spinels
13.	Dhanya T.P.	DRDO	Dr.S.Sugunan	Photo catalysis by modified Titania
14.	George John	Nil	Dr. S. Sugunan	Photo catalysis by modified Titania
15.	Jesny Jagan	Nil	Dr. S. Sugunan	Photo catalysis by modified Titania
16.	Jofrin J.	KSCSTEC	Dr.S.Sugunan	Catalysis by clays
17.	Joyes Jacob	FIP	Dr.S. Sugunan	Photo catalysis by modified Titania
18.	Mary Augustine	Nil	Dr. S. Sugunan	Photocatalysis by Titania
19.	Rajesh K.M	DAE/BRNS	Dr. S. Sugunan	Photo catalysis by modified Titania
20.	Reshmi.R	UJRF	Dr.S.Sugunan	Enzyme catalysis
21.	Rosephilo KJ	Nil	Dr. S. Sugunan	Catalysis by metal oxides
22.	T. Satheesh Babu	IRELTDC	Dr.S.Sugunan	Catalysis by metal oxides



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23.	B.N. Bessy Raj		M.R.Prathapachandra Kurup	Inorganic Chemistry
24.	E. Manoj	UGC	M.R.Prathapachandra Kurup	Inorganic Chemistry
25.	Sreesha Sasi		M.R.Prathapachandra Kurup	Inorganic Chemistry
26.	Binu Varghese		M.R.Prathapachandra Kurup	Inorganic Chemistry
27.	Leji Latheef	CSIR	M.R.Prathapachandra Kurup	Inorganic Chemistry
28.	Suja Krishnan		M.R.Prathapachandra Kurup	Inorganic Chemistry
29.	Laly.K	Teacher fellow	M.R.Prathapachandra Kurup	Inorganic Chemistry
30.	Jessy Emmanuel	Teacher fellow	M.R.Prathapachandra Kurup	Inorganic Chemistry
31.	Sheeja.S.R	CSIR	M.R.Prathapachandra Kurup	Inorganic Chemistry
32.	Nancy Mathew	KSCSTE	M.R.Prathapachandra Kurup	Inorganic Chemistry
33.	Renjusha.S	CSIR	M.R.Prathapachandra Kurup	Inorganic Chemistry
34.	K. Jayakumar		M.R.Prathapachandra Kurup	Inorganic Chemistry
35.	Annie C.F		M.R.Prathapachandra Kurup	Inorganic Chemistry
36.	Neema Ani Mangalam		M.R.Prathapachandra Kurup	Inorganic Chemistry
37.	Beena. S	DRDO	Dr. K. Girish Kumar	Potentiometric sensors for Lanthanides
38.	Leena. R		Dr. K. Girish Kumar	Fabrication of electrochemical sensors for pharmaceuticals
39.	Litha. V.K	Rajiv Gandhi National Fellowship	Dr. K. Girish Kumar	Voltammetric sensors for pharmaceuticals
40.	Pearl Augustine	DRDO	Dr. K. Girish Kumar	Fabrication of potentiometric sensors for pharmaceuticals
41.	Renjini Joseph		Dr. K. Girish Kumar	Sensors and Biosensors



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42.	Sareena John		Dr. K. Girish Kumar	Fabrication of electrochemical sensors for pharmaceutical analysis (thesis submitted)
43.	Sindhu Issac	CSIR	Dr. K. Girish Kumar	Voltammetric sensors for pharmaceuticals
44.	Sobhana Mathew	Teacher fellow	Dr. K. Girish Kumar	Porphyrin based sensors
45.	Sreekumar C.S	Teacher fellow	Dr. K. Girish Kumar	Potentiometric sensors
46.	Theresa C. J.	DRDO	Dr. K. Girish Kumar	Electrochemical sensors
47.	C.V. Elizabeth	-	K. Sreekumar	Nonlinear Optical Polymers
48.	G. Rajesh Krishnan	DRDO	K. Sreekumar	Polymer supported polymer catalysis
49.	K. Mangala	CSIR	K. Sreekumar	Heterogenous catalysis
50.	M.V. Maheshkumar	DRDO	K. Sreekumar	Conjugated Polymers
51.	N.A. Anoop	KSCSTE	K. Sreekumar	Energetic Polymers
52.	S. Suresh	-	K. Sreekumar	Heterogenous catalysis
53.	V. Kannan	-	K. Sreekumar	Heterogenous catalysis
54.	Rekha R. Mallia			Electron transfer reaction
55.	Roshini K. Thumpakkara			Dibenzoylalkene-type systems
56.	Ambily Mary Jacob			Photochemistry of barrelenes
57.	John P. R.			Dipolar additions
58.	Ashlly P.C.	-	Dr. P.V. Mohanan	Biotechnology
59.	Priya Rajan	-	Dr. P.V. Mohanan	Inorganic Chemistry
60.	Navya Antony		Dr. P.V. Mohanan	Biotechnology
61.	Gisha George	CSIR	Dr. P.A. Unnikrishnan	Organic Chemistry
62.	Saino Hanna Varghese	KSCSTE	Dr. P.A. Unnikrishnan	Organic Chemistry
63.	Jayakumar K.	KSCSTE	Dr. P.A. Unnikrishnan	Organic Chemistry



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6. Administrative Personnel

Sl.No.	Designation	No. of posts
1	Section Officer	1
2	Assistant Librarian	1
3	Assistant	3
4	Typist	2
5	Peon	2
6	Sweeper cum Cleaner	1

7. Technical Personnel

Sl. No.	Designation	No. of posts
1	Technical Officer	1
2	Technical Assistant	2
3	Storekeeper	1
4	Laboratory Assistant	1

8. Students Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	M.Sc. I Semester	5	4	9
2	M.Sc. III Semester	4	7	11
3	M.Tech. (Industrial Catalysis) I Semester	3	3	6
4	M.Tech. (Industrial Catalysis) III Semester	6	4	10
5	M.Phil. I Semester	2	6	8

9. Research Facilities:

(a) List of Equipments :

- | | |
|---|---|
| (i) Name of the equipments in the Department worth Rs. One lakh and above along with the cost | 1. UV-Visible Spectrophotometer with Diffuse Reflectance Accessory, Labomed |
| | 2. UV-Vis Spectrophotometer, Thermo |



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- | | | |
|-------|--|--|
| | | 3. FT-IR |
| | | 4. FT-IR ABB Bohmann with ATR accessory |
| | | 5. Surface area Analyser |
| | | 6. TG-DTA |
| | | 7. Atomic Absorption Spectrometer |
| | | 8. HPLC |
| | | 9. GC |
| | | 10. Electrochemical work station |
| (ii) | Names of the equipment purchased in the X Plan worth Rs. One lakh and above. | 1. UVD 3500 double beam spectrophotometer
2. FT-IR spectrophotometer – 4100 |
| (iii) | Percent utilization of equipments | 100% |
| (iv) | Whether the equipment is also used by other Departments/Colleges/other outside agencies (Give details) | Yes |

(b) Library

No. of Books/Journals on 31 st March of previous year	Additions during the year
3705 Journals 5 Nos.	61

(c) Others : Nil

10. Distinguished Visitors

1. Krishnaswami Rasa
Department of Chemistry
College of Staten Island
New York.
2. P.V. Ramachandran
Department of Chemistry
Purdue University
W. Lafayette.
3. Prof. Mukundan Thelakkat
Applied Functional Polymers
University of Bayreuth
4. Dr. T.K. Chakraborty
Head, ORG, DIV-.III
IICT, Hyderabad.



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5. Prof. Henry F. Schaeter
Center for Computational Quantum Chemistry
University of Georgia
Athens, Georgia, USA.
6. Kang Hway Chuan
Department of Chemistry
National University of Singapore
Singapore.
7. Farook Alam
School of Chemical Sciences
University of Saino Malaysia
Malaysia.

11. Ph.D. Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Studies on some new Schiff base complexes of ruthenium and neodymium	Pearly Sebastian	Dr.K.K.Mohammed Yusuff Chittilappilly
2.	Diversity in Structural And Spectral Characteristics on some Transition Metal Complexes Derived from Aldehyde Based Thiosemicar	P.F. Rapheal	M.R.Prathapachandra Kurup
3	Fabrication of Potentiometric Sensors for the Detemination of Certain Metal Ions	RemalakshmyPoduval	Dr. K. Girish Kumar
4	Synthesis, characterization and application studies of some polymer supported metal complexes	Jose. P. Kallooppambil	Dr. K. Girish Kumar

12. List of Publications :

Sl.No.	Name of Paper
1	Sebastian C. Pearly, N. Sridevi and K. K. M. Yusuff "Characterization and catalytic activity of polymer supported ruthenium Schiff base complexes towards catechol oxidation", Journal of Applied Polymer Science, 105 (2007) 997-1711



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2. N. Sridevi and K. K. M. Yusuff "Rapid In Vitro Screening of Drug–Metal Ion Interactions", *Toxicology Mechanisms and Methods*, 17 (2007) 559–565
3. Pearly Sebastian Chittilappilly, N. Sridevi and K.K. Mohammed Yusuff, "Ruthenium complexes of Schiff base ligands as efficient catalysts for catechol-hydrogen peroxide reaction", *Journal of Molecular Catalysis A: Chemical*, (In Press)
4. Bejoy Thomas, S. Prathapan and S. Sugunan, "Towards a green synthesis of isoquinoline: Beckmann rearrangement of E,E cinnamaldoxime over H-zeolites", *Micropor. Mesopor. Materials* 102 (2007) 138.
5. Bejoy Thomas, S. Prathapan and S. Sugunan, "Dehydration of aldoximes over H-zeolites: A convenient and highly atom economic method for the preparation of nitriles", *J.Chem. Eng. Journal*, 133 (2007)59-68.
6. N.N.Binitha and S.Sugunan, "p-Cymene preparation over modified montmorillonite clays", *Catalysis Communications*, 8 (2007)1793-1797.
7. R. Ramanathan and S. Sugunan, "Styrene oxidation by H₂O₂ using Ni–Gd ferrites prepared by co-precipitation method," *Catalysis Communications*, 8 (2007) 1521-1526.
8. Sanjay Gopinath and S.Sugunan, "Enzymes immobilized on montmorillonite K 10: Effect of adsorption and grafting on the surface properties and the enzyme activity", *Applied Clay Science*, 35, (2007) 67-75.
9. P. Renu, T. Radhika and S. Sugunan, "Characterization and catalytic activity of vanadia supported on rice husk silica promoted samaria," *Catalysis Communications*, 9, 5, (2008) 584-589.

10. Synthesis and spectral studies of cadmium(II) complexes derived from di-2-pyridyl ketone and N(4)-phenylsemicarbazide: First structural report of a cadmium(II) complex of semicarbazone, T.A. Reena, E.B. Seenaa, M.R.P. Kurup, *Polyhedron*, *Spectrochimica Acta Section A*, in press.
11. Synthesis, spectral characterization and crystal structure of N -2-hydroxy-4-methoxybenzaldehyde- N'-4-nitrobenzoyl hydrazone and its square planar Cu(II) complex, B. N. Bessy Raj, **M. R. P. Kurup**, in press.
12. Spectral and structural studies of copper(II) complexes of thiosemicarbazones derived from salicylaldehyde and containing ring incorporated at N(4)-position, Leji Latheef, **M.R.P. Kurup**, *Spectrochim Acta Section A*, in press.
13. Synthesis, spectral and EPR studies of oxovanadium(IV) complexes incorporating tridentate ONO donor hydrazone ligands: Structural study of one oxovanadium(V)



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- complex, E.B. Seena, Nancy Mathew, Mini Kuriakose, **M.R.P. Kurup**, Polyhedron 27 (2008) 1455.
14. Crystal study of salicylaldehyde N(4)-phenylthiosemicarbazone, E.B. Seena, **M.R.P. Kurup**, E. Suresh, J. Chem. Cryst. 38 (2008) 93.
 15. Synthesis and spectral studies of bithiocarbohydrazone and biscarbohydrazone of quinoline-2-carbaldehyde: Crystal structure of bis(quinoline-2-aldehyde) thiocarbohydrazone, E. Manoj, **M. R. P. Kurup**, H.-K. Fun, J. Chem. Cryst. 38 (2008) 157.
 16. Synthesis, spectral and structural studies of zinc(II) complexes of salicylaldehyde N(4)-phenylthiosemicarbazone, E.B. Seena., **M.R.P. Kurup** Spectrochim Acta Section A, 69 (2008) 726.
 17. Structural and spectral studies of nickel(II) complexes with N(4),N(4)-(butane- 1,4-diyl) thiosemicarbazones, E. Manoj, **M.R.P. Kurup**, Polyhedron 27 (2008) 275.
 18. Spectral and structural studies of nickel(II) complexes of salicylaldehyde 3-azacyclothiosemicarbazones, Leji Latheef, **M.R.P. Kurup** Polyhedron 27 (2008) 35.
 19. Studies on Co(II) and Co(III) complexes of di-2-pyridyl ketone N(4)-cyclohexyl and N(4)-phenyl thiosemicarbazones, V. Suni, **M. R. P. Kurup**, M. Nethaji, Polyhedron, 26 (2007) 5203.
 20. Six Coordinate Ni(II) Complexes of ONN Donor Aroylhydrazone Ligands - Synthesis, Spectral Studies and Crystal Structures, Mini Kuriakose, **M.R.P. Kurup**, E. Suresh, Structural Chemistry, 18 (2007) 579.
 21. Synthesis and EPR spectral studies of manganese(II) complexes derived from pyridine-2-carbaldehyde based N(4)-substituted thiosemicarbazones: Crystal structure of one complex, P.F. Rapheal, E. Manoj, **M. R. P. Kurup**, Polyhedron 26 (2007) 5088.
 22. Self-assembled macrocyclic molecular squares of Ni(II) derived from carbohydrazones and thiocarbohydrazones: Structural and magnetic studies E. Manoj, **M. R. P. Kurup**, Hoong-Kun Fun, Polyhedron, 26 (2007) 4451.
 23. Synthesis and spectral characterization of zinc(II) complexes of N(4)-substituted thiosemicarbazone derived from salicylaldehyde: Structural study of a novel -OH free Zn(II) complex, Leji latheef, Manoj.E, **M.R.P. Kurup**, Polyhedron 26 (2007) 4107.
 24. Synthesis of mono- and binuclear dioxomolybdenum(VI) complexes derived from N(4)-substituted thiosemicarbazones : X-ray crystal structure of $[(\text{MoO}_2\text{L}^1)_2]$, $[\text{MoO}_2\text{L}^1\text{py}]$ and $[\text{MoO}_2\text{L}^2\text{py}]$, E.B. Seena, **M.R.P. Kurup**, Polyhedron 26 (2007) 3595.
 25. Synthesis, spectroscopic studies and crystal structures of two new vanadium complexes of 2-benzoylpyridine containing hydrazone ligands, Mini Kuriakose, **M.R.P. Kurup**, Polyhedron 26 (2007) 2713.



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26. Structural and spectral investigations on some new nickel (II) complexes of di-2-pyridyl ketone N(4)- phenyl thiosemicarbazones, V. Suni, **M. R. P. Kurup**, M. Nethaji, Polyhedron 26 (2007) 3097.
27. Synthesis, spectral characterization and crystal structure of copper(II) complexes of 2-hydroxyacetophenone N(4)-phenyl semicarbazone, U.L.Kala., S.Suma, Suja Krishnan, **M.R.P. Kurup**, Rohith .P. John Polyhedron 26 (2007) 1427.
28. 2'-(2-Hydroxy-4-methoxybenzylidene)nicotinohydrazide monohydrate, Nancy Mathew, Mini Kuriakose, E.B. Seena, M.R.P. Kurup, Acta Cryst. E63 (2007) o2190.
29. N-2-hydroxy-4-methoxyacetophenone-N-4-nitrobenzoyl hydrazone: Synthesis and structural characterization, B. N. Bessy Raj, **M. R. P. Kurup**, Spectrochim Acta Section A 66 (2007) 898.
30. Spectral characterization and crystal structure of 2-benzoylpyridine nicotinoyl hydrazone, Mini Kuriakose, **M. R. P. Kurup**, E. Suresh, Spectrochim. Acta, A66 (2007) 353.
31. Macrocyclic molecular square complex of zinc(II) self assembled with a carbohydrazone ligand, Easwaran Potti Manoj, **M. R. P. Kurup**, Hoong-Kun Fun, Inorg. Chem. Commun., 10 (2007) 324.
32. Spectral and structural studies of mono- and binuclear copper(II) complexes of salicylaldehyde N(4)-substituted thiosemicarbazones, E.B. Seena, **M.R.P. Kurup**, Polyhedron 26 (2007) 829.
33. Structural and spectral studies of novel Co(III) complexes of N(4)-substituted thiosemicarbazones derived from pyridine-2-carbaldehyde, P.F. Rapheal., E. Manoj, **M.R.P. Kurup**, E. Suresh, Polyhedron 26/3 (2007) 607.
34. Copper(II) complexes of N(4)-substituted thiosemicarbazones derived from pyridine-2-carbaldehyde: Crystal structure of a binuclear complex. P.F. Rapheal, E. Manoj, **M.R.P. Kurup**, Polyhedron 26 (2007) 818.
35. Synthesis and crystal structure of cobalt(III) complex with a schiff base and **azide**, **Sreesha Sasi**, M. R. P. Kurup, **Suresh E**, **J. Chem. Cryst. 37 (2007) 31.**
36. K.Girish Kumar, Pearl Augustine , Sareena John, Jerzi Radecki and Hanna Radecka, Fabrication of potentiometric sensors for the selective determination of Ketoconazole, Analytical Letters (2008)(in press)
37. Priya R. Rao, K.Girish Kumar and Manoj C. Narayan, A New Method of Isolation of Isoflavones from *Glycine max* (Soya Beans) by Complexation Technique, Asian Journal of Scientific Research 1, (2008)176
38. K. Girish Kumar, Pearl Augustine and Sareena John, A novel potentiometric sensor for the determination of nimesulide, Portugaliae Electrochimica Acta, 25(2007)375



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39. K. Girish Kumar, Sareena John, Pearl Augustine, Remalakshmy Poduval and Beena S., A novel mebendazole selective membrane sensor and its application to pharmaceutical analysis, *Anal. Sci.*, 23, (2007) 291.
40. K. Girish Kumar and K. Saji John, Removal of Fe(III) using a polystyrene anchored schiff base, *Env. Chem. Lett.*, 5, (2007)19.
41. Beena Mary John, M. Ushamani, K.Sreekumar, Rani Joseph, C. Sudha Kartha, *Appl. Opt.* 46,(2007)1-5, .
42. V. C. Kishore, R. Dhanya, C. Sudha Kartha, K. Sreekumar and Rani Joseph J. *Appl. Phys.* 101 (2007) 063102, .
43. V. C. Kishore, R. Dhanya, K. Sreekumar, Rani Joseph and C. Sudha Kartha, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 2008*, 1-5 (Available Online).
44. "Simple, Efficient, and Stereoselective oxidation of triphenylfurans to *cis*-but-2-ene-1,4-diones," Rappai, J. P.; Prathapan, S.; Vishnu Unni, M. V.; Unnikrishnan P. A. *Synth. Commun.* 37 (2007) 569.
45. Cntau, T.P. Got, N.Manoj, E-Oliverose, Singlet Oxygen in Microporous silica xerogel: Quantum Yeild and oxidation at the gas solid interface: *Chem.Phys.Chem.*8(16) (2007)2344-2353C.
46. P. Sindhu, V.V. Soorya, P.A. Unnikrishnan, Dr.N. Manoj, Novel Michel Type reaction of 1 – Benzyl-2- methyl-1Hbenzo (D) (1,2,3) triazole)with DMAD in methanolProceedings of the Internatipnal conference Metcol 2007, March 1-3, 2007, Kochi, India.

13. (a) Seminar/Conference presentations :

Name of Participant	Name of Seminar / Conference/ Workshop	Role
1. Digna Varghese	Catalysis Orientation programme organized by National centre for Catalysis research, Chennai	Participant
2. Manju Sebastian	Modern Trends in Inorganic Chemistry, MTIC XII organized	Participant



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- | | | |
|---|--|---|
| | by Indian Institute of Technology
Madras | |
| 3. Arun.V, Manju Sebastian,
Leeju.P, Varsha.G &
Digna Varghese | Current trends in Chemistry,
CTriC-2008 organized by
Department of Applied
Chemistry, CUSAT | Participated and
presented papers |
| 4. Arun.V, Manju Sebastian,
Leeju.P & Varsha.G | International conference on
Materials for the Millennium,
MATCON-2007 organized by
Department of Applied
Chemistry, CUSAT | Participated and
presented papers |
| 5. Bolie Therattil, Joyes Jacob,
S.Sugunan | 18 th National Symposium on
Catalysis, Indian Institute of
Petroleum, Dehradun,2007 | Poster presentation/
Oral presentation |
| 6. Bolie Therattil, S.Sugunan | 5 th National symposium and
Conference on Solid state
Chemistry and Allied
areas, Nagpur, 2007. | Poster Presentation |
| 7. Rajesh K.M, T.Satheesh Babu | Orientation Programme in
Catalysis, IIT, Madras, 2007 | Participation |
| 8. Bolie Therattil, Reshmi.R,
Jofrin J, Ambili V.K,
Dhanya T.P, S.Sugunan | National Conference on Emerging
Trends in the Applications of
Plasma in Material Science and
Technology (APIMSAT),
ISAS-Kerala Chapter, Kaloor,
Cochin,2007 | Participation |
| 9. Bolie Therattil, Reshmi.R, | International Conference on
Advanced Materials and
Composites (ICAMC 2007), 2007 | Poster presentation |
| 10. Bolie Therattil, Reshmi.R,
Rajesh K.M, Ajitha.S,
Joyes Jacob | National Seminar on Current
Trends in Chemistry (CTRIC 2008),
Department of Applied Chemistry,
CUSAT, 2008 | Oral presentation |
| 11. Bolie Therattil | Sixteenth National Symposium
and Workshop on Thermal Analysis,
IGCAR, Kalpakkam, 2008 | Oral Participation |
| 12. Bolie Therattil,
Rajesh K.M, S.Sugunan | CAT Workshop 2008,
National Workshop on Catalysis,
Bhubhaneshwar, 2008. | Poster presentation |



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- | | | |
|---|---|---------------------|
| 13. E. Manoj | Modern Trends in Inorganic Chemistry(MTIC-XII) | Poster Presentation |
| 14. T. A. Reena | Modern Trends in Inorganic Chemistry(MTIC-XII) | Poster Presentation |
| 15. Nancy Mathew | Modern Trends in Inorganic Chemistry(MTIC-XII) | Poster Presentation |
| 16. Pearl Augustine | Current Trends in Chemistry, Department of Applied Chemistry
Cochin University of Science and Technology,
Kochi, India, 2008. | Paper Presentation |
| 17. Beena. S | Current Trends in Chemistry, Department of Applied Chemistry
Cochin University of Science and Technology,
Kochi, India, 2008 | Paper Presentation |
| 18. Sindhu Issac | Current Trends in Chemistry, Department of Applied Chemistry
Cochin University of Science and Technology,
Kochi, India, 2008 | Paper Presentation |
| 19. Litha V.K | Current Trends in Chemistry, Department of Applied Chemistry
Cochin University of Science and Technology,
Kochi, India, 2008 | Paper Presentation |
| 20. Dr. K. Girish Kumar
Sindhu Issac | National workshop on sensors, Trichy , 2007
The 8 th Workshop on Biosensors And
Bioanalytical μ -Techniques in Environmental
and Clinical Analysis, Goa, India, 2007. | Invited talk |
| 21. M. V. Maheshkumar, M. J. Joseph and K. Sreekumar | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 22. G. Rajesh Krishnan and K. Sreekumar | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 23. J. Thomas, G. Rajesh Krishnan and K. Sreekumar | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 24. N. A. Anoop, M. V. Maheshkumar, M. J. Joseph, K. Sreekumar and H. G. Ang, | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |



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| 25. K. Mangala and K. Sreekumar | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 26. Elizabeth and K. Sreekumar | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 27. Kannan. V and K. Sreekumar | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 28. Raihana K, Kannan. V and K. Sreekumar | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 29. S. Suresh, K. Sreekumar | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 30. N.Hanly, K. Sreekumar and M. J. Joseph | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 31. Benjamin Varghese. P, Satish John, K. N.Madhusoodanan, K. Sreekumar and M. J. Joseph | MATCON-2007 at Cochin University of Science and Technology, Kerala, India, March-2007. | Paper Presentation |
| 32. G. Rajesh Krishna and K. Sreekumar | Symposium on Future Directions of NMR, at Indian Institute of Science, Bangalore, India. August 2007. | Paper Presentation |
| 33. V. C. Kishore, R. Dhanya, K. Sreekumar, Rani Joseph and C. Sudha Kartha | International Workshop on the Physics of Semiconductor Devices, Mumbai, India, December-2007. | Paper Presentation |
| 34. N. A. Anoop, M. V. Maheshkumar, M. J. Joseph, K. Sreekumar and H. G. Ang | International Conference POLYCHAR- 16 at Lucknow, U. P. India, February-2008. | Paper Presentation |
| 35. V. C. Kishore, R. Dhanya, K. Sreekumar, Rani Joseph and C. Sudha Kartha | International Conference POLYCHAR- 16 at Lucknow, U. P. India, February-2008. | Paper Presentation |
| 36. R. Dhanya, V. C. Kishore, K. Sreekumar, C. Sudha Kartha and Rani Joseph | International Conference POLYCHAR- 16 at Lucknow, U. P. India, February-2008. | Paper Presentation |
| 37. C. V. Elizabeth and K. Sreekumar | International Conference POLYCHAR- 16 at Lucknow, U. P. India, February-2008. | Paper Presentation |



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- 38. K. Mangala and K. Sreekumar International Conference POLYCHAR- Paper Presentation 16 at Lucknow, U. P. India, February-2008.
- 39. Pramitha. V, Nimmi. K. P, K. Sreekumar, Rani Joseph and C. Sudha Kartha International Conference POLYCHAR- Paper Presentation 16 at Lucknow, U. P. India, February-2008.

Dr.S. Prathapan Citric 2008 Organizing Committee Member

Dr.N. Manoj MATCON 2007 Organizing Committee Member
 Dr.N. Manoj CITRIC 2008 Organizing Committee Member

P.M. Sabura Begum MATCON 2007 Co-author and Organizing Committee Member

P.M. Sabura Begum Current Trends in Chemistry 2008 Organizing Committee Member

Dr. P.V. Mohanan MATCON 2007 Organizing Committee member

14. Awards / Honours / Fellowships etc. received:

Name of Recipient	Name of Fellowship / Honour/Award	Awarding Agency
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15. Sponsored Research Project :

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1.	Special Assistance Programme (DRS)	U.G.C.	43.2 lakhs	Dr. K.K. Mohammed Yusuff (coordinator)



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2	Chemical analysis and Standardization of Ayurvedic formulations	Kerala Government	40 lakhs	Dr. K. K. Mohammed Yusuf (Principal Investigator), Dr. S.Prathapan & Dr. Jacob Philip (Coinvestigators)
3	Studies on surface properties and catalytic activity of copper chromites on thermal decomposition of ammonium perchlorate	CSIR	15,00,000	Dr.S.Sugunan
4	Pillared clay catalyzed green route oxidation of phenol in aqueous media	KSCSTEC	10,00,000	Dr.S.Sugunan
5	Studies on photocatalysis by nano titania in pollution control	BRNS	14,98,726	Dr.S.Sugunan
6	Studies on photocatalysis by nanotitania for detoxification of water containing pollutants	DRDO	17, 22, 976	Dr.S. Sugunan
7	Catalysis by nanocrystalline ceria modified With transition metals	IRELTDC	20,38,790	Dr.S.Sugunan
8.	A correlative study between stereochemistry and biological activity of Oxovanadium(IV) complexes	CSIR New Delhi	7,99,000	M.R.Prathapachandra Kurup
9.	Investigations of Structural aspects of transition metal complexes of some aroylhydrazones.	KSCSTE Thiruvananthapuram	7,26,000	M.R.Prathapachandra Kurup
10.	“Development of Ion Selective Electrodes for the determination of Metal Ions”	DRDO	22.82 lakhs	K.Girish Kumar
11.	“Development of Electrochemical Sensors for the Determination of Pharmaceuticals”	DRDO	14.87 lakhs	K.Girish Kumar
12.	“Fabrication of Biosensors for the determination of pharmaceuticals”	DST INDO-POLISH	4.30 lakhs	K.Girish Kumar



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BILATERAL
PROGRAMME

13.	Development of green thermoplastic elastomers as energetic binders and plasticizers	EMRC, NTU	5.3	Dr. K. Sreekumar
14.	Development of polymer supported dendrimer-transition metal complexes as heterogeneous catalysts	DRDO	30.35	Dr. K. Sreekumar
15.	Development of photorefractive polymers for optical recording	DST	21.87	Dr. K. Sreekumar (Co-investigator)
16.	Fabrication and recording of holograms on photosensitized polymer films with high diffraction efficiency	DRDO(CARS)	40.5	Dr. K. Sreekumar (Co-investigator)
17.	Nanostructured conjugated polymeric ink for printable chemical sensors	KSCSTE	7.61	Dr. K. Sreekumar
18.	Development of anti-WSSV drugs from mangrove plants endemic to Indian coastal zone	DBT	39 Lakhs	Dr. I.S.Bright Singh Dr. Rosamma Philip Prathapan S.

16. Research Programmes and Activities :

Sl.No.	Problem / Topic	Investigator (s)
1.	Synthesis characterization and catalysis of some new transition metal complexes and zeolite encapsulated complexes	K.K.Mohammed Yusuff, Pearly Sebastian, Lissy K Thalakkottur and Annu Anna Varghese
2.	Synthesis characterization and catalysis	K.K.Mohammed Yusuff, Manju



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| of some new transition metal complexes with Schiff bases | Sebastian, Arun.V Leeju P., Varsha G and Digna Varghese |
| 3. Synthesis characterization and catalysis of some new supported metal complex catalysts | K.K.Mohammed Yusuff and Robinson.P.Pominissery |
| 4. Synthesis and characterization of nano zinc oxide | K.K.Mohammed Yusuff, Rani Joseph and P.M.Sabura Begum |
| 5. Catalysis by immobilized enzymes | Dr.S.Sugunan |
| 6. Catalysis by spinels | Dr.S.Sugunan |
| 7. Catalysis by metal oxides | Dr.S.Sugunan |
| 8. Catalysis by mesoporous silicates | Dr.S.Sugunan |
| 9. Photocatalysis by modified titania | Dr.S.Sugunan |
| 10. Structural and NLO properties of some metal complexes | B.N. Bessy Raj & M.R.P.Kurup |
| 11. Metal complexes of carbohydrazones | E. Manoj & M.R.P.Kurup |
| 12. Ligating properties of some anions | Sreesha Sasi & M.R.P.Kurup |
| 13. Metal complexes of Semicarbazones | Binu Varghese & M.R.P.Kurup |
| 14. Studies of metal complexes of some thiosemicarbazones | Leji Latheef & M.R.P.Kurup |
| 15. Studies of metal complexes of some bis(thiosemicarbazones) | Suja Krishnan & M.R.P.Kurup |
| 16. Studies of metal complexes of some bis (thiosemicarbazones) | Laly. K. & M.R.P.Kurup |
| 17. Transition metal complexes of aroyl hydrazones | Jessy Emmanuel & M.R.P.Kurup |
| 18. Studies of metal complexes of multidentateligands | Sheeja S.R. & M.R.P.Kurup |
| 19. Studies of metal complexes of some hydrozones | Nancy Mathew & M.R.P.Kurup |
| 20. Studies of metal complexes of thiosemicarbazones | Renjusha R & M.R.P.Kururp |
| 21. Studies of metal complexes of thiosemicarbazones | K.Jayakumar & M.R.P.Kururp |
| 22. Metal complexes of semicarbazones | Annie C.F. & M.R.P.Kurup |
| 23. Studies of metal complexes of hydrozones | Neema Ani Mangalam & M.R.P.Kurup |



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| 24. | Development of Biosensor | Dr. K.Girish Kumar in collaboration with Jerzy Radecki and Hanna Radecka of Polish Academy of Sciences, POLAND |
| 25. | Fabrication of electrochemical sensors for pharmaceuticals analysis (Thesis submitted) | K. Girish Kumar, Sareena John |
| 26. | Potentiometric sensor for pharmaceuticals | Dr. K. Girish Kumar, Pearl Augustine |
| 27. | Development of potentiometric sensors for Lanthanides | Dr. K. Girish Kumar, Beena S |
| 28. | Potentiometric sensors | Dr. K. Girish Kumar, Sreekumar C S |
| 29. | Carbon nanotube based sensors for the determination of pharmaceuticals | Dr. K. Girish Kumar, Sindhu Issac |
| 30. | Voltammetric sensors for pharmaceuticals | Dr. K. Girish Kumar, Litha V K |
| 31. | Applications of porphyrin based voltammetric sensors in pharmaceutical analysis | Dr. K. Girish Kumar, Theresa C J |
| 32. | Voltammetric determination at carbon paste electrode | Dr. K. Girish Kumar, Renjini Joseph |
| 33. | Pharmaceutical application of porphyrin based membrane sensors | Dr. K. Girish Kumar, Leena R |
| 34. | Porphyrin based sensors for pharmaceuticals | Dr. K. Girish Kumar, Sobhana Mathew |
| 35. | Polymer supported dendrimers based catalysts in organic reactions. | K. Sreekumar, G. Rajesh Krishnan |
| 36. | Acid activated clays as heterogeneous catalysts for organic reactions. | K. Sreekumar, S.Suresh |
| 37. | Modified Clay based heterogeneous catalysts for fine chemical synthesis. | K. Sreekumar, V. Kannan |
| 38. | Metal modified Polycarbosilanes as heterogeneous catalysts. | K. Sreekumar, K. Mangala |
| 39. | Electronic and optoelectronic properties of low band gap conducting polymers | K. Sreekumar, M.V. Maheshkumar |
| 40. | Theoretical and experimental studies on nonlinear optical properties of main chain chiral polyurethanes | K. Sreekumar, C. V. Elizabeth |
| 41. | Energetic polyoxetanes and polyphosphazenes for binder applications | K. Sreekumar, N. A. Anoop |



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17. Seminar / Conference / Workshop / Refresher Course conducted by the Department :

Sl.	Title	Duration	Co-ordinator	Funding Agency
1.	National Seminar on Current Trends in Chemistry - CTric 2008	18 - 19	Dr. P.A. Unnikrishnan	KSCTE , UGC

18. Consultancy Work :

Sl. No.	Nature of Consultancy	Sponsoring Agency
	Nil	

19. Extension Services : Nil

20. Departmental Publications, if any : Nil

21. Any Other Achievements/Activities : Nil



DEPARTMENT OF APPLIED ECONOMICS

Estd : 1979

Economics was established in the University in the year 1979. It was originally envisaged primarily as a research-oriented department with its focus on applied economic problems. Situated in a Science and Technology academic environment, the Department promotes studies and research pertaining to the economic dimensions of science, technology and society as also the economic problems of the region.

1. Programmes of Study/Research :

The candidates for the Ph.D and M.Phil programmes are admitted on the basis of an entrance test and an interview. The dates of which are notified by the University during the month of December. Candidates eligible for the Junior Research Fellowship from the UGC are exempted from the entrance test for the Ph.D programme.

The Master of Business Economics (MBE) programme at the department is designed to provide advance theoretical and applied economics education, involving:

- A grounding in the principles of microeconomics
- An understanding of different schools of thought in macroeconomic theory and policy
- An appreciation of the nature of business and its role within the private enterprise system.
- The ability to use basic economic principles to analyse decision making within the firm and identify and explain the impact of key governmental policies on business
- A familiarity with recent developments in economic approaches to business strategy.
- A range of transferable skills in task-planning, communication, research, information analysis and interpretation and team-working.

2. Faculty Members

Sl. No	Name	Designation	Qualification	Specialisation
1	Dr. S.Harikumar	Professor and Head	Ph.D	Agricultural Economics, Environmental Economics
2	Dr.P.Arunachalam	Reader	Ph.D.	Quantitative Methods, International Economics



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Sl. No	Name	Designation	Qualification	Specilisation
3	Dr.D.Rajasenan	Professor	Ph.D.	Econometrics, Fisheries Economics
4	Dr.M.Meera Bai	Reader	Ph.D.	Industrial Economics, Gender Economics
5	Sri. P.K.Manoj	Lecturer	(results awaited)	Finance and Accounts, Business Strategy, Operations Management
6	Dr.M.K.Sukumaran Nair (on leave)	Professor	Ph.D.	Economics of Technology, Technology Change and Small Business Economics

3. Visiting Faculty : Nil

Sl. No	Name	Designation	Qualification	Specilisation
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4. Research Staff : Nil

Sl. No	Name	Designation	Qualification	Specilisation
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5. Research Scholars

Sl. No	Name	Funding Agency	Guide	Area of Work
1.	Ranjini R.Prabhu		Dr.D.Rajasenan	
2	Harilal G.		Dr.Mary Joseph	
3	A.B.Aliyar		Dr.P.Arunachalam	
4	Sumi Nair S.			
5	Sebastian Thomas			
6	V.Sreekumar			
7	Parvathy P.		Dr.D.Rajasenan	Marine Economics



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Sl. No	Name	Funding Agency	Guide	Area of Work
8	Sudeep S.			
9	T.G.Saji			
10	Sangeetha K.Pratap			
11	Jayasree Paul		Dr. Mary Joseph	Developmental Economics
12	Ansar A.S			
13	Anupa Jacob			
14	Joy Joseph		Dr. P.R.Wilson	
15	Emmanuel Thomas		Dr.M.K.Sukumaran Nair	
16	Sajitha P.P.		Dr.K.C.Sankaranarayanan	
17	Dhanalakshmi T.		Dr.K.C.Sankaranarayanan	Environmental Economics
18	Suprabha K.M		Dr. K.B.Pavithran	
19	K.M.Rajani		Dr.K.C.Sankaranarayanan	
20	Jomi Thomas		Dr. S.Anilkumar	
21	Tojo Jose		Dr. P.Arunachalam	
22	Raveendrakumar D.		Dr. D. Rajasenan	
23	Bindu George		Dr. D.Rajasenan	
24	Mini Zacharia		Dr. M.K. Sukumaran Nair	
25	Tom Jacob		Dr. M.K. Sukumaran Nair	
26	Koshi P. Mathew		Dr. M.K. Sukumaran Nair	
27	Thomas Mathew		Dr. M.K. Sukumaran Nair	
28	Benny Thomas		Dr. P. Arunachalam	
29	Toms Joseph		Dr.Tarian George	Rubber Production sector
30	Kunhikkannan T.P		Dr. M.K.Sukumaran Nair	
31	Smitha T.H.		Dr.K.C.Sankaranarayanan	Indian Economy
32	Binny Chandy		Dr. Tharian George K	
33	Robins Jacob		Dr. D.Rajasenan	
34	Mary Antony		Dr. S.Anilkumar	
35	Florance M.A.		Dr. D>Rajasenan	
36	Sudheer S.P.		Dr. P.Arunachalam	

6. Administrative Personnel

Sl. No.	Designation	No. of posts
1	Sel. Gr. Assistant	1
2.	Sel.Gr.Typist/Stenographer	1
3	Peon	1



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4	Sweeper cum cleaner	1
5	Assistant on daily wage basis	1
6	Asst. Librarian	1
7	Professional Assistant on daily wage basis	1

7. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	MBE	10	5	15
2	M.Phil.	1	8	9

8. Research Facilities :

a. Laboratories (List out Major equipments available)

b. Library

No. of books and Journals on 31 st March of previous year	Additions during the year current year
Books – 10521	152
Back volume – 1545	55
Indian Journals – 40	30
Foreign Journals – 10	9

c. Others

9. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Dynamics of Deforestation on the Socio-economic Profile of Tribal Women in Attappady, 2007	Hazeena V.A.	Dr. M.Meera Bai

10. Publications

a. Papers

1	Dr. S.Harikumar	Consumption Expenditure and Health Status: The cause of Kerala (Jointly with Dhanya Sudhakar), Kerala Economy to Performance, ed.Meera bai M., Serials, New Delhi 2008. Structural disequilibrium in the labour market: A study of job mismatch in the job marker for the educated in Kerala, (Jointly with T.Remadevi) Keralas Development issues in the New Millennium
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- 2 Dr.P.Arunachalam ed. B.A. Prakash and V.R.Prabhakaran Nair, Serials, New Delhi 2008
- 'EPZ and SEZ in India: An Analysis', Southern Economist, Vol. 46, No. 19, Feb. 1, Bangalore, Arunachalam (2008)
- 'Special Economic Zones and FDI in India', Souvenir, Bishop Herber College, Tiruchy, 27th February. Arunachalam (2008)
- "Minority Entrepreneurship : Problems and Prospects", South Asian Journal of Human Rights, New Delhi. Arunachalam and Mavoothu (2007)
- "HRM Practices in SEZs in China: The Implications for India", International Research Journal of Social Sciences (Forthcoming), New Delhi. Arunachalam and Mavoothu (2008)
- "Special Economic Zones and Displacement of People in India", International Research H Journal of Social Science (Forthcoming) New Delhi. Arunachalam and Mavoothu (2008)
- "HR Initiatives for Differently Abled by Indian Corporates", Indian Journal of Human Rights and Justice, New Delhi. Arunachalam, Mavoothu and Pooduval (2007)
- "Economic Rights of Differently Abled by Indian corporates", Indian Journal of Human Rights and justice, New Delhi. Arunachalam, Mavoothu and Poduval (2007)
- "Special Economic Zones in India: Lassons from China" Proceidings in an International Conference, onAdvanced Computing and Communication Technologies for I ligher Performance Applications Conducted from 24th to 26th September 2008 at Federal institute of Science and Technology (FISAT) Arunachalam (2008)
- Special Economic Zones, Proceedings, National Seminar on India's Economic Reforms-recent changes and Future Challenges organized by Sri. Sarada College for Women, Salem, Temil Nadu held on 27.09.2008. Arunachalam (2008)
- Special Economics Zones in India : Lessons from China in a UGC, ASHSS, ICSSR (SRC) and APSCHE sponsored National Semiar on "Special Economic Zones: Engines of Growth and Social Development for India Present Problems and Future prospects" held at Osmania University, Hyderabad held on 16th and 17th October 2008 Arunachalam (2008)
- Special Economic Zones in India : Lessons from China in a UGC, ASHSS, ICSSR (SRC) and Apsche sponsored National Seminar on "Special Economic Zones: Engines of Growth and Social Development for India Present Problems and Future prospects" held on Osmania University, Hyderabad held on 16th and 17th October 2008 Arunachalam (2008)
- "Special Economic Zones and Displacement of Population in India" National Seminar Proceedings, Population dynamics and Human



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- Development”, Centre for Population Studies, University of Madras, Chennai - 600 005. Arunachalam (2008)
- Introduction : Emerging Trends in Technical Education in Kerala
Dr. M.Meera Bai (ed), Technical Education in Kerala: Emerging Trends, Serials Publications, New Delhi, 2008
- “Technical Education in India: The Way Ahead” in Dr. Meera Bai M. (Ed), Technical Education in Kerala: Emerging Trends”, Serials Publications, New Delhi, 2008
- “Technical Education and Gender Needs” Dr. Meera Bai M. (ed) Technical Education in Kerala: Emerging Trends, Serials Publications, New Delhi, 2008.
- “Introduction” Dr. Meera Bai M.(ed), Kerala Economy: Slumber to Performance”, Serials Publications, New Delhi, 2008.
- Technical Education and Gender Needs A Keralite’s View”, Southern Economist. Vol. 4G Number 18, January 15, 2008.
- 3 Dr. M.Meerabai Networking among women Entrepreneurs in Kerala” Southern Economist, Vol. 46, Number 19, Feb, 1, 2008.
- “Technical Education in India: Opportunities and Future Strategies”, Southern Economist, Vol. 46, No. 16, December 15, 2007.
- “ICT Industry in India: a Swot Analysis”, Journal of Global Economy, (Oct.-Dec. 2007, Vol.3, No. 5&6, pp.263-278.
- “Data Mining: Technology for Competitiveness of Banks in the Knowledge Economy”
The Indian Banker, (September 2007), Vol. 02, No. 09, pp.24-28.
- “Rural Kerala be Focussed”
Kerala Calling, January 2008, Vol. 28, No.3, pp.38-39 (Govt. of Kerala Publication) (Information & Public Relations Dept.)
- “E-Governance Initiatives in Kerala: The Way Ahead”
Southern Economist, Vol.46, No.21, March 01, 2008, pp.05-08.
- “Human Resource Management in Banks: Some Strategic Imperatives
Indian Banker (Journal of Indian Banks’ Association, Mumbai), Vol. II, No. 2, February 2008, pp.35-41
- “Innovative Technology in Indian Banking: the case of Cheque Truncatoin.”,
Proceedings of AICTE & CSR Sponsored National Seminar on Avanced Networking Technologies and Security Issues, at Federal Institute of Science and Technology (FISAT), Ankamaly, Kerala during Aug. 07-10, 2007. (Paper No.15) (pp.106-114).
- 4 Dr. P.K.Manoj “Data Mining and its Role in Improving the Competitiveness of Banking Operations” Proceedings of National Conference on Theory



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and Practice of Operational Research in Information Technology and Supply Chain Management (ORITSCM 2007) at Thiagarajar College of Engineering (TCE), Madurai during Sept. 6-8, 2007; organized by ORSI, IISc, Bangalore Chapter and Department of Mechanical Engineering, Thiagarajar College of Engineering. (Paper No.13) (pp.76-86)

“Technologies for Affordable Housing in India: an International Perspective”

Proceedings of the International Conference on Innovative and Smart Structural Systems for Sustainable Habitat (INSIIAB 2008) at Coimbatore Institute of Technology, Coimbatore on Jan 03-05, 2008.

“Technological Innovation for Enhanced Productivity: A Study of Indian Manufacturing Sector in the LPG Regime”

Proceedings of International Conference on Emerging Technologies and Applications in Engineering, Technology and Sciences (ICETAETS-2008) at Sourashtra University, Rajkot on Jan. 13-14, 2008 (Vol.II, pp.1786-1795)

“Role of Lean Manufacturing in Enhancing the Competitiveness of Indian Manufacturing in the LPG Regime: An Analysis”

Proceedings of International Conference on Resource Utilization and Intelligent Systems (INCRUIS 2008) during January 3-5, 2008 at Kongu Engineering College, Erode, Tamil Nadu: (Vol. 1, pp.182-187)

“Manufacturing Competitiveness and Indian Economic Development: Some Strategic Imperatives” Conference Volume Vol. I relating to “Development Convention 2008” on “Rethinking India’s Growth Strategy, Services Vs. Manufacturing” held during 20-22 February, 2008 at Institute of Public Enterprise (IPE), Hyderabad. (ICSSR Sponsored National Conference)

“Higher Education in India - The Way Ahead” Proceedings of the International conference on Reforms in Higher Education in Asia (RHEA-2008)” (Sponsored by ICSSR) organized by CPA College, Pankajam Nagar, Bodinayakanur (TN) during 23-25 March, 2008. pp.17-26

“Positioning India in the Global Tourism Village: Strategies for Sustainable Tourism Development” Proceedings of the International conference on “Managing Global Organization (Challenges, Opportunities and Strategies)” organized by Tecnia Institute of Advanced Studies, Delhi on 23 February, 2008.

“Small and Medium Scale Enterprises in India: Strategies for Enhanced Productivity and Competitiveness” (Paper Code. BP-126-015) Proceedings of the International Conference on “Issues and Challenges in Supply chain Management” organized by the Dept. of Mechanical Engg., Institute of Tech, BHU, Varanasi, in association



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with institution of Engineers (India) on 28-30 March, 2008, pp.87-93.
“Revival of Indian Agriculture for Balanced Economic Development: a Few Macro Level Strategies” Proceedings of the International conference on Sustainable Agriculture organized by CMS College, Kottayam (in collaboration with DCDC, MG University) during February 06-07, 2008.

“Environment Friendly Tourism for Economic Development of India: an Analysis” International Conference on Biodiversity Conservation and Management, organized by Rajive Gandhi Chair, School of Environmental Studies, CUSAT during February 03-06, 2008.

“Sustainable Tourism in India: a Study from a Global Perspective with Focus on Toursim Prospects of Kerala”.

Second International Conference on “Responsible Toursim in Destinations” organised by Incredible India (Govt. of India), ICRT India and Kerala Tourism (Govt. of Kerala) during March 21-24, 2008 at Hotel Le-Meridian, Kochi, Kerala.

b. Books

- 1) “Restructuring Economics Education in India: An Imminent Need” in K.A.Rasure (Ed) “Economics of Education, Health and Human Resource Development” Vol. One, Chapter 21, pp.324-343. Dr. Manoj P.K. Publishers: Abhijeet Publications, New Delhi. Year: 2008; Price: Rs. 1980.
- 2) “Micro Fiance in Housing” in Daniel Lazar & Palanichamy (Eds.), “Micro Finance and Poverty Eradication: Indian and Global Experiences”, Part - I, Chapter 6, pp.70-84. Publishers: Pondicherry University in Association with New Century Publications, New Delhi. Year: 2008; Price: Rs. 1870.00

11. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students:

Name of Participant	Name Seminar/ Conference/Workshop	Role
Dr.M.Meera Bai	“Intellectual Property Rights”, organized by the Department of Applied Economics, funded by the Kerala State Council for Science and Technology and Environment on 4th July 2007	Participant
	“Sexual Harassment at Work Places” organized by the National Institute of Public Co-operation and child Development, southern Regional Centre, Bangalore during 23-25, 2008	Participant
Dr. Manoj P.K.	AICTE & CSIR Sponsored National Seminar on Advanced Networking Technologies and Security Issues, at Federal Institute of Science and Technology (FISAT), ankamalay, Kerala during Aug. 07-10, 2007. (Paper No.15, pp.106-114) in the Proceedins)	Paper Presenter



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Dr. Manoj P.K.	National Conference on Theory and Practice of Operational Research in Information Technology and Supply Chain Management (ORITSCM 2007) at Thiagarajar College of Engineering (TCE), Madurai during Sept. 6-8, 2007, organized by ORSI, IISc, Bangalore Chapter and Department of Mechanical Engineering, Thiagarajar College of Engineering. (Paper No.13, pp.79-86 in the Proceedings)	Paper Presenter
Dr. Manoj P.K.	National Conference on Innovations in Information & Communication Technology 2007 (NCICT 2007) at PSG College of Technology, Coimbatore, Tamil Nadu, during September 21-22, 2007. (Paper No.21, "Information Processing", pp. 83-88 of the Proceedings)	Paper Presenter
Dr. Manoj P.K.	International Conference on Innovative and Smart Structural Systems for Sustainable Habitat (INSIAB 2008) at Coimbatore Institute of Technology, Coimbatore on Jan 03-05, 2008	Paper Presenter
Dr. Manoj P.K.	International Conference on Emerging Technologies and Applications in Engineering, Technology and Sciences (ICETAETS-2008) at Sourashtra University, Rajkot on Jan. 13-14, 2008. (Vol.II, pp.1786-1795)	Paper Presenter
Dr. Manoj P.K.	International conference on Resource Utilization and Intelligent Systems (INCRUIS 2008) during January 3-5, 2008 at Kongu Engineering College, Erode, Tamil Nadu (Vol. I, pp. 182-187)	Paper Presenter
Dr. Manoj P.K.	"Development Convention 2008" on "Rethinking India's Growth Strategy, Services Vs. Manufacturing" held during 20-22 February, 2008 at Institute of Public Enterprise (IPE), Hyderabad. (ICSSR Sponsored National Conference)	Paper Presenter
Dr. Manoj P.K.	International Conference on Reforms in Higher Education in Asia (RHEA-2008)" (Sponsored by ICSSR) organized by CPA College, Pankajam Nagar, Bodinayakanur (TN) during 23-25, March 2008. (Paper included in the Proceedings, pp. 17-26)	Paper
Dr. Manoj P.K.	International Conference on "Managing Global Organizations (Challenges, Opportunities and Strategies)" organized by Tecnia Institute of Advanced Studies, Delhi on 23 February, 2008.	Paper Presenter
Dr. Manoj P.K.	International Conference on "Issues and Challenges in Supply Chain Management" organized by the Dept. of Mechanical Engg. Institute of Tech., BHU,	Paper Presenter



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	Varanasi, in association with Institution of Engineers (India) on 28-30 March, 2008. pp.87-93	
Dr. Manoj P.K.	International Conference on Sustainable Agriculture organized by CMS College, Kottayam (in collaboration with DCDC, MG University) during Feb. 06-07, 2008.	Paper Presenter
Dr. Manoj P.K.	International Conference on Biodiversity Conservation and Management, organized by Rajive Gandhi Chair, School of Environmental Studies, CUSAT during February 03-06, 2008.	Paper Presenter
	Second International Conference on "Responsible Tourism in Destinations" organised by Incredible India (Govt. of India), ICRT India and Kerala Tourism (Govt. of Kerala) during March 21-24, 2008 at Hotel Le-Meridian, Kochi, Kerala	Paper Presenter
Dr. P. Arunachalan	National Seminar on "The New Patent Regime in India: Intellectual Property Rights" held on 4th July 2007, at the Department of Applied Economics, CUSAT.	Participant
	National Seminar on "Bridging the Rural and Urban Gap" held on 7.0.2007 at P.S.G. Krishnamammal College for Women, Coimbatore	Valedictory
	Managing Incipient Sickness in the Small Scale Industries" in the National Symposium on "Managing small Scale Industries in India. Challenges and Remedies", held on Thursday 27th September 2007 at Nirmala College, Coimbatore	Paper Presenter
	Presented a paper on "What Foreign Experts Expect from US" on the National Level Workshop on Research Methodology in Social Sciences held from 25.10.07 to 26.10.07 at PSG College of Arts and Science, Coimbatore 14.	Paper Presenter
	Talk on "The Making of Monetary Policy" organised by Reserve Bank of India" held on Friday, November 30, 2007 at Hotel Abad Plaza, Cochin	Invited Guest
	National Seminar on Arthasasthra 2007, conducted by Indian Institute of Scientific Heritage (IISH), held at Aluva on 22.12.2007.	Participant
	"Globalization and Foreign Direct Investment in India, in the National Seminar on globalization and its impact on Indian Economy", organized by M.S. University Tirunelveli, Tamil Nadu held during	Paper Presenter



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January 21-23, 2008.

National Seminar on External sector of India including panel Discussion on Trends, Causes and Implications of Exchange Rate Movements of Rupee, organized by Albertian Institute of Management, Ernakulam held in February 1, 2008 Participant

“Tourism” a case study of Waynadu District, Kerala in the International conference on Biocam 2008. Biodiversity Conservation and Management” organized by Rajeeve Gandhi Chair, Cochin University of Science and Technology held during 4.2.2008 Paper Presenter

National Seminar on “Role of FDI in Indian Economy” organized by Department of Economics, Bishop Heber College Tiruchi, Tamil Nadu held on 27th Feb. 2008 Resource Person

National Seminar on “Business Research Methods and Models” organized by Department of Applied Economics, CUSAT, held on 3.3.08 to 4.3.08 Resource Person

“Management Education in India: History, Problem and Prospects” International Conference sponsored by ICSSR from 3.3.08 to 5.3.08 Paper Presenter

International Seminar on “Rural Communities: Problems and Challenges” organized by Department of Sociology, University of Madras held from 5.3.08 to 6.3.08 Title of Paper “Special Economic Zones and Rural and Urban Divide” Paper Presenter

“Service Sector Spectrum in the New Millennium” organized by the Dept. of Economics, Periyar University Salem, TN on 13th and 14th of March 2008. The title of the paper is “FDI in Service Sector and Special Economic Zones in India” Chaired a session and presented a paper

“RBI and ICSSR sponsored National Seminar on “Ethical Empowerment on poor under Sustainable Environment” organized by the Department Economics, Sri Venkateswara University, Tirupathi, Andhra Pradesh held from March 14th and 15th 2008. The title of the paper presented is “Ethics and industrilization: With special reference to Land Acquisition for Special Economic Zones in India” Chaired a session and presented a paper

Chaired a session and presented a paper

Paper - “Importance of employing differently abled persons in Indian Corporate as a Corporate Social



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Responsibility for a Sustainable society” jointly prepared with Dr. D.Mavoothu, in the National seminar on Ethical Empowerment of Poor Under sustainable Environment held on March 14-15th, 2008 at Tirupathi Sri. Venketeswara University	Chaired a session and presented a paper
National Seminar on “Action Plan for the RAMSAR sites of Kerala” organized by Rajiv Gandhi Chair, School of Environmental Studies, CUSAT, Centre for Environment and Development, Thiruvananthapuram, Kerala State Council for Science and Technology and Environment, Government of Kerala, held on 24th and 25th March 2008.	Participant
Participated as an Expert, Chaired a Session and presented a paper on Special Economic Zones and Displacement of People in India at the National Workshop held at Gandhigram Rural University on 27th March 2008.	Expert, Chaired a session and presented a paper
Participated as Chairman-technical Session and presented on “SEZ in India” in the National Seminar on Economic Reforms in India held at Dhanaraj Baid Jain College, Chennai - 600 097 conducted by the Department of Economics and Department of Co-operation on 29th March 2008	Chaired a session and presented a paper
Participated in the UGC-SAP-DRS sponsored National Seminar on Current Indian Industrial Scenario: Problems and Prospects Organized by the Department of Economics, Bharathiar University, Coimbatore on 31th March and 1st April 2008.	Participant
Participated and presented a paper on “Special Economic Zones and Displacement of People” in India in the two days International Seminar on “Globalisation and its Impact on Society” organized by Pondichery University, on 30th and 31st March 2008.	Participant and paper presenter
Participated and presented another paper on “HRM parctices in SEZs in China : the Implications for India” in the same International Seminar held in Pondicherry, March 2008.	Participant and Paper presenter



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12. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour/Award	Awarding Agency
Dr. Meera Bai M	UGC Major Research Project	UGC
Sri. Manoj P.K.	Gate - 2007 (Production and Industrial Engineering) Passed with Rank - 181; Score-335; Total No of Candidates appeared for GATE - 2007 (in Production and Industrial Engineering) = 1321	UGC
Sri. Manoj P.K.	UGC-NET (in Commerce) Examination conducted by the UGC was cleared. Certificate No. A 043293 dated 09.11.2006 of the UGC	UGC
Sri. Manoj P.K.	Accredited Management Teacher (AMT) (in Financial Management) was conferred by the All India Management Association (AIMA), New Delhi, (Reg. No IAMT/01/2006)	AIMA
Sri. Manoj P.K.	CAIIB (Certified Associateship of the Indian Institute of Banking and Finance) Examination was passed in First Class with Distinction; thus becoming a Certified Associate of IIBF, Mumbai. (Manoj P.K.)	
Sri. Manoj P.K.	MISTE. That is, Membership (Life) with "The Indian Society for Technical Education" (ISTE), was conferred in 2006 (LM 48930) Manoj P.K.)	
Sri. Manoj P.K.	AMIIE. That is, Associate Membership with Indian Institution of Industrial Engineering, (IIIE) was conferred (AMIIE 8945) Manoj P.K.)	

13. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigation(s)
1	Social Safety Nets, Technology and Industrial Policies for Informal Women Workers in Globalised India: A Micro Level Study-Major Research Project	UGC	Rs.3,93,400/-	Dr.M.Meera Bai



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14. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	National Seminar (Two day) Emerging Trends in Technical Education in Kerala	2 days	Dr. M.Meera Bai	AICTE
2.	"Intellectual Property Rights"	1 days	Dr. M.Meera Bai	Kerala State Council for Science, Technology and Environment

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DEPARTMENT OF ATMOSPHERIC SCIENCE

Estd: 1996

The Department of Atmospheric Sciences was formed in 1996 by bifurcating the erstwhile Physical Oceanography and Meteorology Division of the School of Marine Sciences. The Department started offering a 4-semester M. Sc programme in Meteorology since 1975 and a 4-semester M. Tech in Atmospheric Science since 1989.

Apart from teaching activities, research works in modeling, diagnostic, theoretical and observational studies in the field of Meteorology/Atmospheric Sciences are in full swing. The Department has started the phase II of the ambitious project under the ***New Millennium Indian Technology Leadership Initiative (NMITLI)***, after successfully completing the first phase of **Mesospheric Modelling of Monsoon Related Predictions**.

The University Grants Commission has selected the Department of Atmospheric Sciences under its **Special Assistance Programme (SAP)** based on the quality of teaching, academic achievements, research in thrust area and viable potential for future development. The essence and primary aim of SAP of the UGC is the combination of teaching and research to encourage group research efforts. The project entitled, ***Effect of global warming and the land use changes on the weather and climate of Kerala***, under UGC – SAP - Level DRS Phase II from 2007 to 2012. The Department receives Rs. 36.5 lakhs to carry out research in the frontier area of Atmospheric Sciences. The financial support for five years is expected to develop the Department into a Centre of Excellence.

Department of Science and Technology (DST) identified the Department of Atmospheric Sciences as one of the premier centres in India in the field of Atmospheric Research and Teaching and sanctioned Rs. 30 Lakhs under its **FIST** programme.

The Department has been pursuing research on the Indian Monsoon over the past two decades. Taking into account the often-felt need for a coordinated effort on monsoon research in the country, the University has established a **Centre for Monsoon Studies** in the Department of Atmospheric Sciences in July 2000. The centre is also engaged in R&D activities with SNOM and NODPAC of Southern Naval Command. A prestigious project ANTHARIKSHA, funded by ISRO and Govt. of Kerala is also at full swing to set up a network of automatic weather stations in and around selected places in Kerala and Lakshadweep. The Centre is now actively involved in the prestigious ARMEX (Arabian Sea Monsoon Experiment) project of MoES-INCOIS in collaboration with NIO.

The University has also established a **Centre for Space Research** to conduct research projects funded by Indian Space Research Organisation in the fields of Atmospheric Dynamics and Modelling, Remote Sensing Applications, Meteorology, Oceanography, Geology, Fisheries, Electronics and Communications etc. under the Department of Atmospheric Sciences. The collaborative programme will enhance academic activities in space science and technology and their applications generate human resource and infrastructure developments in CUSAT and will support the space programme of our Country.



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Eight efficient and dynamic faculty are available in the Department. Prestigious awards such as BOYSCAST, Commission of the European Communities (CEC) Fellowships, etc. were awarded to the faculty. The Department has produced 34 Ph. D.s and published about 190 research papers in reputed international and national scientific journals. In addition, more than 200 research papers were presented in various national/international scientific conferences in India and abroad. Eminent Scientists and Professors are often invited to the Department for giving lectures in advanced areas

The Department has high-speed computational facilities, and full-fledged surface weather observatory. It has also setup a data bank, which has NCEP/NCAR reanalysis global data, UARS data from NASA, Rocket data, MST Radar data, surface weather observations, TOMS data, etc.

Seven national-level seminars and an International seminar were organized and conducted by the Department during the past five years.

1. Programmes of Study/Research

- (1) M.Sc. Meteorology
- (2) M.Tech Atmospheric Sciences
- (3) Ph.D Programme in Meteorology/Atmospheric Science

The syllabi for both the M.Sc. Course in Meteorology and the M.Tech Course in Atmospheric Sciences are fully modified at par with the syllabi of foreign universities of international standard. The M.Sc.Course is now in Credit System with 50% internal and external evaluations and the M.Tech Course with 100% internal evaluation. M.Tech Course is a four-semester programme from 2002 admissions.

2. Faculty Members:

Sl. No.	Name	Designation	Qualification	Specialization
1.	Dr. C. A. Babu	Reader & Head	M.Sc., Ph. D	Boundary layer Meteorology
2.	Dr.H.S.Ram Mohan	Professor	M.Sc.Tech.,Ph.D	Agricultural Meteorology, Hydrometeorology
3.	Dr. K. Mohan Kumar	Professor	M.Sc., Ph.D	Stratosphere-Troposphere Interactions
4.	Dr. K. G. Anil Kumar	Reader	M.Sc., Ph. D	Air Pollution Meteorology
5.	Dr. Santosh. K. R	Reader	M.Sc., Ph. D	Remote Sensing
6.	Sri. B. Chakrapani	Sel. Gr. Lecturer	M.Sc.	Numerical Modelling
7.	Dr. V. Madhu	Lecturer	M.Sc., Ph. D	Middle Atmospheric Dynamics



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Sl. No.	Name	Designation	Qualification	Specialization
8.	Dr. P. V. Joseph	Emeritus Professor	MA, Ph.D	Tropical Meteorology
9.	Dr. B.V.Charlotte	Lecturer on contract basis	M.Sc., Ph.D.	Synoptic Meteorology

3. Research Staff

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Bindu G	Project Scientist	M.Sc., Ph.D	Air Pollution Meteorology
2	Johnson Zacharia	SRF	M.Tech	
3	Sandeep V.M.	JRF	M.Sc	
4	Amritash S.	JRF	M.Sc	
5	Lix John	JRF	M.Sc	
6	Hebin.C	JRF	M.Sc.	
7	Gireesh Kumar	JRF	M.Sc.	
8	Lorna R Nayagam	JRF	M.Sc.	
9	Rajesh . J	JRF	M.Sc.	
10	Nithin Viswambharan	JRF	M.Sc.	
11	Sabin T.P.	SRF	M.Sc.	
12	Smitha John	JRF	M.Tech	
13	Vanisree. S	JRF	M.Sc.	
14	Vijayakumar	JRF	M.Sc.	
15	Sabeer Ali	JRF	M.Sc.	

4. Research Scholars

Sl. No	Name	Funding Agency	Guide	Area of work
1.	Abhilash S	CSIR SRF	Dr.K.Mohan Kumar	Meteorology
2.	Asha S Philip	CSIR SRF	Dr. C. A. Babu	"
3	Smitha A.	CSIR SRF	Dr. H.S.Ram Mohan	"
4	Abeesh B	CSIR SRF	Dr. K.Mohan Kumar	"
5	Prasanth A Pillai	CSIR-SRF	Dr.K.Mohan Kumar	"
6	Johnson Zacharia	DOD-SRF	Dr. C. K. Rajan	"



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Sl. No	Name	Funding Agency	Guide	Area of work
7	Jayakrishnan P R	CSIR JRF	Dr. C. A. Babu	"
8	Nithin Viswambharan	UGC JRF	Dr. K. Mohan Kumar	"
9	Sivaprasad P.	UGC JRF	Dr. C.A. Babu	"
10	Sabeer V	CSIR JRF	Dr. K.Mohan Kumar	"
11	Vijayakumar	CSIR-JRF	Dr. Santosh. K. R	"
12	Vanisree. S	ISRO-JRF	Dr. C. K. Rajan	"
13	Lorna R Nayagam	SAP-JRF	Dr.H.S. Ram Mohan	"
14	Rajesh. J	SAP-JRF	Dr.K.Mohan Kumar	"
15	Reshmi E.A.	JRF	Dr. K.Mohan Kumar	"
16	Smitha John	JRF	Dr. K.Mohan Kumar	"
17	Subash. N		Dr. H. S. Ram Mohan	"
18	Baby Chakrapani		Dr.H.S.Ram Mohan	"
19	Gopakumar C.S		Dr. H.S. Ram Mohan	"
20	Krishnakumar K.N		Dr. H.S.Ram Mohan	"
21	Lathadevi. P. K		Dr.C.K.Rajan	"
22	Sailaja Devi		Dr. C. K. Rajan	"
23	Sakkeer Hussain. A		Dr. Santosh K R	"
24	Shaji Joseph		Dr. C. K. Rajan	"
25	Sheena Xavier		Dr. C. K. Rajan	"
26	Smitha A		Dr. H. S. Ram Mohan	"
27	Sanjay Kumar Mehta		Dr. K.Mohan Kumar	"
28	Joseph Sebastian M.D		Dr. C. K. Rajan	"

5. Administrative personnel

Sl No.	Designation	No. of Posts
1.	Section Officer	1
2.	Office Supdt.	1
3.	Assistant Grade II	1
4.	Peon	1



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6. Technical Personnel

Sl No..	Designation	No. of Posts
1.	Technical Assistant Grade III	2

7. Students Enrollment

Sl. No.	Programme of study	Men	Women	Total
1.	M.Sc.(Meteorology)	6	5	11
2.	M.Tech (Atmospheric Science)	4	3	7
3.	Ph.D	3	4	7

8. Research Facilities

a. Laboratories (List out Major equipments available)

1. Meteorological Instrumentation Laboratory : **Sonic Anemometer**
2. Synoptic Lab
3. Computer Lab
4. Surface Meteorological Observatory
5. Modelling Lab : SGI 02/origin 200/350/IBM Workstation
6. Atmospheric Data Bank

b. Library

No. of books and Journals as on 31st March of the Previous Year	Additions during the current year

9. Ph.D awarded/ submitted

Sl. No.	Title of the Thesis	Name of Research Scholar	Supervising Guide
1.	Dynamic Characteristics of the Atmospheric Boundary Layer during Different Phases of Monsoon	Hamza Varikoden	Dr.C.A.Babu

10. Publications:

a. Papers

Sl.No.	Name of Paper
1.	Tropospheric biennial oscillation of Indian summer monsoon with and without El-nino southern oscillation



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Sl.No.	Name of Paper
2	Local Hadley circulation over Asian monsoon region associated with Tropospheric biennial oscillation
3.	Stratosphere-Troposphere intereaction associated with Biennial oscillation of Indian summer monsoon
4	Role of TBO and ENSO scale Ocean-Atmosphere intereaction in the Indo-Pacific region on Asian summer monsoon variability
5	Seasonal modification of Walker Circulation Cells associated with Tropospheric Biennial Oscillation cycle
6	Effect of late 1970's climate shift on Tropospheric Biennial Oscillation- Role of local Indian Ocean processes on Asian Summer monsoon.
7.	An empirical model for the seasonal prediction of southwest monsoon rainfall over Kerala, a meteorological subdivision of India
8	A Multiple Linear Regression Model for the Seasonal Prediction of Rainfall over Peninsular India
9	Seasonal Prediction of Rainfall over Peninsular India using a Principal Component Regression Model
10	Long Range Forecasting of Monsoon Rainfall over Peninsular India for Recent Years
11	Prediction of Monsoon rainfall over Peninsular India using parameters over Arabian Sea and adjacent seas.
12	Solar signal in the monsoon and post monsoon Total Precipitable Water over Peninsular India region
13	Decadal Variability in the monsoon and post monsoon total Precipitable water over Peninsular India region
14	Solar cycle signal in the seasonal moisture field over the Peninsular Indian region
15	Variation in radio refractivity index associated with formation of low - pressure system
16	Analysis of sea surface temperature from TRMM Microwave Imager data using Wavelet based methods
17	Tropospheric Biennial Oscillation of Indian summer monsoon independent of EI-Nino Southern Oscillation
18	Effect of Climate change in the late 1970's on Tropspheric Biennial Oscillation
19	Evidence of increase in Tropospheric biennial oscillation of India summer monsoon after the late 1970's climate shift
20	Interaction between stratosphere and troposphere on quasi-biennial timescale linked with Indian summer monsoon
21.	Atmospheric circulation associated with Tropospheric Biennial Oscillation
22	Tropospheric Biennial Oscillation of Indian summer monsoon without EI-Nino southern oscillation
23	Characteristic features of LLJ & TEJ during Monsoon
24	Observation of multiple cores for LLJ-Analysis using LAWP data
25	Evolutionary characteristics of Indian summer monsoon 2007



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Sl.No.	Name of Paper
26	Stability indices and thermodynamic parameters associated with thunderstorms over Kerala during pre-monsoon seasons
27	Characteristics of Sea Surface Temperature in Arabian Sea in relation to wind forcing
28	Dispersion of pollutants due to industrial sources of Cochin, a modeling study

11. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Madhu V.	Refresher Course on Atmospheric Physics and Climate Change 19 Nov. 15 Dec. 2007	Co-ordinator
Dr. C. A. Babu	IUGG 2007, 2-13 July 2007, Perugia, Italy	Presented paper
Rajesh J	IUGG 2007, 2-13 July 2007, Perugia, Italy	Presented paper
Jayakrishnan P.R.	IUGG 2007, 2-13 July 2007, Perugia, Italy	Presented paper
Sivaprasad P	1st International Workshop on Frontiers of Atmospheric Physics & Technology, held at Kadappa, AP, 20-22 Feb 2008	Presented paper
Jayakrishna P.R.	1st International Workshop on Frontiers of Atmospheric Physics & Technology, held at Kadappa, AP, 20-22 Feb 2008	Presented paper
Dr. C.A.Babu	1st International Workshop on Frontiers of Atmospheric Physics & Technology, held at Kadappa, AP, 20-22 Feb 2008	Presented paper
Asha S Philip	National Space Science Symposium, Tata Institute of Fundamental Research, Ooty, 26-29 Feb, 2008	Presented paper
Vanisree S	National Space Science Symposium, Tata Institute of Fundamental Research, Ooty, 26-29 Feb, 2008	Presented paper



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Prasanth A Pillai	National Space Science Symposium, Tata Institute of Fundamental Research, Ooty, 26-29 Feb, 2008	Presented paper

12. Sponsored Research Projects

Sl. No	Title	Sponsoring Agency	Amount (in lakhs)	Investigator(s)
1.	XBT observations along Cochin to Lakshadweep under (indomodesatcore) ARMEX Programme	DOD	27.70	C.K.Rajan, R. Sajeev & P.V.Joseph
2.	Teaching of Computer Applications at PG Level	UGC	15.00	Head of the Department
3.	Influence of Arabian Sea and the Orography of Western Ghats on the Weather and Climate of Kerala	UGC - SAP	39	All faculty Members
4.	Project for Fund for Improvement of Sci. & Tech Infrastructure	DST	30.00	Head of the Department
5.	Vertical Structure and Dynamics of Tropical Mesoscale Convective Systems : Observational and Modelling Studies	ISRO	18.11	Dr. K. Mohan Kumar
6.	Numerical Simulation of Atmospheric Dispersion for Kerala Coast	ISRO	7.11	Dr. C. K. Rajan
7.	Study of Rain Bearing Monsoon Clouds Using INSAT Data	ISRO	7.47	Dr. Santosh K R
8.	Intra-seasonal Oscillation of Precipitation and Its Coherence with Circulation During Monsoon Using TMI Data	ISRO	3.96	Dr. Santosh K R Dr. H. S. Ram Mohan
9.	Extended Range Prediction of Active and Break Phases of Indian Summer Monsoon	ISRO	19.80	Dr. P V Joseph & Dr. C A Babu
10.	Meteorological Observation Network in Kerala (Anthariksha)	ISRO, Govt. of Kerala & CUSAT	25	Dr. C.K.Rajan



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Sl. No	Title	Sponsoring Agency	Amount (in lakhs)	Investigator(s)
11.	Impact of Bay of Bengal cyclones & West Pacific Typhoons in the sea and swell conditions over Bay of Bengal	SNOM & CUSAT	5	C.K.Rajan
12.	Study on the Anomalous Propagation over East Central Arabian Sea	NODPAC & CUSAT	5	C.K.Rajan
13.	Evaluation of Pollutant Transport and Dispersion in a Coastal area using Mesoscale Model	DST	9.12	G. Bindu
14	Mesoscale modeling for monsoon related weather prediction- Ph II-Development of topography module and coupled slab ocean atmosphere model simulations of Intraseasonal variability of monsoon using Varsha GCM	NMITLI-	31.93	Dr. K.Mohan Kumar
15	Effect of global warming and the land use changes on the weather and climate of Kerala	SAP-DRS Phase II-UGC	36.50	Dr. K.Mohan Kumar

13. Research programmes and activities

Sl. No.	Problems/Topics	Investigator(s)
1.	TBO and Monsoon Variability	Prasanth A Pillai / Dr. K. Mohan Kumar
2.	Numerical Simulation of Atmospheric Dispersion over Kerala coast	Vanisree / Dr. C. K. Rajan
3.	SST and Deep Convection	Sabin. T. P./ Dr. C A Babu
4.	Indian Ocean Climate Variability	Asha. S. Philip / Dr. C A Babu / Hareesh Kumar
5.	Development of Drought Indices for Indo Gangetic Basins	Subash. N / Dr. H. S. Ram Mohan
6.	Crop Weather Modelling of Coconut in the Humid Tropics	Krishnakumar K.N. / GSLHVPrasada Rao/ Dr.H.S.RamMohan
7.	Mesoscale Modelling of a Coastal Environment	B. Chakrapani / Dr. H. S. Ram Mohan
8.	Climate Variability and Plantation Crops Production in the Humid Tropics	Gopakumar C.S./GSLHV Prasada Rao/ Dr.H.S.RamMohan



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Sl. No.	Problems/Topics	Investigator(s)
9.	Physical Effects of Rainfall on Exploitation of Hevea	Dr. C. K. Rajan / Sylajadevi
10.	Study of Monsoon Clouds using Satellite Data	Vijayakumar P/ Dr. Santosh. K. R
11.	Boundary Layer Dynamics and Monsoon	Anishkumar Nair/ Jayakrishnan P R / Dr. C. A. Babu
12.	Tropical Mesoscale Convective Systems	Abhilash. S/ Dr. K. Mohan Kumar
13.	Influence of Arabian Sea on the Weather &	Rajesh J./ Dr. K.Mohan Kumar
14.	Inter-Tropical Convergence Zone and its Variability	Joseph Sebastian M.D/ Dr. C. K. Rajan
15.	Influence of Topography on the Climate of Kerala	Lorna R Nayagam/ Dr. H. S. Ram Mohan
16.	Aerosol and Radiation	Lathadevi. P.K/ Dr. C. K. Rajan
17.	Mixed Layer Variations in the Arabian Sea	Johnson Zacharia/ Dr. C. K. Rajan
18.	Influence of windstress curl over the Bay of Bengal	Smitha A/Dr. H.S.Ram Mohan
19.	Sudden Stratospheric warming over Northern Hemisphere	Reshmi E.A/ Dr. K.Mohan Kumar
20.	Stratosphere-Troposphere coupling	Nithin Viswambharan/Dr. K. Mohan Kumar
21.	Mesoscale Modelling of Atmospheric Phenomena	Smitha John/ Dr. K.Mohan Kumar
22.	Aerosol Study in Boundary Layer	Sivaprasad P/ Dr. C.A.Babu
23.	Ozone - climate interaction	Anila Alex/ Dr.K. Mohan Kumar
24.	Stratosphere-Troposphere Interactions	Sabeer V/Dr. K.Mohan Kumar
25.	A study on the dynamics of atmospheric aerosols over Indian subcontinent and its influence on Indian summer monsoon	Abish B/ Dr. K.Mohan Kumar



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14. Seminars/Conferences/workshop/Refresher course conducted by the Department.

Sl. No.	Title	duration	Co-ordinator	Funding Agency
1.	Refresher Course on Atmospheric Physics and Climate Change	19 Nov.-15	Dr. V.Madhu	UGC
2	Workshop conducted on WMO Day 2008: Theme : Observing our Planet for a Better Future	25 March 2008	Dr. H.S. Ram Mohan	IMS Cochin Chapter

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DEPARTMENT OF BIOTECHNOLOGY

Estd : 1987

The mandate of the Department is to train human resources in Biotechnology and to cater to the needs of the Nation in harnessing the vast biodiversity and to promote bioindustries, not only in the state of Kerala but also in the Nation. The M.Sc. programme in Biotechnology offers comprehensive education in all aspects of modern applied biology. The programme has been designed in such a way that the students are well trained in state-of-the-art techniques in the world of fermentation, molecular biology, genetic engineering, bio-informatics, molecular neurobiology and immunology. The theoretical and practical knowledge acquired by the student during the first three semesters is perfected through an intensive dissertation work during the fourth semester. Topically relevant problems are identified for the purpose so as to impart training in identification and execution of research problems and interpretation of data.

Most of the M. Sc. students opt for research programmes in national/international laboratories after they complete their programme. They also find employment in industries, educational institutions and other organizations involved in R and D and also in medical, pharmaceutical, agricultural and environmental biotechnology sectors.

Research activities of the Department are presently centered on areas such as Microbial Technology, Medical Biotechnology, Genetic Engineering, Molecular Neurobiology, Cell Biology and Plant Biotechnology. The research students generally get absorbed as Scientists in different national and international laboratories and as lecturers in Universities/Colleges.

On an average, about 60% of the M.Sc students clear the NET and 80% pass the GATE.

44 students have so far taken their doctoral degrees from the Department, with about 46 scientific publications from the Department.

A Centre for Neurosciences was established during 2000 in the Department with the intention of bringing the Industries, medical colleges and hospitals closer to research accomplishments. The Centre organizes annual workshops, meetings, lecture and awareness programmes. The Centre also takes up extension activities like conducting neurological surveys, diagnosis, awareness programme, clinical and scientific testing. The research interests of the Centre include molecular aspects of Neurotransmitter receptors functional regulation in relation to Diabetes, Cell proliferation, Cancer, Epilepsy, Herbal medicines, Alcoholism, Bone fracture healing, Stem Cell differentiation aging, Hypoxia and Hypoglycemia. The Centre offers an elective paper in Molecular Neurobiology for M.Sc students and other interested students in the University. It provides opportunities to do research activities in Molecular Neurobiology for students of India and abroad. Every year the Centre conducts World Brain Awareness Programme for the students of Colleges, Schools and Public. This makes people aware how efficiently they can make use of their brain for a better living avoiding disease occurrence.

The Department has linkages with R & D Institutions and Industries such as Sree Chitra Tirunal Institute of Medical Sciences, Indian Spices Research Board, Rajiv Gandhi Centre for Biotechnology, Amritha Institute of Medical Sciences, Lakeshore Hospital and Research Centre, Madona Hospital and Research Centre, Synthite Industries, Kerala Ayurveda Pharmacy Ltd, Medical College, Kottayam, MOSC Medical College, Kolenchery and Muvattupuzha Medical Centre.



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1. Programmes of Study/Research: **M. Sc. and Ph. D., Biotechnology**

2. **Faculty Members**

Sl.No.	Name	Designation	Qualification	Specialisation
1	Dr. M Chandrasekaran	Professor	Ph D	Microbial Technology
2	Dr.C.S.Paulose	Reader, Head, DBT	Ph D	Molecular and Cellular Neurobiology
3	Dr. Sarita.G.Bhat	Lecturer	Ph.D.	Bioprocess Technology
4	Dr. Padma Nambisan	Lecturer	Ph.D.	Plant Biotechnology
5	Dr. Elyas K. K.	Lecturer	Ph.D	Medical Biotechnology
6	Dr. E.Vijayan	Emeritus Professor	Ph.D	Neuroendocrinology

3. **Visiting Faculty (If any)** Nil

Sl.No.	Name	Designation	Qualification	Specialisation
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4. **Research Staff** Nil

Sl.No.	Name	Designation	Qualification	Specialisation
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5. **Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
1.	Sreeja Chellappan	DBT, New Delhi	Prof. M. Chandrasekaran	Alkaline protease production from marine fungus
2.	Jasmin C .	DBT, New Delhi	Prof. M. Chandrasekaran	Molecular cloning & expression of alkaline protease gene
3.	Madhu K .M.	UGC, New Delhi	Prof. M. Chandrasekaran	Cellulase production from a marine fungus
4.	Soorej M. Basheer	CSIR, New Delhi	Prof. M. Chandrasekaran	Lipase production from a marine fungus
5.	Lailaja V.P.	CSIR, New Delhi	Prof. M. Chandrasekaran	Lipase production from marine bacterium
6.	Bijina B.	Welfare Fellowship	Prof. M. Chandrasekaran	Isolation & purification of protease inhibitors
7.	Jissa G. Krishna	KSCSTE, Trivandrum	Prof. M. Chandrasekaran	Pigment production from marine bacteria



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Sl. No.	Name	Funding Agency	Guide	Area of Work
8.	Balarama Kaimal.S	ICMR, New Delhi	Dr.C.S.Paulose	GABA receptor functional regulation during pancreatic regeneration and insulin secretion in rats
9.	Santhosh Thomas. K	DST, New Delhi	Dr.C.S.Paulose	Dopamine receptor functional regulation in pancreatic regeneration & insulin secretion in rats
10.	Akash. K. George	ICMR, New Delhi	Dr.C.S.Paulose	Dopaminergic and Serotonergic functional regulation of Aldehyde dehydrogenase isozymes in alcoholism.
11.	Gireesh. G	KSCSTE, Trivandrum	Dr.C.S.Paulose	Effect of principal components from medicinal plants on insulin gene expression in the pancreatic islets.
12	Finla Chathu	University Fellowship	Dr.C.S.Paulose	Adrenergic Receptor functional regulation and Gene expression in Hypoxia Induced Neonatal Rats
13	Reas Khan	KSCSTE, Trivandrum	Dr.C.S.Paulose	GABA Receptor functional regulation and Gene expression in epilepsy
14	Remya Robinson	University Fellowship	Dr.C.S.Paulose	Dopaminergic Receptor functional regulation in the insulin induced hypoglycaemia
15	Savitha Balakrishnan	University Fellowship	Dr.C.S.Paulose	Cholinergic Receptor functional regulation during adrenal stress in Wistar rats
16	Binoy Joseph	-	Dr.C.S.Paulose	Serotonergic functional regulation and Gene expression in epilepsy



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Sl. No.	Name	Funding Agency	Guide	Area of Work
17	Archana Kishore	CSIR, NewDelhi	Dr Sarita G Bhat	Studies on marine vibriophages
18	Manjusha S	University Fellowship	Dr Sarita G Bhat	Studies on plasmid biology
19	Bernard Rajeev	CSIR, New Delhi	Dr Sarita G Bhat	Molecular characterisation of Vibrios
20	Siju Varghese		Dr Sarita G Bhat	Molecular characterisation of Salmonella
21.	Beena P S		Dr. M Chandrasekaran	Industrial Enzymes from Marine Fungi
22.	Sapna K		Dr. M Chandrasekaran	Enzyme inhibitors from marine organisms
23.	Roselin Alex		Dr, M Chandrasekaran	Bioremediation of Hydrocarbons using marine bacteria
24.	Jeena Augustine		Dr. Sarita G Bhat	Studies on Salmonella phages
25.	Manzur Ali P P		Dr. Sarita G Bhat	Studies on protease inhibitors for biotechnological applications
26.	Anu Joseph		Dr. C S Paulose	Neurotransmitter receptor gene expression and functional regulations during diabetes effect of herbal plant extracts
27.	Nair Ameer Krishnakumar		Dr. C S Paulose	Neurotransmitter receptor gene expression and neurodegenerative diseases
28.	Sajan V L		Dr. M Chandrasekaran	Microbial Technology
29	Pretty Mary Abraham		Dr. C.S.Paulose	Glutamate and GABA receptors subtype gene expressioninterrelationships with serotonin & acetylcholine at the second messenger level durig diabetes and insulin secretion



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Sl. No.	Name	Funding Agency	Guide	Area of Work
30	Peeyushkumar T	-	Dr. C.S. Paulose	Acetylcholine, dopamine epinephire and norepinephrine functional interaction gene expression and second messenger studies during diabetes: Effect of cur cumin and costus picuts on regulation of insulin secretion
31	Anju T.R.	-	Dr. C.S. Paulose	Serotonin receptor subtypes gene expression and functional regulation in hypoxia induced neonatal rats: Interrelationship with GABA and Glutamate
32	Jobin Mathew	-	Dr. C.S. Paulose	Molecular Neurobiology Neurotransmitter receptor gene expression and functional regulation during epilepsy: Effect of herbal plant extracts
33	Sherin Antony	-	Dr. C.S. Paulose	Molecular neurobiology Neurotransmitter receptor gene expression and functional regulation during hypoglycaemia and hyperglycaemia
34	Abraham Mathew	-	Dr. Elyas K. K.	Microbial enzyme (b-β Glucosidase from novel fungal isolates)
35	Rameshkumar S	-	Dr. Elyas K. K.	Molecular studies of the virus causing infectious flacherie in Bombyxmoril
36	Raghul Subin S	-	Dr. Sarita G. Bhat	Studies on vibrios accumulating polyhydroxyalkonoates
37	Helvin Vincent	-	Dr. Sarita G. Bhat	Soil Metagenomics



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Sl. No.	Name	Funding Agency	Guide	Area of Work
38	Smitha S	-	Dr. Sarita G. Bhat	Bioactive compounds from Marine Bacteria
39	Alphonsa Vijaya Joseph	-	Dr. Sarita G. Bhat	Studies on extra cellular enzymes of benthic vibrios
40	Doles P.E.	-	Dr. M.Chandrasekaran	Studies on Bioprocess Development for enzyme production
41	Manjula R	-	Dr. M.Chandrasekaran	Studies on Natural Pigments

6. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	One
2	Sel Gr. Typist/Steno	One
3	Clerical Assistant	One
4	Peon	One
5	Sweeper-cum-cleaner	One

7. Technical Personnel

Sl.No.	Designation	No. of Posts
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8. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	M.Sc.	2	10	12
2	Ph.D	6	7	13

9. Research Facilities

a. Laboratories (List of Major equipments available)

1. PCR unit-Automatic Thermocycler (Eppendorf) – 2 no.s
2. Gel Documentation system (Amersham Pharmacia)
3. Gel documentation system (Biorad)
4. HPLC (Shimadzu)
5. Liquid Scintillation Counter (Wallac 1409)
6. Protein gel electrophoretic systems (Amersham Pharmacia)



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7. Chromatographic columns (Amersham Pharmacia)
8. Refrigerated Centrifuge (Heraeus)
9. Spectrophotometer (Spectronic Genesis 5, Milton Roy (USA))
10. Spectrophotometer (Shimadzu)
11. Hybridization oven (Amersham Pharmacia) 2 no.s
12. Fermenter 14 litre - Fully automated (Scigenics)
13. Mini jar fermenter (Eyela Inc. Japan)
14. Gamma Counter (ECI)
15. Phase contrast microscope (Nikon, Japan)
16. Inverted Phase Contrast Microscope (Olympus CK 40)
17. Lyophilizer (Yamata Neocool, Japan)
18. Electronic balance (Mettler) 2no.s
19. UV Cross linker (Hoefer)
20. -70°C Freezer (Sanyo)
21. Ice flaker (Sanyo)
22. Refrigerated Centrifuge (Sigma)
23. Real Time PCR
24. Confocal Microscope
25. Nanospectrophotometer
26. Cryostat

b. Library

No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
1418	264

c. Others

10. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1	Dr. Sudhir Nambiar	Director, Process R&D, Astrazeneca India Pvt. Ltd., Bangalore - 24	Industrial
2.	Dr. M.Michael Arulhas	Head, Dept. of Endocrinology, University of Madras, Chennai-113	Scientific collaboration
3	Prof. M.A.Akbarshah	School of Life Sciences Bharathidasan University Tiruchirappalli - 24	"
4.	Prof. C.C.Kartha	Sri Chithirathirunal Medical Sciences & Technology, Trivandrum	Scientific Visitor



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Sl.No.	Name	Affiliation	Remarks
5.	K.C.Majumdar	CCMB, Hyderabad	DST Official Visit
6	A.K. Rawat	DBT. New Delhi	"
7	J.F.Cockren	Massey University, Newzealand	International Visitor
8	I.S.Bajaj	National Academy of Medical Sciences, New Delhi	NAMS Official
9	Dr. Michael Farias	Oxford University	International Visitor Special seminar
10	Prof. Aparna Dutta Gupta	School of Life Sciences Hyderabad University Hyderabad	PH.D. Viva-voce examiner
11	Dr. A.Damodaran	Prof.& Vice Principal JNTU College of Engineering, Hyderabad	Academic Council member visitor

11. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Isolation & purification of protease inhibitors	Bijina B	Dr. M Chandrasekaran
2	Dopaminergic and Serotonergic functional regulation of Aldehyde dehydrogenase isozymes in alcoholism	Akash K.George	Dr.C.S.Paulose
3	Effect of principal components from medicinal plants on insulin gene expression in the pancreatic islets.	Gireesh G	Dr C.S.Paulose
4	Studies on ribotyping integron genes and pathogenicity of marine vibrios	Bernard Rajiv S.W.	Dr. Sarita G.Bhat
5	Lipase production from a marine fungus	Soorej M.Basheer	Dr. M.Chandrasekaran
6	Adrenergic Receptor functional regulation and Gene expression in Hypoxia Induced Neonatal Rats	Finla Chathu	Dr. C.S. Paulose
7	Purification and Characterization of vibriophage isolated from	Archana Kishore	Dr. Sarita G.Bhat



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Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
8	Mangalavanam Mangroves Molecular cloning & expression of alkaline protease gene	Jasmin C.	Dr. M.Chandrasekaran
9	Dopaminergic Receptor functional regulation in the insulin induced hypoglycaemia	Remya Robinson	Dr. C.S. Paulose
10	GABA Receptor functional regulation and Gene expression in epilepsy	Reas Khan S.	Dr. C.S. Paulose

12. Publications

a. Papers

Sl.No.	Name of Paper
1	C. S. Paulose, Ameer Krishnakumar and Anu Joseph, Neurotransmitter: Functional Role in Neurodegenerative Disease Management: Recent Advances. <i>J. Science & Society</i> , 5(1)(2007) 23- 30
2	G.Gireesh, S.Balarama Kaimal, T. Peeyush Kumar, C.S. Paulose, Decreased muscarinic M1 receptor Gene Expression in the Hypothalamus Brainstem and Pancreatic islets of Streptozotonic induced diabetic rats. <i>Journal of Neuroscience Research</i> DOI: 10.1002/jnr.21544(2007)
3	Anu Joseph, Remya Robinson, C.S.Paulose, Enhanced [³ H] Glutamate Binding in the Cerebellum of Insulin Induced Hypoglycaemic and Streptozotocin Induced Diabetic Rats. <i>Cellular and Molecular Neurobiology</i> 10.1007/s10571-007-9198-1 (2007)
4.	Pyroja S., Binoy Joseph and C.S.Paulose: Increased 5-HT _{2C} receptor binding in the brain stem and cerebral cortex during liver regeneration and hepatic neoplasia in rats, <i>J.Neurological Sciences</i> , 254:3-8. (2007)
5	C. S. Paulose, Ameer Krishnakumar and Anu Joseph Neurotransmitter: Functional Role in Neurodegenerative Disease Management: Recent Advances. <i>J. Science & Society</i> , 5(1) (2007) 23- 30,
6	Eswar Shankar P. N, Anu Joseph and C. S. Paulose. Decreased [³ H] YM-09151-2 binding to Dopamin D ₂ receptors in the hypothalamus, brainstem and pancreatic during pancreatic regeneration in rats, <i>Eur. J.Pharma.</i> , 557/2-3, 99-105, (2007). I.F. 2.477
7	S. Balarama Kaimal, G. Gireesh and C. S. Paulose. Decreased GABA A receptor function in the brainstem during pancreatic regeneration in rats. <i>Neurochem Res</i> . DOI 10.1007/s11064-007-9283-3 (2007)



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Sl.No.	Name of Paper
8	Akash. K. George, Balarama Kaimal. S, C. S. Paulose. Decreased dopamine D2 receptor function in cerebral cortex and brain stem: their role in hepatic ALDH Regulation in ethanol treated rats. <i>Molecular and Cellular Biochemistry</i> . DOI: 10.1007/s11010-007-9498-2 (2007)
9	Reas S.Khan, Ameer Krishnakumar, C.S.Paulose Decreased glutamate receptor binding and NMDA R1 gene expression in the hippocampus of pilocarpine induced epileptic rats: neuroprotective role of Bacopa monnieri extract. <i>Epilepsy and Behavior</i> - DOI:10.1016/j.yebeh.2007.09.021. (2007)
10	G.Gireesh, Reas S.Khan, Jobin Mathew, C.S.Paulose. Decreased M1 receptor gene expression in the cerebral cortex of streptozotocin induced diabetic rats and Aegle marmelose leaf extract's therapeutic function. <i>Journal of Ethnopharmacology</i> . DOI:10.1016/j.jep.2007.11.036. (2008).
11	Balarama Kaimal, Akash K.George, C.S.Paulose. γ - Aminobutyric acid receptor functional decrease in the hypothalamus during Pancreatic regeneration in rats. <i>Pancreas</i> . (2008).
12	Finla Chathu, Ameer Krishnakumar, C. S. Paulose: Acetylcholine Esterase Activity and Behavioural Response in Hypoxia Induced Neonatal Rats: Effect of Glucose, Oxygen and Epinephrine Supplementation. <i>Brain and Cognition</i> (2008)
13	Anju T.R., Athira Babu and C.S.Paulose. "Superoxide dismutase functional regulation in neonatal hypoxia: Effect of glucose, oxygen and epinephrine." Society for Free Radical Research, India Satellite Meeting, All India Institute of Medical Science (AIIMS), New Delhi. (February 2008)
14	C.S.Paulose and Savitha Balakrishnan. "Adrenergic, dopaminergic and serotonergic gene expression in low dose long time insulin and somatotropin treatment to ageing rats: rejuvenation of brain function." International symposium on Regenerative Neuroscience, National Institute of Mental Health & Neuro Sciences (NIMHANS) Bangalore. (January 2008).
15	Anu Joseph, Sherin Antony, and C.S.Paulose. "Enhanced Glutamate and IP3 receptor gene expression in the cerebral cortex of insulin induced hypoglycaemic and streptozotocin induced diabetic rats." International symposium on Regenerative Neuroscience, National Institute of Mental Health & Neuro Sciences (NIMHANS) Bangalore. (January, 2008)
16	Ameer Krishnakumar, Pretty Mary Abraham and C.S.Paulose. "Enhanced 5-HT _{2c} receptor gene expression in the cerebral cortex of pilocarpine induced epileptic rats: Neuroprotective role of Bacopa monnieri." International symposium on Regenerative Neuroscience, National Institute of Mental Health & Neuro Sciences (NIMHANS) Bangalore. (January, 2008)
17.	Koshy J., Pinheiro A and Nambisan P. (2008). Handmade paper from spent mushroom substrate, International Conference on Biodiversity Conservation and Management, Cochin, 3-6 February, 2008



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Sl.No.	Name of Paper
18	Pinheiro A., Koshy J. and Nambisan P. (2008) In vitro evaluation of microbial retting of agri-wastes for fibre extraction, International Conference on Biodiversity Conservation and Management, Cochin, 3-6 February, 2008.
19	Nambisan P. (2008) Biotechnological intervention in oil seed crops for biodiesel production, International Conference on Biodiversity Conservation and Management, Cochin, 3-6 February, 2008
20	Nambisan P. Biotechnological intervention in <i>Jatropha</i> for biodiesel production, <i>Current Science</i> , 93(10) 20071347-48
21	Soorej M Basheer, Beena P S, Archana Kishore, Sreeja Chellappan and Chandrasekaran M <i>Aspergillus awamori</i> Nagasawa partial Lipase gene related NUDIX protein. NCBI accession No: EF 524197 (2007)
22	Soorej M Basheer, Beena P S, Archana Kishore, Sreeja Chellappan and Chandrasekaran M <i>Aspergillus awamori</i> 28S ribosomal RNA gene partial sequence. NCBI accession No: EF 524198 (2007)
23	Archana Kishore, Beena P S, Sarita G Bhat and Chandrasekaran M (2007) <i>Vibrio</i> sp. 16SrDNA partial sequence. NCBI accession No: EF 506946
24	Archana Kishore, Beena P S, Soorej M Basheer, Sarita G Bhat and Chandrasekaran M <i>Vibriophage</i> mcp gene partial sequence. NCBI accession No: EF 506947 (2007)
25	M Chandrasekaran and Sarita G Bhat Genomics and Marine prokaryotes. In the proceedings of the National conference on Recent advance in prokaryotic genomic and Nanobiotechnology. Pg – 185-190 (2007) Feb 2 nd and 3 rd , 2007. Biotechnology, SRM University.
26	P.M. Sandeep, S.W.B. Rajeev, M. Sheeba, S.G. Bhat, and V.P.N. Nampoori (2007) Laser induced fluorescence based optical fiber probe for analyzing bacteria. <i>Laser Phys. Lett.</i> 1–5 (2007) / DOI 10.1002/lapl.200710027
27	Manjusha S. and Sarita G.Bhat (2008) Characterization of plasmids from Multiple antibiotic resistant <i>Vibrios</i> isolated from molluscs and crustaceans of Kerala, Proceedings of BIOCAM 2008, Cochin, Kerala. International conference on biodiversity conservation and management, Kochi, from 3-6 th Feb, 2008.
28	Rahual Subin S and Sarita G.Bhat (2008) Poly hydroxyalkanoates (PHAs) accumulating <i>Vibrios</i> isolated from marine benthic environment as a good candidate for bioplastic production. Proceedings of BIOCAM 2008, Cochin, Kerala. International conference on biodiversity conservation and management Kochi, from 3-6 th Feb, 2008
29	S. Jeena Augustine and Sarita G.Bhat (2008) <i>Salmonella</i> phage: potential candidate for ecofriendly biocontrol Proceedings of BIOCAM 2008, Cochin, Kerala. International conference on biodiversity conservation and management, Kochi, from 3-6 th Feb, 2008



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Sl.No.	Name of Paper
30	M.Chandrasekaran and Sarita G.Bhat (2007). Genomics and Marine prokaryotes. In the proceedings of the National conference on Recent advances in prokaryotic genomic and Nano-biotechnology. Pg-185-190, Feb 2nd and 3rd, 2007. Department of Biotechnology, SRM University
31	Archana Kishore, Beena P. S, Sarita G Bhat and Chandrasekaran M. (2007) <i>Vibrio</i> sp. 16SrDNA partial sequence. NCBI accession No: EF 506946
32	Archana Kishore, Beena P S, Soorej M Basheer, Sarita G Bhat and Chandrasekaran M. Vibriophage mcp gene partial sequence. NCBI accession No: EF 506947 (2007)
33	Manjusha S., Sarita G. Bhat, Sandhya C. Elyas, K.K. Bernard, RSW and Chandrasekaran M. Occurrence of integron containing plasmids of <i>Vibrio metchikovi</i> isolated from brackish water of Kerala. Proceedings of BIOVISION 2007, International symposium on Bioengineering for environmental management (2007)
34	Helvin Vincent and Sarita G. Bhat, (2008) Novel amylolytic enzyme from soil metagenome Proceedings of BIOCAM 2008, Cochin, Kerala. International conference on biodiversity conservation and management, Kochi, from 3-6 th Feb, 2008
35	Smitha S. and Sarita G. Bhat, (2008) Exploitation of marine bacteria for novel bioactive compounds. Proceedings of BIOCAM 2008, Cochin, Kerala. International conference on biodiversity conservation and management, Kochi, from 3-6 th Feb, 2008
36	Raghul Subin S, Smitha S and Sarita G. Bhat, (2008) Exploitation of marine benthic <i>Vibrios</i> as a promising source of bioactive molecules. Paper presented at National Seminar on "Bioactive compounds from the marine organisms" from 14-15 th March, 2008
37	Chandrasekaran M., 2008 "Bioprospecting of marine biodiversity" International conference on Biodiversity Conservation & Management (BIOCAM-2008) held at Cochin during Feb. 3-6, 2008. (Invited)
38	Jissa G.Krishna, Soorej M. Basheer, Beena P.S. and M.Chandrasekaran 2008 "Marine bacteria as source of pigment for application as dye in textile industry" International conference on Biodiversity Conservation & Management (BIOCAM-2008) held at Cochin during Feb. 3-6, 2008.
39	Sapna K.. Elyas K.K. "Screening, Isolation and application studies of protease enzyme inhibitors from marine microorganisms". International conference on Biodiversity Conservation & Management (BIOCAM-2008) held at Cochin during Feb. 3-6, 2008
40	Abraham Mathew and Elyas K K "Bioethanol production from cellulose using fungal glucosidase". International conference on Biodiversity Conservation & Management (BIOCAM-2008) held at Cochin during Feb. 3-6, 2008



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Sl.No.	Name of Paper
41	Rameshkumar S., Rajeurs S. and Elyas K.K. Clone of Flacherie causing virus of Bombyx morin India Gene Bank Accession bankit 1018074 (2007)
42	Jissa G.K., Beena P.S., Soorej M.B, Elyas K. K. and Chandrasekaran M Accession number EU239958, 16SrRNA gene sequence of marine Serratia sp. BTWJ8 partial (452bp) (2007)
43	Jasmin C, Sreeja C, Rajeev S., Chandrasekaran M, Elyas K K, and Sarita GB. EMBL accession No. AM412313 <i>Engyodontium album</i> eap gene for alkaline serine protease precursor, isolate BTMFS10. (2007)
44	Jasmin C, Sreeja C, Chandrasekaran M Elyas K K, and Sarita GB <i>Engyodontium album</i> alkaline protease gene sequence. NCBI accession No: DQ 268654 (2007)
45	Jasmin C, Sreeja C, Chandrasekaran M, Elyas K K, and Sarita GB <i>Engyodontium album</i> translation elongation factor-like mRNA, partial sequence. NCBI accession No: DQ 268655 (2007)
46	Genebank accession No.EF506947. Vibriophage mep gene partial sequences. Archana Kishore, Soorej M. Basheer, Beena P.S., M.Chandrasekaran and Sarita G.Bhat.

b. Books

- 1 THE ART AND CRAFT OF HANDMADE PAPER FROM PLANT FIBERS (English and Malayalam version) written by Padma Nambisan, Jasmine Koshy, Anita Pinheiro and Thresia Rejimol (2007) published by Department of Biotechnology, CUSAT

13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. C. S. Paulose, Savitha Balakrishnan.	International symposium on Regenerative Neuroscience, National Institute of Mental Health & Neuro Sciences (NIMHANS) Bangalore. (January - 2008).	Resource person presented a paper on "A d r e n e r g i c , dopaminergic and serotonergic gene expression in low dose long time insulin and somatotropin treatment to ageing rats: rejuvenation of brain function.



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. C. S. Paulose, Anu Joseph, Sherin Antony	International symposium on Regenerative Neuroscience, National Institute of Mental Health & Neuro Sciences (NIMHANS) Bangalore. (January, 2008)	Resource person presented a paper on "Enhanced Glutamate and IP3 receptor gene expression in the cerebral cortex of insulin induced hypoglycaemic and streptozotocin induced diabetic rats.
Ameekrishnakumar, Anu Joseph and C. S. Paulose	receptor gene expression in the cerebral cortex of pilocarpine induced epileptic rats: Neuroprotective role of Bacopa monnieri." International symposium on Regenerative Neuroscience, National Institute of Mental Health & Neuro Science (NIMHANS) Bangalore. (January, 2008)	Resource person presented a paper "Enhanced 5-HT _{2c} receptor gene expression in the cerebral cortex of pilocarpine induced epileptic rats: Neuroprotective role of Bacopa monnieri.
Savitha Balakrishnan and C. S. Paulose	76 th Annual meeting SBC(I), Tirupati. (November, 2007)	Conference attended presented a paper Kinetic parameters of Acetylcholine esterase in the heart of streptozotocin induced diabetic and hypoglycemic rats.
Finla Chathu and C. S. Paulose	76 th Annual meeting SBC(I), Tirupati. (November, 2007).	Conference attended presented a paper on Kinetic parameters of glutamate dehydrogenase in the kidney of strepto zotocin induced diabe tic rats as a of age.



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Anu Joseph, Remya Robinson and C. S. Paulose	Annual meeting of Society for Biotechnologists, India and National Symposium on Current Trends in Stem Cell Biology organized by Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram. (December 2007).	Conference attended
Dr. C S Paulose	Indian Academy of Neuroscience- Silver jubilee conference and annual meeting, Banaras Hindu University, Varanasi. (November, 2007)	Conference attended
Dr. C. S. Paulose	Society for Free Radical Research, India-Satellite Meeting, All India Institute of Medical Sciences (AIIMS), New Delhi. (February 2008).	Meeting organized
Dr. C. S. Paulose	World Brain Awareness Week-2008 conducted by Centre for Neuroscience, Department of Biotechnology, Cochin University of Science and Technology, Cochin (March 10-15, 2008)	Meeting organized
Dr. Sarita G.Bhat	UGC sponsored two days workshop on 'Health & Wellness' Nov. 29-30, 2007, organized by the Centre for Population Studies, Dept. of Statistics, CUSAT	Workshop attended
Dr. Sarita G.Bhat	ICAR sponsored training programme "Training on microbial products and their applications in food processing" conducted at CAS Agricultural Microbiology, TNAU, Coimbatore from January 21st to February 10 th , 2008	Conference attended
Dr. Sarita G.Bhat	National seminar on "Bioactive compounds of marine biology, microbiology and biochemistry, School of Ocean Sciences and Technology	Seminar Attended & Paper presented
Dr. Elyas K K	National seminar on 'Bioactive compounds from the marine organisms' from 14-15 th March 2008 organized by the School of Ocean Science and Technology, CUSAT	Seminar Attended & Paper presented
Dr. Elyas K K	International conference on Biodiversity conservatoin and Management, Kochi, from 3-6 th Feb, 2008 organized by	Seminar Attended & Paper presented



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
	Rajiv Gandhi Chair in Contemporary Studies, CUSAT, Zoological Society of India, Bodhgays and Sree Sankara University of Sanskrit Kalady, Ernakulam	
Dr. Elyas K K	One day seminar organized by Society of Clinical chemists, Kerala on 25 th Nov. 2007.	Seminar attended
Dr. Elyas K K	'Workshop on Health and Wellness' organized by Dept. of Statistics, CUSAT	Participation
Dr. Elyas K K	'Workshop on Rabbit inoculation for raising antibodies' organized by MES College, Marampilly, Cochin as a part of Science Day Celebrations on 28 th Feb 2008.	Workshop attended
Jissa G.Krishna, Soorej M.Basheer, Beena P.S. and M.Chandrasekaran	<i>International Conference on Biodiversity Conservation and Management-Theme: Ecosystems and sustainable development. Biocam 2008, Feb 3rd-6th.</i>	Seminar Attended presented a paper on Marine bacteria as source of pigment for application as dye in textile industry.
Prof. Dr. M. Chandrasekaran	<i>National Seminar on achievements and opportunities in post harvest management and value addition in root and tuber crops (NSRTC2). G. Padmaja, T.Premkumar, S.Edison, Bala Nambisan (Eds). 343-350</i>	Seminar Attended presented a paper on Emerging trends in Industrial enzymes- Indian scenario. Root and tuber crops-Post harvest management and value addition.
Prof. Dr. M. Chandrasekaran	International Conference on Biodiversity Conservation and Management held at CMFRI, Cochin organized by Rajiv Gandhi Chair in Contemporary Studies, Cochin University of Science & Technology,	Paper presented & Seminar attended presented a paper on "Bioprospecting of marine biodiversity"



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Chandrasekaran M, Soorej M.Basheer and Beena P.S.	Industrial Enzymes from Marine Fungi. International Conference & Workshop on 'Recent Advances in Bioengineering' held at SRM University, Chennai, Feb. 7 th -9 th .	Seminar attended & Paper presented
Dr. Padma Nambisan	At Kakkanad office of Kudumbashree, Ernakulam District on 17.8.2007 on the occasion of Onam Fair, 2007.	Conference attended Put up stall highlighting the aims and objectives of the project.
Dr. Padma Nambisan	EDP Programme in Biotechnology sponsored by the DBT and organized by BCIL at IIT, Chennai, during August 27- 31, 2007.	Participation
Dr. Padma Nambisan	Seminar on Aproprate Technology for sustainable Rural development organized by the CRDAT, CUSAT, Kochi - 22 on 29 th September, 2007.	Paper Presented on "Green wealth for rural women through fiber extraction from agri waste"
Dr. Padma Nambisan	Biocam, 2008, International conference on biodiversity conservation and management, Feb. 3-6, 2008 at CMFRI, Cochin	Paper presented
Dr. Padma Nambisan	Malabar Botanical Garden Exhibition, Calicut from 9-13 February, 2008.	Participation Put up stall

14. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour / Award	Awarding Agency
Dr. Chandrasekaran	Member, Task Force on Aquaculture and Marine Biotechnology, Department of Biotechnology, Ministry of Science and Technology, Govt.of India 2006-2009,	Govt.of India 2006-2009,



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Dr. Chandrasekaran	Member , Sub-Committee of the Earth Sciences Research Committee on Disaster Preparedness, Council of Scientific & Industrial Research	HRD Group, New Delhi (May 2006 to March 2009)
Dr. Chandrasekaran	Selected as fellow of Zoological Society of India.	Zoological Society of India 2008
Dr. C.S.Paulose	Shiksha Rattan Puraskar 2007 by India International Friendship Society	IIFS
Dr. C.S.Paulose	Sir Shriram Memorial Oration Award for the year 2007-08 by National Academy of Medical Sciences	NAMS

15. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount (in lakhs)	Investigator(s)
1.	Neurotransmitter Receptor Functional Regulation in Epilepsy: Memory Modulation using Medicinal Plant, <i>Bacopa monnieri</i>	KSCSTE 2006-09	Rs.20.70 lakhs	Dr. C. S. Paulose
2.	Hypoxia and Brain Disorders: Adrenergic and Serotonergic Gene Expression: Dopamine, Glutamate, GABA and Acetylcholine functional inter-relationship	DST, GOI 2006-2009	Rs.44.50 lakhs	Dr. C. S. Paulose
3.	Production purification, genetic characterization and application studies of tannase enzyme from marine fungus <i>Aspergillus awamori</i> ,	DST 2007-08	Rs.9.84 lakhs	Mrs. Beene P. S under the Women Scientist Scheme
4.	Isolation, characterization and application of protease enzyme inhibitors from marine microorganisms. (Principal Investigator)	Department of Biotechnology, New Delhi 3 years (2007-2010)	Rs.33.69 Lakhs	Dr. Elyas K K(PI)
5.	Molecular cloning & expression of alkaline protease gene	Department of Biotechnology, New Delhi years (2001-2006)	Rs.26.00 Lakhs	(Dr.)M. Chandrasekaran (PI) Sarita G Bhat and Elyas K.K. (Co -Investigators)



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Sl.No.	Title	Sponsoring Agency	Amount (in lakhs)	Investigator(s)
6.	Screening of marine microbes for bioactive compounds from backwaters and nearshore waters of Kerala & lakshadweep	CSIR, New Delhi (2004-2007)	Rs.14.00 Lakhs	Prof M Chandrasekaran (PI) Dr Sarita G Bhat (Co - Investigator)
7.	Morphometric and Molecular characteristics of deep sea fishes and screening and isolation of potentially bioactive molecules from deep sea organisms”, “Feb.2008-Feb.2013	Ministry of Earth Sciences (CMLRE-MOES) Govt. of India	Rs. 1.3 Crores	Dr. M. Chandrasekaran
8	Role of benthic Vibrios in the mineralization process in the marine environments	DOD 2006-07	Rs.16.41 Lakhs	Dr. Sarita G Bhat(PI)
9.	Green wealth for rural women through fiber extraction from agri-waste(Sanctioned in Feb.2007) DBT, GOI	Feb.2007) DBT, GOI	Rs.18.46 lakhs	Dr. Padma Nambisan
10.	Advanced Research in Neurotransmitters Functional Regulation to Diabetes and Pancreatic Regeneration : Insulin Secretion and Function at Molecular Level	2007-2012	1.90 Crores	Dr. C.S. Paulose
11.	Adrenergic and Muscarinic receptors gene expression in the Streptozotocin induced diabetic rats : Role of stress on insulin secretion as a function of age.	2007-2010 ICMR, GOI	36.13 lakhs	Dr. C.S. Paulose
12.	Stem cell therapy in Parkinson's disease: Dopaminergic receptor subtypes functional regulation by norepinephrine, serotonin, acetylcholine and GABA.	2008-2011 ICMR	27 lakhs	Dr. C.S. Paulose



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16. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1	Microbial Technology	Prof (Dr) M. Chandrasekaran
2	Molecular and Cellular Neurobiology	Dr. C. S. Paulose
3	Bioprocess Technology	Dr. Sarita. G. Bhat
4	Plant Biotechnology	Dr. Padma Nambisan
5	Medical Biotechnology	Dr. Elyas K. K.
6	Neuroendocrinology	Dr. E. Vijayan

17. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1	World Brain Awareness Week, Cochin, 2008	March 10 15, 2008	Dr. C. S. Paulose	European Dana Alliance, London, NBRC & UGC – CUSAT

18. Consultancy Work Nil

Sl.No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
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DEPARTMENT OF CHEMICAL OCEANOGRAPHY

Estd : 1984

The Department of Chemical Oceanography has credentials of facilities and rich expertise in teaching / research on various chemical aspects of the aquatic system. It has pioneered investigations in many an area of vital significance and has contributed valuable inputs into the national database. Chemical Oceanography (Marine Chemistry) is the fulcrum for interaction between the various disciplines of Marine Sciences.

Two members of the faculty carried out post-doctoral research in the U.K. through the award of Commonwealth Academic Staff Fellowships.

Sophisticated instrumental facilities available in the Department include UV-VIS Spectrometer, AAS, GC, CHN, Polographic Analyzer, Laminar Flow Chambers, etc.

The Department is actively engaged in consultancy and extension activities that include Analytical Testing/ Training Water Quality Analysis etc.

1. Programmes of Study/Research :

M.Sc. (Hydrochemistry)
Research

2. Faculty Members

Sl.No.	Name of the staff	Designation	Qualification	Area of Specialisation
1.	Dr. N.Chandramohana-kumar	Professor & Head of the Dept.	M.Sc., Ph.D.	Chemical Oceanography, Analytical Techniques, Theoretical & Physical Chemistry
2.	Dr. Jacob Chacko	Professor	M.Sc., Ph.D.	Chemical Oceanography, Analytical Techniques, Co ordination Chemistry
3.	Dr. S.Muraleedharan Nair	Reader	M.Sc., Ph.D.	Chemical Oceanography, Analytical Techniques, Organic Chemistry
4.	Dr. C.H.Sujatha	Sr. Lecturer	M.Sc., Ph.D.	Chemical Oceanography, Analytical Techniques, Inorganic Chemistry



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3. Research Scholars

Sl.No	Name	Supporting Agency	Guide	Area of work
1.	Deepulal P.M.		Dr. C.H.Sujatha	
2.	Anuradha V	UJRF	Dr. S.Muraleedharan Nair	
3	Gireesh Kumar T.R	UJRF	Dr. N.Chandramohanakumar	
4	Ratheesh Kumar C.S.		Dr. N.Chandramohanakumar	
5	Shaiju P.	RFMS	Dr. S.Muraleedharan Nair	
6	Nify Benny	UJRF	Dr. C.H.Sujatha	
7	Renjitha Raveendran		Dr. C.H.Sujatha	
8	Manju Mary Joseph	USRF	Dr. N.Chandramohanakumar	
9	Sheela V.S.	UGC	Dr. N.Chandramohanakumar	
10	Suryakumari S.	UGC	Dr. S.Muraleedharan Nair	
11	Padma P.		Dr. S.Muraleedharan Nair	
12.	Josekkutty J.Ozhukayil	UGC	Dr. N.Chandramohanakumar	
13	Aneesh Kumar N		Dr. C.H.Sujatha	
14	Pratheesh V.B.		Dr. C.H.Sujatha	
15	Sumangala K.N.		Dr. C.H.Sujatha	
16	Laluraj		Dr. S.Muraleedharan Nair	
17	Radhika S.		Dr. C.H.Sujatha	
18	Geetha Andrews		Dr. Jacob Chacko	
19	M.G.Rajagopalan		Dr. Jacob Chacko	

4. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Section Grade Assistant	2
2.	Lab Assistant	1
3.	Peon	1

5. Technical Personnel

Sl.No.	Designation	No. of Posts
1.	Technical Assistant Gr. I	1 (Vacant)



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6. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1.	MSc. (Hydrochemistry)	8	15	23
2.	Ph.D.	9	10	19

7. Research Facilities

a. Laboratories (List out Major equipments available)

UV-VIS Spectrometer, AAS, GC, CHN, Polographic Analyzer, Laminar Flow Chambers etc.

8. Ph.Ds Awarded

Sl.No	Title of Thesis	Name of Research Scholar	Supervising Guide
1		Josia Jacob	Dr. N.Chandramohanakumar (under adjudication)

9. Publications

a. Papers

Sl.No.	Name of Paper
1	Babu V., Anuradha V. and Nair S.M. 2008- Seasonal and temporal variations of cyclodiene pesticides in the sediments of Kuttanad backwaters Proc. 20th Kerala Sci. Cong., India. 07-13/543-545.
2	Anu Gopinath, Kumar N.C., Jayalakshmi K.V. and Nair S.M. 2007. Monitoring of heavy metal partitioning in reef corals of Lakshadweep Archipelago, Indian Ocean. Environ. Monit. Assess. 128; 195-208.
3	Kalesh N.S. and Nair S.M. 2007. The Accumulation Levels of Potentially Toxic Heavy metals Pb and Cd in Marine Algae from Southwest Coast of India. 15th International Conference on Environmental Bioindicator, Hong Kong.No. 66
4	Shaiju P., Nair S.M., and Babu V., 2007. Assessment of DDT and its metabolites in the sediments of Kuttanad- a tropical backwater paddy field ecosystem. Proc. 19th Kerala Sc. Congress, India. 08-11.
5.	Shaiju P., Nair S.M., and Kumar N.C. 2007. A study on safety of drinking water in the Fort Cochin area. Proc. 19th Kerala Sc. Congress, India. 08-50.
6.	Renjith K.R. and N.Chandramohanakumar, 2007. Geochemical characteristics of surficial sediments in a tropical estuary, south-west India. Chemistry and Ecology, 23(4), 337-343(7)
7	Remya L., Geetha R., Chandramohanakumar N., and Mathews L. 2007. Impact on the Quality of Water after Tsunami on the Dug wells in Chellanam- A Tsunami Affected Area in Southern India- Research Journal of Chemistry and



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- Environment, 11, 72-76.
- 8 L.Mathews, N.Chandramohanakumar, R.Geetha 2007. Distribution of total reactive fluoride in sediments of Kuttanad waters Indian Journal of Environmental Protection 27(11): 1001-1005

b. Books

Sl.No.	Name of Book
1.	The International Journal of Environmental Studies- Special India Issue-December 2007. (Prof. Jacob Chacko, Guest Editor)

10. Participation in Seminar/Conference/Refresher Courses etc by the Faculty / Students.

Name of Participant	Name of Seminar/ Conference/ Workshop	Role
Prof. Jacob Chacko	Workshop on "Energy Security, low carbon vistas- India's options" 29th March 2008.	Coordinator
Dr. S.Muraleedharan Nair	do	Participant
Dr. N.Chandramohanakumar	do	do

11. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	Environmental Chemistry	3 Weeks	Maharajas	UGC

12. Consultancy Work

Sl.No	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	ASETT (Analytical Services and Training Unit)	Cochin Port Trust	Cochin Port Trust

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DEPARTMENT OF COMPUTER APPLICATIONS

Estd : 1984

Computer Applications is one of the thrust areas in Science and Technology. In appreciation of its growing importance in business and industrial scenario, the University has established the Department of Computer Applications to facilitate research and human resource development in the subject. The department offers Master's Programme in Computer Applications (M.C.A.) and research programme leading to Ph.D.

The department in its present form was founded in 01/01/1996 as one of the constituent department of School of Computer Science Studies, under the faculty of technology. From 11/04/1992, it was a division under the School of Mathematical Sciences. The University could implement the MCA Programme with a benign grant of Rs.5.00 Lakhs from the UGC and DOE, Government of India. Presently, the department is housed in the first floor of the School of Engineering building.

1. Programmes of Study/Research

- (i) MCA (Regular Batch & Cost-sharing Batch)
- (ii) Ph.D.

2. Faculty Members

Sl.No.	Name of the staff	Designat-ion	Qualification	Area of Specialisation
1.	Dr. S. Babu Sundar	Professor	M.Sc., Ph.D. M.Tech	Computer applications Fuzzy Logic Artificial Intelligence Multimedia
2.	Mr. A. Sreekumar	Lecturer	M.Sc., M.Tech.	Compiler Design/ Number Theory, Cryptography Software Engineering Computer Network
3.	Dr. K.V. Pramod	Senior Grade Lecturer	M.Sc., Ph.D.	Simulation & Modelling Cryptography Systems Analysis & Design Coding Theory Computer Aided Design.
4.	Dr. B. Kannan	Lecturer	M.Sc., M.Phil, M.Tech.Ph.D.	Artificial Intelligence Database Design
5.	Ms.Malathi.S	Lecturer	M.C.A,M.Tech	Software Quality Assurance, Project Management, Testing.
6.	Mr.Ajmal.V.S	Lecturer	M.C.A	Database Design, Visual Programming, Object Oriented Design.



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5. Visiting Faculty (If any)

Sl.No.	Name	Designation	Qualification	Specialisation
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6. Research Staff

Sl.No.	Name	Designation	Qualification	Specialisation
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7. Research Scholars

Sl.No	Name	Supporting Agency	Guide	Area of work
1.	Mr.K.N.James	Part-time	Dr.S.Babu Sundar	Computer application in music analysis and synthesis
2.	Mr.A.Sreekumar	„	Dr.S.Babu Sundar	Cryptography
3.	Ms. Sreevidya. S	„	Dr.S.Babu Sundar	Data Mining and Knowledge Discovery
4.	Mr.Ramkumar.P.B	„	Dr.K.V.Pramod	Algorithms
5.	Manju C	„	Dr.K.V.Pramod	Cryptography
6.	Aysha V	„	Dr.S.Babu Sundar	Image processing and pattern recognition and data compression
7.	Sindhu M.S.	„	Dr.S.Babu Sundar	Artificial Intelligence expert systems
8.	Sudhakumar R	„	Dr.S.Babu Sundar	
9.	Malathi S	„	Dr.K.V.Pramod	
10.	Sindhu P.Menon	„	Dr.K.V.Pramod	Issues in Wireless Networking
11.	Ajan U.Nair	„	Dr.K.V.Pramod	Some problems related to Network protocols



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Sl.No	Name	Supporting Agency	Guide	Area of work
12.	A.T.Francis	Part-time	Dr. Humayoon Kabir	Re-defining University Libraries in the context of modern information technologies: A study with special reference to the University Libraries in Kerala
13.	Archana S.N.	„	Dr. Humayoon Kabir	Virtual Resource Sharing Centre for the Engineering Colleges Affiliated to MG University
14.	Aneurin Salim A.L.	„	Dr. S.Babu Sundar	Human Computer Interaction
15.	Surendran Cherukodan	„	Dr. Humayoon Kabir	Applying ICT for Reference Service in University Libraries in Kerala
16.	Ajmal V.S.	„	Dr. K.V.Pramod	Data Mining
17.	Jayan K.	„	Dr. K.V.Pramod	Computer Vision
18.	Sweety Issac	„	Dr. Humayoon Kabir	Internet utilization and academic activities of Faculty members in the Universities in Kerala: An analytical study
19.	Nikehs N.	“		
20.	Jomy John	“	Dr. S.Babu Sundar	
21.	Mary Jeltruth		Dr. S.Babu Sundar	Computer Assisted Classical Music Analysis, Evaluation and Training
22.	Beena A.L.	“	Dr. Humayoon Kabir	Comparison of Metadata standards
23.	Reshmi S.	“	Dr. K.V.Pramod	Neural Network based Emotion Detection cum 3D Sound Synthesizer



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Sl.No	Name	Supporting Agency	Guide	Area of work
24.	Ramkumar R.	Part time	Dr. K.V.Pramod	Developing new and efficient algorithms for recognizing and characterizing different types of large graphs each as planar graphs, bipartite graphs, medium graphs etc.
25.	Celin Sam Koshy	"	Dr. S. Babu Sundar	
26.	Binu Jacob	"	Dr. S.Babu Sundar	
27.	S.Arumughavelan	"	Dr. S.Babu Sundar	Building Automatic Innovative General Efficient Neural Network and pattern matching Model Applied to Medical Imaging in Health Care

8 . Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Section Officer	1
2.	Sel. Gr. Assistant	2
3.	Sel. Gr Typist/Steno	1
4.	Sr. Gr. Typist/Steno	1
5.	Junior Librarian	1
6.	Peon	2

9. Technical Personnel

Sl.No.	Designation	No. of Posts
1.	Technical Assistant Gr. III (Computer)	1
2.	Technical Assistant Gr. II (Computer)	1
3.	Technical Assistant Gr.II (Electrical)	1



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Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1.	MCA II Semester	48	14	62
2.	MCA IV Semester	34	27	61
3.	MCA VI Semester	36	22	60

7. Research Facilities

a. Laboratories (List out Major equipments available)

The Research activities of the Department include the subject areas Fuzzy sets and Logic Applications in Artificial Intelligence, Simulation, Cryptography & Coding Theory, Algorithm, Pattern recognition, Internet-Marketing, e-commerce and Internet Technology, Networking and Mobile Communication and Software Engineering. Apart from this, the Department has taken up a challenging research project funded by AICTE, "Computer Assisted Classical Music". The Department of Computer Applications is also doing consultancy work for public and private sector undertakings.

The department has a well-equipped laboratory, which is being constantly updated with the latest computers. At present, the laboratory has the following facilities:

1. One number of IBM x series 255, Intel Pentium IV 3.0 GHz four processor Windows 2003 server.
2. 60 number of IBM Think Centre Intel Pentium IV 3.2 GHz Windows XP clients connected with the Windows 2003 server;
3. One number of Acer Altos 12000 dual processor, Intel Pentium III 500 MHz Linux Server.
4. 30 number of AMD Athlon 64 bit 3000 + series machines loaded with 64 bit SUSE Linux;
5. One number of HP E60 Server Intel Pentium III 500 MHz loaded with Windows NT Server,
6. One number of IBM RS 6000 Series Model E20 Server loaded with AIX;
7. LIPI T6050 Line Printer, two Lazer Printer, five Inkjet printer and four scanners, 3 dot matrix printers.
8. There is 24 hour Internet access through a dedicated 8 MBPs link to the campus network.
9. IBM Thinkpad 2 Nos. Intel Core 2, .83 GHz with Windows XP Professional
10. 3 Nos. of IBM Think Centre of Intel Pentium D, 3 GHz

The department has modern equipments such as multimedia projectors, image presenters to aid in the teaching process.



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b. Library:

At present, the department library has more than 4500 books concerning various disciplines in Computer Science and Computer Applications. The faculty members of the department give special attention to purchase the latest books on a particular subject which help the students to be aware of the latest trends in a particular subject. Also the department library subscribes journals and magazines of international standard. It is proposed to have a new CD library.

	No. of books and journals as on 31 st March of Previous Year	Addition during the current year
Books	4276	258
Journals	7	Nil

c. Others

Placement Cell & its functioning

The department has a placement cell managed by the students and actively assisted by the faculty members. Department has almost 100% placement every year.

Seminars & Conferences:

The department has conducted many seminars and conferences concerning the latest trends in industry and technology. A seminar cell functions in the department.

SAMCA:

The Students Association of MCA conducts the annual festival of MCA students and also actively assists the faculty members in conducting the activities of the department.

11. Distinguished visitors

Sl.No	Name	Affiliation	Remarks
1.	Istock Petenin	University of Maniber	As part of the Indo-Slovenian Joint Research Project
2.	Simon Spacpar	''	''

12. Ph.Ds Awarded

Nil

Sl.No	Title of Thesis	Name of Research Scholar	Supervising Guide
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9. Publications

a. Papers

Name of Author	Title of Publications	Year	Name of Journal
Dr. S.Babu Sundar	1. Artificial Intelligence	1999	Infokairali Nov. 1999
	2. A Note of Adjacent Topology	1999	Proceedings of UGC sponsored National Seminar on Discrete Analysis, 22-24 March 99, Coimbatore
	3. On t-Irreducible Elements in a Lattice	1999	
Mr. A. Sreekumar	1. A Simple Algorithms for Generating Magic Square	1999	„
	2. Uniform Secret Sharing using visual cryptography - 3 Papers	2008	„
Dr. K.V.Pramod	1. On t-Irreducible Elements in a Lattice	1999	„
	2. Uniform Secret Sharing using visual cryptography	2008	„
Dr. B.Kannan	1. A Modified Majority Strategy for Median graphs	1999	„
	2. An Energy Efficient Tree based adaptive Routing Protocol for wireless Sensor networks		
Smt. S.Malathi	A study on user help/ documentatoin for search engines	2008 March	

b. Books

Sl.No.	Name of Book
1.	Data Structures using 'C' by Dr. B.Kannan

14. Participation in Seminar/Conference/Refresher Courses etc by the Faculty / Students.

Name of Participant	Name of Seminar/ Conference/ Workshop	Role
Mr. A.Sreekumar	Microsoft Summer School International	Participant
Dr. B.Kannan	Conference on Informatoina Process, Bangalore, August 10-12, 2007	Participant



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15. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour / Award	Awarding Agency
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16. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
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17. Research Programmes and Activities:

Sl.No	Problem / Topic	Investigator (s)
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18. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	IBM Hands on Software	Workshop December 2006		

19. Consultancy Work

Sl.No	Name of Consultancy	Name of Consultant	Sponsoring Agency
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DEPARTMENT OF COMPUTER SCIENCE

Estd: 1985

The Department of Computer Science came into existence in 1984 with an M.Tech. course in Computer and Information Science, which was the first in the state of Kerala. In 1986, the Department was identified by the Defence Research and Development Organisation for conducting an M.Sc. programme in Computer Software, as a feeder course to the DRDO Laboratories. The department served as a seeding agent for the establishment of the Computer Centre, which was inaugurated by the then Prime Minister in 1990,. The department was entrusted with the responsibility of conducting the MCA programme in June 1994, which helped to streamline the course and setting it into the right track. The B.Tech. course started in 1996, was given co-ordinating support by the department in the branch of Computer Science & Engineering. A new M.Tech. programme in Software Engineering sponsored by UGC was also started in the academic year 2000-2001

Ph.D. programme in the areas of Artificial Intelligence, Networking, Information Systems Engineering etc. are being pursued.

The department has so far received grants to the tune of Rs. 10 crore from various national agencies. The INFOCUS project with support from the Netherlands Government and collaboration of the Delft University of Technology was piloted by the department.

The campus intranet, the CUSAT website, the campus intercom system were all initiated and commissioned by the department.

The department provides technical expertise and support to various Government/Quasi-government bodies.

1. Programme of Study/Research

1. M.Tech. Computer and Information Science
2. M.Tech. Software Engineering
3. Ph. D

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialisation
1	Dr. K. Poullose Jacob	Professor	M.Tech, Ph.D	Parallel Architecture, Computer Networks, Information Systems Engineering
2	Krishna R. Putcha	Reader	M.Tech, M.S	Super Computing
3.	Dr. Suman Mary Idicula	Reader	M.Tech, Ph.D	Natural language Processing, Human Computer Interaction
4.	K.B.Muralidharan (on leave)	Lecturer	M.Tech.	Artificial Intelligence
5.	G. Santhosh Kumar	Lecturer	M.Tech.	Software Engineering Theoretical Computer Science
6.	Sudeep Kumar N	Lecturer (Contract)	M.Tech	Image Processing



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3. Visiting Faculty (If any) : Sri. K. Mohanan, Scientist, NPOL

4. Research Staff : Nil

5. Research Scholars(Part-time)

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Mangu G		Dr. Sumam mary Idicula	CAI
2.	L.L. Ramachandran		Dr. K. Poullose Jacob	Information System Engineering
3.	Shibu Ray S		Dr. Baby M D	
4.	Surekh Mariam Varghese		Dr. K. Poullose Jacob	System Security
5.	Susan Mathews		Dr. Baby M D	
6	Shahana T.K		Dr. K. Poullose Jacob	VLSI
7	Rekha K. James		Dr. K. Poullose Jacob	VLSI
8	G. Santhosh Kumar		Dr. K. Poullose Jacob	Sensor Networks
9	Sheena Mathew		Dr. K. Poullose Jacob	System Security
10	Litta A J		Dr. Sumam Mary Idicula	Neural Networks
11	Bindhu M S		Dr. Sumam Mary Idicula	Natural Language Processing
12	Bindya M Varghese		Dr. A.Unnikrishnan	
13	Daleesha M.Viswanathan		Dr. Sumam Mary Idicula	Human Computer Interaction
14	Sudeep Elayidom M		Dr. Sumam Mary Idicula	Datamining
15	Vineetha S.		Dr. Sumam Mary Idicula	Bioinformatics
16	Binsu C.Kovoor		Dr. K.Poullose Jacob	System Security
17	Binu Elias Kurian		Dr. K.Poullose Jacob	Information systems Engineering
18	Preetha Mathew		Dr. K.Poullose Jacob	Information Systems Engineering
19	Mohanan K		Dr. Sumam Mary Idicula	Software Engineering
20	Mini U		Dr. K.Poullose Jacob	Information Science
21	Sreeraj M		Dr.Sumam Mary idicula	Artificial Intelligence



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Sl. No.	Name	Funding Agency	Guide	Area of Work
22	Santhosh Simon		Dr. K. Poullose Jacob	Expert Systems
23	Prime Kumar		Dr.Sumam Mary idicula	Neural Networks
24	Sindhu L.		Dr.Sumam Mary idicula	Natural Language Processing
25	Bindu Baby Thomas		Dr.Sumam Mary idicula	Natural Language Processing
26	Lini Varghese		Dr. K. Poullose Jacob	Mobile Computing
27	Syama Das		Dr.Sumam Mary idicula	Data mining
28	Vimina E.R		Dr. K. Poullose Jacob	Computer Vision

6. Administrative Personnel

Sl. No.	Designation	No. of posts
1	Section Officer	1
2	Sel. Grade Assistant	1+1 (vacant)
3	Office Superintendent (Typist)	1
4	Peon	1
5	Sweeper/Cleaner	1

7. Technical Personnel

Sl. No.	Designation	No. of posts
1	Tech. Officer Gr. I	1
2	Tech. Asst. Gr. II	3
3	Junior Librarian	1

8. Students Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	M.Tech. Degree in Computer & Information Science			
	2006-2008 batch	11	7	18
	2007-09 batch	7	12	19
2	M.Tech. Degree in Software Engineering			
	2006-2008 batch	8	10	18
	2007-09 batch	2	16	18



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9. Research Facility

A. Laboratory

1.	IBM server X3400 Intel Xeon 3 GHz, 2GB ECC DDR2 SDRAM, 2*73 GB, DVD Writer, FDD, 20/40 GB DAT, 17" TFT monitor	- 03 No.
2.	Server (HCL) XEON 3.2 GHz dual processor, 1 GB DDR-2 RAM, 146*3 SCSI HDD, DVD Writer, FDD, TFT Monitor	- 01 No.
3.	HCL Infiniti Global line server, PIV, 128 MB, 48 GB, CDD, FDD, CRT monitor.	- 01 No.
4.	PC (IBM) Pentium duo 1 GB, 80 GB, FDD, Combo drive, TFT Monitor	- 18 Nos.
5.	PC (HCL) Pentium IV 512 MB, 40 GB, FDD, CDD, TFT monitor	- 24 Nos.
6.	PC (PCS) PIV 256 MB 40 GB FDD, CDD, CRT Monitor	- 06 nos.
7.	PC PIV910 Mother board, 256 MB, 10 GB, CDD, FDD, CRT Monitor	- 01 No.
8.	PC AMD SEMPRON 256 MB 10 GB, CDD, FDD, CRT Monitor	- 02 Nos.
9.	PC (Accel) PIII 256 MB, 40 GB, FDD, CDD, CRT Monitor	- 06 Nos.
10.	PC (HCL) PIII 256 MB 40GB FDD, CDD, CRT Monitor	- 01 Nos.
11.	PC (HCL) PIII, 128 MB, 8GB, CDD, FDD, CRT Monitor	- 01 No.
12.	PC (WIPRO) PII 256 MB, 40 GB, FDD, CDD, CRT Monitor	- 06 Nos.
13.	PC (HCL) Pentium 128 MB, 16 GB, CDD, FDD, CRT Monitor	- 01 No.
14.	PC AMD 2500 64 bit, 512 MB, 40 GB, CDD, FDD, CRT Monitor	- 01 No.
15.	UPS 30KVA Tata Leibert	- 01 No.
16.	PC 104 based embedded boards	- 05 Nos.
17.	PowerQuicc Reference Design board	- 01 No
18.	NI's PXI Controller	- 01 No
19.	Mica Mote Educational Kit	- 01 No
20.	Montavista Development Kit	- 01 No

SOFTWARE

1. Windows 2000
2. Oracle 8i
3. Rational Suite Enterprise Edition
4. Math Lab
5. RT-Linux Pro 2.2
6. Labview 8.2
7. Windriver Tornado 2.2.1/Vx Works 5.5.1
8. Montavista Linux

B. LIBRARY

	No. of books/journals as on 31 st March of the previous year		Additions during the current Year
Books	4192	Books	NIL
Journals	34	Journals	NIL



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C. OTHERS

24 x 7 Broad-band Internet connectivity on TCP/IP, Overhead Projectors, Multimedia Projector etc.

10. Distinguished Visitors

Sl. No.	Name	Affiliation	Remarks
1	Dr. Wilsy M., Professor	University of Kerala, Thiruvananthapuram	
2	Mr. H.R. Mohan	The Hindu, Chennai	

11. Ph.D. Awarded

Nil. Three Thesis sent for adjudication

12. Publications

a) Papers

1	G.Santhosh Kumar Rameetha K., K.Poulose Jacob	"A Generic Software Architecture for a Domain Specific Distributed Embedded System" International Conference on Software Engineering, Theory and Practice (SETP 07), Orlando, FL, USA, July 9-12 (2007)
2.	G. Santhosh Kumar Sangeetha Jose, V. Suresh Kumar	"Development of a Knowledge Management Model in a Multidisciplinary Software Development Environment using Transfer Function approach", International Conference on Global Software Development (ICGSD 07), PSG College of Technology
3.	G. Santhosh Kumar Anil C.B, K. Poulose Jacob	"CIBLA – A Localization Algorithm for Wireless Sensor Networks" International Conference on Embedded Systems, Mobile Communication and Computing (ICEMC ² 2007), PESIT, Bangalore
4.	G. Santhosh Kumar Jose Mathew K., K. Poulose Jacob	"MAC Protocols for Static and Mobile Wireless Sensor Networks: A Survey", International Conference on Information Processing (ICIP2007), UVCE, Bangalore
5.	G. Santhosh Kumar Lino Abraham Varghese, V. Damodharan, B. Kannan, K. Poulose Jacob	"An Energy Efficient Tree based Adaptive Routing Protocol for Wireless Sensor Networks", International Conference on Information Processing (ICIP2007), UVCE, Bangalore,
6.	G. Santhosh Kumar Vinu Paul, K. Poulose Jacob	"Impact of Node Mobility on the Performance of Wireless Sensor Networks", Proceedings of the International Conference on Sensors and Related Networks (SENNET07), VIT University, Vellore, December 2007



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7. Jose Mathew K.,
G. Santhosh Kumar,
K. Poullose Jacob Proceedings of the International Symposium on Ocean Electronics (SYMPOL) , Cochin University, Kerala, 11-14 December 2007
8. Nikesh P.L., Sumam
Mary Idicula, David
Peter S. English-Malayalam Cross-Lingual Information Retrieval – an Experience accepted for presentation in IEEE EIT 2008 in May 2008 at Ames, Iowa, USA.
9. Vimal V.B., Sumam
Mary Idicula An Information Retrieval Engine for Question Answering, in the Proceedings of the National Conference on Software Engineering held in April, 2007 at Cochin, India.
10. Sumam Mary Idicula,
David Peter S., Multilingual Query Processing System using Software Agents in Journal of Digital Information Mangement, India, December, 2007.
11. Sumam Mary Idicula,
David Peter S. A Fault Prediction Model for Object Oriented Systems, accepted for publication in Journal of Computer Science, ICFAI University Press, India, July 2007.
12. Sumam Mary Idicula,
David Peter S., A Morphological Processor for Malayalam Language” to be published in South Asia Research Journal Vol. 27.2, Sage Publications U.K., July 2007.
13. K. Poullose Jacob “Jerim-320: a 320-bit hash function with dual applications - a statistical analysis” Journal of Discrete Mathematical Sciences & Cryptography [Print awaited].
14. K. Poullose Jacob “JERIM-320: A new 320-bit hash Function with Higher Security” International Journal of computer Science & Applications [Print awaited]
15. K. Poullose Jacob “GUI Based Decimation Filter Design Tool For Multi-standard Wireless Transceivers” IETECH Journal of Communication Techniques [Print awaited]
16. K. Poullose Jacob “Message Integrity in the World Wide Web : Use of Nested Hash Function and a Fast Stream Cipher” International Journal of Information Processing, Vol. 1, No.2, 2007
17. K. Poullose Jacob “Anomaly Detection Using System Call Sequence Sets” Journal of Software, Volume 6, 2007
18. K. Poullose Jacob “Impact Of Node Mobility On The Performance Of Wireless Sensor Networks”, International Conference on Sensors and Related Networks (SENNET’07), VIT, India, December 2007.
19. K. Poullose Jacob “GUI Based Decimation Filter Design Tool For Multi-Standard Wireless Transceivers” IET International Conference on Information and Communication Technology in Electrical Sciences (ICTES 2007), Chennai, India, December 2007.
20. K. Poullose Jacob “Polyphase Implementation of Non-recursive Comb



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- Decimators for Sigma-Delta A/D Converters” IEEE International Conference on Electron Devices and Solid-State Circuits, Taiwan, December, 2007.
21. K. Poullose Jacob “Performance Analysis of FIR Digital Filter Design: RNS Versus Traditional” 7th IEEE International Symposium on Communications and Information Technologies (ISCIT 2007), Sydney, Australia, October, 2007.
22. K. Poullose Jacob “Fault Tolerant Error Coding and Detection using Reversible Gates”, IEEE TENCON 2007 Taiwan, October, 2007
23. K. Poullose Jacob “A New Look at Reversible Logic Implementation of Decimal Adder” International Symposium on System-on-Chip (SOC 2007) Tampere, Finland, November “A 2007

13. Participation in Seminar/Conference/Refresher courses etc.

Participant(s)	Programme	Role
G. Santhosh Kumar	International Conference on Global Software Development (ICGSD 07), PSG College of Technology, July 26 – 28 (2007)	Participant
G. Santhosh Kumar	International Conference on Information Processing (ICIP2007), UVCE, Bangalore, Karnataka, India, August 10 -12 (2007)	Participant
G. Santhosh Kumar	International Conference on Sensors and Related Networks (SENNET07), VIT University, Vellore, December 2007	Participant

14. Awards/ Honours/ Fellowship etc. received : Nil

Invited talk delivered at the National Conference at FISAT by Dr. K.Paulose Jacob

15. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount (Rs.)	Investigator(s)
1	“Development of Regional Language interface for Information Retrieval from Database “	ISRO	Rs.6.7 lakhs.	Dr. Sumam Mary Idicula



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2	“Development of Multimodal Interface for Information Retrieval from Databases”	ISRO	Rs.9.5 lakhs	Dr. Sumam Mary Idicula
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16. Research Programmes and Activities :

Three Research Scholars working under the guidance of Dr. K.Paulose Jacob have completed the work and have submitted their PhD Thesis.

17. Seminar/ Conference/ Workshop/ Refresher Courses

Conducted by the Department : National Conference on Software Engineering in Association with Computer Society of India

18. Consultancy work

Sl. No.	Name of Consultancy	Sponsoring Agency
1	Computerisation and System Development	State Government undertaking

* * *



DEPARTMENT OF CULTURE AND HERITAGE

Estd : 1976

The Department was established in 1976 under the name of Foreign Languages. In the year 2003 it was renamed as Department of Culture and Heritage. Besides its earlier concerns with teaching linguistic and literary aspects of languages like English, French, German, Japanese and Russian, the Department now gives thrust to culture as an integral part of language study. During 2006-07, the study of Italian language and culture was introduced with funding from the Italian Government. This year a cultural exchange program is to be initiated with the Calabrian Institute for International Relations (ISCaPI) Italy, with 15 students taking part in the program from CUSAT and ISCaPI.

The Centre for Comparative Literature has published the 5th Volume on Comparative Literature entitled: Perspective on Comparative Literature and Culture. There is an ongoing Ph.D. program in Comparative Literature and Culture.

One of the extension activities of the Department consists of conducting short term courses in language and culture for institutions and the public on demand. Yet another is consultancy in terms of interpretation and translation. With the emergence of English as a global lingua franca, the teaching of English will be given added importance. To facilitate communication skills in English and other languages a multimedia laboratory has been set up. Two short-term courses of 3 months duration in Communicative English were conducted.

The Department conducts National Seminars and Workshops annually for teachers and research scholars on culture, literature and language themes with the collaboration of Sahitya Akademi and UGC. During the current year the National Seminar on "Perspectives on Postmodernism" was conducted.

Another project planned for this year is the commencement of Yoga Courses with the help of UGC funding.

1. Programmes of Study/Research

- (1) Certificate Course in French, German, Italian, Japanese and Russian
- (2) Diploma Course in French, German, Japanese and Russian
- (3) Integrated Diploma Courses in French, German, Italian and Russian
- (4) P.G.Diploma Course in Communicative English
- (5) Ph.D.Programme in Comparative Literature
- (6) Short-term Course on the above foreign languages and Communicative English

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr.Mariam Vincent Panikulangara	Head of The Department	M.A. (Linguistics) M.A.(Russian) Ph.D	Russian Language & Literature, Linguistics, Culture Studies, Film Studies



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Sl.No.	Name	Designation	Qualification	Specialisation
2.	Sri. A. Achuta Menon	Sr.Lecture in German	M.A., PGCTG (German)	German Language and Literature
3.	Smt.Brinda Bala Sreenivasan	Lecturer in English	M.A (English)	English Language and Literature

3. Visiting Faculty

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Ms. Sara Andreis	Sr. Lecturer in Italian	M.A.	Italian Language and Literature
2.	Prof.K.C.George	Lecturer in French	M.A	French Language and Literature
2	Smt.Monica Thomas	Lecturer in English	M.Phil	English Language and Literature
3	Dr.Mathew Joseph	Lecturer in English	Ph.D	English Language and Literature
5	Sri. Hudson Peter	Lecturer in Japanese	B.A., B.Tech	Japanese Language and Literature

4. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1.	Devi.S		Dr.Mariamman Vincent Panikulangara	TheAesthetics of Anna Akhmatova and Sylvia Plath
2.	Jose Augustine		-do-	Polemics & Culture patterns in the fiction and films of M.T.Vasudevan Nair
3.	Brinda Bala Sreenivasan		-do-	Culture motifs in the fiction of Gabriel Garcia Marcase and M.Mukundan
4	Ansy Sebastian		-do-	Aesthetics of Verlaine and Changampuzha

5. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Peon	1
2.	Library Assistant	1



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Sl.No.	Designation	No. of Posts
3.	Selection Grade Assistant	1
4.	Typist (HG)	1

6. Technical Personnel

Sl.No.	Designation	No. of Posts
Nil		

7. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	Certificate Course in French	34	2	36
2	Certificate Course in German	40	1	41
3	Integrated Diploma in Italian	14	-	14
4	Certificate Course in Japanese	24	1	25
5	Certificate Course in Russian	9	1	10
6	Diploma Course in Russian	1	-	1
5	P.G.Diploma in Communicative English	7	3	10
6	Ph.D Programme	1	3	4

8. Research Facilities

a. Laboratories (List out Major equipments available)

A multimedia Language Laboratory has been set up with 24 positions.

b. Library

No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
6367	95

c. Journals : 13

9. Distinguished visitors

Sl.No.	Name
1	Dr. Patrizia Raveggi, Director, Indian Embassy Cultural Institute, New Delhi



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Sl.No.	Name
2.	Prof. Lou Rizzolo and Linda Rozzolo Gwen Frostic School of Art, Western Michigan University, U.S.A.
3.	Prof. D.Venkat Rao School of Critical Humanities The English and Foreign Language University, Hyderabad

10. Ph.Ds Awarded : Nil

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
Ph.D. Program started in 2003			

11. Publications

a. Papers

Sl.No.	Name of Paper
1	Ideology in Literature, Theatre and Cinema Dr. Mariamma Vincent Panikulangara

b. Books

Sl.No.	Name of Paper
1	Perspective on Comparative Literature and Culture (Dr.Mariamma Vincent Panikulangara)

12. Participation in Seminar / Conference/Refresher Courses etc by Faculty / Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr.Mariamma Vincent Panikulangara	UGC National Seminar: Perspectives on Postmodernism 12-13 March 2008 Dept. of Culture and Heritage, CUSAT.	Director
A.Achuta Menon	-do-	Co-ordinator
Brinda Bala Sreenivasan	-do-	-do-

13. Awards/Honours/Fellowship, etc., received

Name of Recipient	Name of Fellowship / Honour/Award	Awarding Agency
Nil		



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14. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1.	Malayalam and Konkani Cultures in Contact – Historical and Linguistic Perspectives	UGC	Rs.4,16,000/-	Dr. Mariamma Vincent Panikulangara

15. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1.	Film Studies	Dr. Mariamma Vincent Panikulangara

16. Seminar / Conference/ Workshop / Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	National Seminar Perspectives on Postmodernism	2 days	Dr. Mariamma Vincent Panikulangara	UGC, Sahitya Akademi, New Delhi

17. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Short-term Course on Russian Interpretation	Dr. Mariamma Vincent Panikulangara	Carborandum Universal, Kalamassery
2.	Translation and Interpretation of official documents and manuals	Dr. Mariamma Vincent Sri.A.Achuta Menon Ms. Sara Andreis	institutions & Individuals

* * *



DEPARTMENT OF ELECTRONICS

Estd : 1975

The University of Cochin instituted the Department of Electronics in the year 1975. This is envisaged as a postgraduate Department with Master's Degree and Ph.D programmes in frontier fields of Electronics. The Department was inaugurated by Prof. M.G.K. Menon in 1975. Realising the growing needs of trained man-power in various fields of Electronics, the University decided to start teaching programmes in the Department, anticipating formal sanction and approval of the University Grants Commission, All India Council for Technical Education, etc. in due course. Initially, an M.Tech. course was started with a student strength of 6. Subsequently it was raised to 20 in the general category and 5 in the sponsored quota.

In 1983, the All India Council for Technical Education (AICTE) and the University Grants Commission (UGC) extended financial support to the M.Tech. course. The Doctorate Programmes of the Department are mainly in the fields of Underwater Acoustics, Ocean Electronics, Microwave Propagation & Antennas, Pattern recognition, Microprocessor Applications, Signal processing and Display Devices. External agencies like the Department of Science & Technology (Govt. of India), Indian Space Research Organisation (ISRO), C.S.I.R., Atomic Energy Commission, Defence Research and Development Organisation and the State Government are supporting this Department through various Research projects and Research Fellowships.

In 1990, the Department started M.Sc. degree course in Electronics co-sponsored by UGC and Department of Electronics (Govt. of India). In 1988, the University Grants Commission sanctioned "COSIST" assistance of Rs.57.86 lakhs to the Department for development of postgraduate education and research in the areas of Microprocessor Applications and Microwave Antennas.

In 1993, the Department was selected by UGC for the Departmental Research Support (DRS) in the field of Ocean Electronics, with a financial assistance of about 60.00 lakhs for five years. In 1998, an additional financial assistance was sanctioned for Rs. 33.00 lakhs under DRS scheme for a period of 5 years. In 2005, DST selected this Department for financial assistance under their FIST Programme. An amount of Rs. 59.00 lakhs was sanctioned by DST for a period of 5 years. Sponsored projects are running in the Department for a total outlay of Rs.577.76 lakhs.

Ministry of Human Resources Development has given assistance for Rs.75.00 lakhs for establishing an advanced VLSI Laboratory and Signal Processing Laboratory in this Department. In the year 2007 the University Grants Commission has given Rs.20.00 lakhs and Rs.30.00 lakhs in 2008 specifically for creating infrastructural facilities in this Department. UGC has also sanctioned 5 separate Research Fellowships namely Research Fellowship for Meritorious Students (RFMS) to this Department in 2007 and 2008. The UGC has sanctioned Rs.75.00 lakhs to the Department for implementing the DSA (Phase II) Programme. Recently the DST has sanctioned two projects to the Department at a total cost of Rs.44.80 lakhs, and



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the Ministry of Earth Sciences has sanctioned a project at total cost of Rs.95.00 lakhs to the Department.

The technical biasing of the University, spectacular growth of Electronics industries in Kerala and the location of the University in the industrial zone of the State are all favourable aspects for hope of substantial development of this Department.

1. Programmes of Study/Research

- (1) M.Tech. Electronics
- (2) M.Sc. Electronic Science
- (3) Ph.D

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr.K. Vasudevan	Professor & Head	M.Sc.,Ph.D.	Antennas, Electromagnetics, Microwave Devices, Radar Systems, Microwave Communications
2.	Dr. P.R.S.Pillai	Professor	M.Sc.,Ph.D.	Digital Communication Computer Networks, Underwater Acoustics Microprocessors
3.	Dr. P. Mohanan	Professor	M.Sc.,Ph.D.	Antennas, Microwave Networks, Microwave Communication
4.	Dr. Tessamma Thomas	Reader	M.Sc.,M.Tech, Ph.D.	Speech/Image & Bio-medical Signal Processing, Digital System Design
5.	Dr.R.Mary Lourde (On leave)	Reader	B.Tech., M.Tech Ph.D	Digital Electronics, Control Systems, Automation
6.	Dr. C.K.Aanandan	Reader	M.Sc.,Ph.D.	Microwave Communication, Radar Systems & Antennas
7.	Dr.Sreela Sasi (On leave)	Sr.Lecturer	B.Tech.,M.S. Ph.D.	Speech Processing, Digital Electronics Processing and Artificial Intelligence



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Sl.No.	Name	Designation	Qualification	Specialisation
8.	Dr.A.P. Preethi (On leave)	Lecturer	B.Tech.,M.Tech. Ph.D	Digital Electronics and Image Processing
9.	Mr. James Kurian	Reader	M.Sc., M.Tech.	Instrumentation, Embedded Systems
10.	Ms. Supriya M.H.	Sr. Lecturer	B. Tech., M.Tech.	Signal Processing, Network Analysis, Digital Electronics, Microprocessors, Computer Graphics, Control Systems, Data Structures.

3. Visiting Faculty

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Sri. A.K.Prakash	Formerly Senior Scientist, NPOL	M.Tech.	Radar & Communication
2.	Dr. Muraleekrishna	Scientist, NPOL	M.Tech	Digital Signal Processing
3.	Ms. Remadevi	Scientist, NPOL	M.Tech	Digital Signal Processing
4.	Mr. Prince Joseph	Scientist, NPOL	M.Tech	Embedded Systems

4. Research Staff

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr. Jaimon Yohannan	Principal Investigator of DST Research Project	Ph.D.	Microwave Electronics
2.	Ananthakrishnan V	Project Scientist	M.Sc.Electronics	Digital Electronics
5.	Sujith R.	Project Scientist	M.Sc.Electronics	Microwave Electronics

5. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
Full-time				
1.	Dinesh Kumar V.P	CSIR, SRF	Dr. Tessamma Thomas	Image Processing
2.	Anil Lonappan	CSIR, SRF	Dr.K.T.Mathew	Bio-medical Engineering



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Sl. No.	Name	Funding Agency	Guide	Area of Work
3.	Gijo Augustine	UJRF	Dr. K. Vasudevan	Microwave Electronics
4.	Bybi.P.C.	UGC	Dr.P.Mohanan	Microwave Electronics
5.	Deepthi Das	DST	Dr.C.K.Aanandan	Microwave Electronics
6.	Gopikrishna.M	UGC	Dr.C.K.Aanandan	Microwave Electronics
7.	Jitha.B.	UGC	Dr.C.K.Aanandan	Microwave Electronics
8.	Robin Augustine	UGC	Dr. K. T. Mathew	Microwave Electronics
9.	Shameena.V.A.	UGC	Dr. P. Mohanan	Microwave Electronics
10.	Prajas John	JRF	Dr.P.R.S. Pillai	Embedded Systems
11.	Deepu.V.	JRF	Dr. P. Mohanan	Microwave Electronics
12.	Sarin.V.P.	UGC	Dr. K. Vasudevan	Microwave Electronics
13.	Prabha.C.	JRF	Dr.P.R.S.Pillai	Target Identification and tracking using neural
14.	Ullas G. Kalappura	UGC	Dr. K. T. Mathew	Microwave Electronics
15.	Nishamol. M.S.	UGC	Dr. K.Vasudevan	Microwave Electronics
16.	Laila D.	UGC	Dr. P.Mohanan	Microwave Electronics
17.	Ashkarali P.	UGC	Dr. C.K.Anandan	Microwave Electronics
18.	Reji A.P.	UGC	Dr. Tessamma Thomas	Image Processing

Part-time

1.	Dominic Mathew	HMT, Kalamasserry	Dr. Tessamma Thomas	Self Leaving Systems
2.	Francis Jacob.K	Dy. General Manager, BSNL	Dr. P. Mohanan	Smart Antennas for local wireless accessing in Telecom
3.	Supriya M.H	Sr. Lecturer, DOE, CUSAT	Dr. P.R.S. Pillai	User Interactive Under water Target
4.	Radhakrishnan K	MA College of Engg. Kothamangalam	Dr. K.G. Balakrishnan	Kalman Filter and Optional Control
5.	James Kurian	Reader, DOE, CUSAT	Dr. P.R.S. Pillai	Imaging Techniques for detection of flaws in nonmetallic media of microwaves
6.	Deepa Sankar	Lecturer, SOE, CUSAT	Dr.Tessamma Thomas	Medical Image Processing
7.	Praveen.N.	-	Dr.Tessamma Thomas	Biometrix
8.	Vinu Thomas	IHRD	Dr. K.T.Mathew	Microwave Imaging



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Sl. No.	Name	Funding Agency	Guide	Area of Work
9.	Manoj Joseph	Scientist, VSSC, TVM	Dr. P.Mohanan	Microwave Electronics
10.	Anish Kumar M.S.	-	Dr. Gopikakumari	Microwave Electronics
11.	Ananda Resmi.S.	-	Dr.Tessamma Thomas	Image Processing
12.	Neelakantan.P.C.	-	Dr.C.K. Aanandan	Bandwidth enhance- ment of microstrip ant- ennas using stepped T striptfeed
13.	Mohankumar.K.	-	Dr.P.R.S.Pillai	Target Identification and tracking using neural networks
14.	Girish.G.	-	Dr.C.K. Aanandan	
15.	Kedarnath Shenoy.S		Dr.P.R. S.Pillai	Target Identification and tracking using neural networks
16.	Nobert Thomas Pallath	-	Dr.Tessamma Thomas	Design and Developm- ent of a hybrid MAC protocol for video trans- mission over wireless networks
17.	Deepa J.	-	Dr. Tessamma Thomas	Medical Image Techniques
18.	Gopakumar C.	-	Dr. K.T.Mathew	Microwave Imaging Techniques
19.	Sethunadh R.	-	Dr. Tessamma Thomas	Image Processing
20.	Ajith Kumar P.C.	-	Dr. P.Mohanan	Adaptive Algorithm for Smart Antenna

6. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Section Officer	1
2.	Selection Gr. Assistant	2
3.	Asst. Grade II	1(On daily wages)
4.	Typist/Steno	2 (1 on daily wages)
5.	Peon	2
6.	Sweeper	1



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7. Technical Personnel

Sl.No.	Designation	No. of Posts
1.	Maintenance Engineer	1 (Vacant)
2.	Tech.Asst.Grade III	4 (One on LWA) & 1 Vacant)
3.	Technician	1 (Vacant)
4.	Printer	1
5.	Asst. Librarian	1
6.	Lab. Assistant	3
7.	Storekeeper Gr. II (Electronic Science)	1

8. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1.	M.Tech. (Electronics)	24	18	42
2.	M.Sc. (Electronics)	28	19	47

9. Research Facilities

a. Laboratories (List out Major equipments available)

***List of MAJOR Equipments available in the department
(Cost exceeding more than 1 lakh)***

Sl.No	Equipment	Cost in Lakhs
1.	HP 8510 C-Network Analyzer	20.00
2.	HP 8514 B S Parameter Test set	20.50
3.	HP 8341 B Broad band Microwave sweep oscillator	7.00
4.	HP 83651B Dedicated source 45 MHz - 50 GHz	18.5
5.	HP 8511B Frequency Converter	1.36
6.	HP Spectrum Analyzer	7.98
7.	HP Dynamic Signal Analyser	6.99
8.	Impedance Analyzer	1.76
9.	Multifunction generator HP 8904A	1.95



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Sl.No	Equipment	Cost in Lakhs
10.	Flaw Detector UFD 300	4.98
11.	Level recorder , Turn Table, Recording Accessories	3.00
12.	Power Amplifier B& K (2 Nos)	3.75(each)
13.	Measuring Amplifier (2 Nos)	1.25(each)
14.	Precession Conditioning Amplifier	1.05
15.	Charge Amplifier	1.12
16.	Graphics Plotter	1.42
17.	Transducer B & K 8100, 8103, 8104, 8105 (4 Nos)	2.92
18.	HP 83 HP Frequency Converter	5.00
19.	Image Scanner	2.38
20.	HP Duel Power meter (2 Nos)	3.00
21.	HP 8410 Network Analyzer with reflection test	7.0
22.	S- Band Radar (Donated by LRDE, Bangalore)	100.00
23.	Vacuum Coating Unit	4.00
24.	Robot Arm & Vision System	7.00
25.	Lock-in Amplifier	2.00
26.	LAN System	12.00
27.	HP XY/t Record	1.2
28.	UPS 5 KVA(6 Nos)	9.00
29.	HP 8349 B Frequency Converter	1.5
30.	HP Microwave Sweep Oscillator	6.5
31.	HP 9000 series Instrumentation Controller	3
32.	Scientific Atlanta Positioner & Controller	2.4
33.	HP Microprocessor Development System	5.00
34.	Short Range Sonar	5.07
35.	Workstation (DEC)	4.7
36.	Fully Instrumented Underwater Transducer Evaluation Facility	20.00
37.	Fully Instrumented Free Field Antenna Test Facility	20.00
38.	Digital Personal Workstation	3.50
39.	High Frequency High Power Amplifier	1.98
40.	Standard Transducer	2.92
41.	Echo Sounder ES60	17.29
42.	Simulation Software for Microwave Circuits/Antennas	2.00
43.	Underwater Video Camera & Accessories	5.03
44.	Matlab for DSP Laboratory	3.68
45.	48 Channel 100MHz Logic Analyzer	1.05



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Sl.No	Equipment	Cost in Lakhs
46.	Image Grabber System	1.12
47.	Workstations (2 Nos)	1.53 (each)
48.	Portable Network Analyzer	5.00
49.	Microwave Vector Network Analyzer	38.07
50.	Dual Frequency Sonar	6.62
51.	SMD Rework Station	13.25
52.	Logic Analyzer	4.31
53.	Digital Storage Oscilloscope	1.07
54.	Computer with Xeon Processor 3.73 (GHz x 2 (16 Nos.)	42.83
55.	Spectrum Analyzer	3.26
56.	Colour CCD Camera COHU	3.82
57.	Sony Lap Top	1.16
58.	UPS IGA Sattern 5 K V A (8 Nos.)	12.24
59.	HP XW 4300 Workstation	1.30
60.	20 K V A Diesel Generator	3.14
61.	Agilent PNA	45.00
62.	Simulation Software for Microwave Circuits/Antennas	13.00
63.	VLSI Tools	4.00
64.	Workstation/Computers etc.	12.00
65.	Generator / UPS etc.	8.00
66.	R & S PNA	37.00
67.	Spectrum Analyzer	8.00
68.	T _L A 5201 Logic Analyzer Tektronix 34 channels 25 Hz	6.00
69.	TDS 2022 Two channel 200 MHz 2GS/s Oscilloscope (DSO)	1.00
70.	SMD Re-work station Martin DBL-05 + Air Compressor	17.00

SPECIAL CENTRES OF RESEARCH AND TRAINING IN THE DEPARTMENT

With special assistance from the Ministry of Human Resource Development, Govt. of India, three special centers of Research and Training have been set up in the Department in frontier areas of Electronics.

Electronics Instrumentation Research Laboratory (EIRL)

The EIRL was set up in 1983 with aid from the Ministry of Human Resource Development (MHRD), Government of India. A total grant of Rs.40 lakhs has been sanctioned for setting up this laboratory. The laboratory is equipped with Sensors and Transducers, Signal Conditioners, Measuring and Display units, Microprocessor system support cards for A/D & D/A conversion, Data logging, Analog- Hybrid Computer, Process Control Trainer System, Logic Analysers/Scopes and General Purpose Measuring Instruments.



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Research work is being carried out in the areas of Electronic Instrumentation and Microprocessor based Measurement and Control Systems. The EIRL also proposes to set up a Standards Laboratory.

Centre for Research in Microprocessor Applications (CRMA)

This Centre was set up with aid from the Ministry of Human Resource Development, Government of India. A total grant of Rs.30 lakhs has been sanctioned for setting up this centre. The centre is equipped with Microcomputer systems, a large number of Microprocessor system support cards including memory cards, Dynamic Memories, Battery Backup Cards, A/D & D/A Cards, Relay Cards, Opto Coupler Cards, Peripheral Controller Cards, Graphic and Semigraphic Terminals, stand alone VDU's and three Microprocessor Development Systems: One is a 16 bit system from Hewlett Packard and the other two from Intel Corporation- the 8 bit Personal Development System and the 16 bit stand alone Development system.

The Laboratory is equipped with multi purpose bus running through out to accommodate most commonly used buses.

Research works undertaken in this centre are in the areas of Multiprocessors, Protocols for Multiprocessors, Speech Processing, Pattern Recognition, etc.

Centre for Ocean Electronics (CUCENTOL)

A centre for Research and Training in Ocean Electronics (CUCENTOL) has been set up in the Department with the financial assistance from the Ministry of Human Resource Development, Govt. of India and the UGC. An amount of Rs.32 lakhs was sanctioned by the Ministry in two installments for this Centre. University Grants Commission has approved the establishment of the Centre during the VIII plan period with essential staff and infrastructure. UGC has sanctioned a sum of Rs.60.00 lakhs under the DRS programme in 1993. Developments of new Underwater Transducers and Arrays for Sonar Applications are the major activities of the centre.

Microwave Electronics and Antenna Laboratory

A well established research and training Laboratory in Microwave Electronics and Antennas has been set up in this Department with financial assistance from MHRD, UGC, DST (Govt. of India) and DoE (Govt. of India). The Laboratory is equipped with most modern and sophisticated equipment like HP 8510 B Network Analyzer, Microwave Power Meter and different antenna and RCS standards. The laboratory is having a Microwave Anechoic Chamber for simulating free space environment for antenna and RCS measurements. The Chamber has instrumentation set-up attached to it with provision for fully automatic measurement based on HP 8510 B Network Analyzer and Scientific Atlanta Positioner. The Department has developed an indigenous software which is used for quick and precise antenna measurements and analysis. The major areas of research now being pursued are microstrip antennas and transmission lines, super- conducting microwave transmission lines, integrated circuits and antennas, reduction of radar cross section, microwave non-destructive



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tive testing, leaky wave antennas, microwave horn antenna, material studies in microwave region etc. Non-destructive testing of objects like vehicular tyres is a break through by the laboratory in NDT technique. These facilities are being used/operated by many establishments like SAMEER (Bombay & Madras), SAC Ahamadabad, NPOL, Cochin, Delhi University, CSIR Regional Research Laboratory (Trivandrum), Jadavpur University, Gulbarga University and others.

Embedded System Laboratory (ESL)

The Department has set up an Embedded Systems Laboratory, comprising of Martin Auto vision Expert 9.5 SMD Re-workstation, Tektronics 34 Channel Logic Analyzer, Tektronics Digital Storage Oscilloscope, etc.. The nature of activities currently being pursued in the Department making use of these facilities include the design and development of Embedded Systems for the realization of steering/control system for hydrophone arrays, embedded signal processor modules, embedded CDMA transceiver modules, miniaturized archival tags for tagging tuna, development of miniaturized embedded global positioning devices, etc..

Centre for Research in Electromagnetics and Microwave Antennas (CREMA)

The Centre for Research in Electromagnetics and microwave Antennas (CREMA) for Research and Training has been set-up in the Department with the financial assistances from the Ministry of Human Resource Development, UGC, AICTE, DST and DoE (Government of India). The Centre is well equipped with most modern and sophisticated equipment such as HP8510 B Network Analyser, Agilent PNA, Rhode & Schwarz India Pvt. Ltd., Vector Network Analyzer.

Training and Research facilities in VLSI Design

In view of the importance and significance in promoting Training and Research activities in VLSI Design, the Department is planning to establish a VLSI Laboratory for exposing the PG students and Research Scholars to this most emerging area of Electronics, and cater the requirements of National Laboratories and industries.

Centre for Research in VLSI/Embedded Systems

This Centre was set-up with the assistance from the Ministry of Human Resource Development, Government of India. A total grant to the tune of Rs.50.00 lakhs has been sanctioned for setting-up this Centre.

Other Research Laboratories :

- (i) Microwave Tomography and Materials Research Lab(MTMR)
- (ii) Audio and Image Research Lab (AIRL)

b. Library

	No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
Books	5612	90
Journals	37	1



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c. Others : Nil

12. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1.	Padmashree Dr. A.Sivathanu Pillai	Distinguished Scientist and Chief Controller R & D, Defence Research & Development Organization & Chief Executive Officer, Brahmos Aerospace Limited	Inauguration of SYMPOL-2007 & Keynote address on Recent Trends in Sonar Technology
2.	Shri. S.Anantha	Director, Naval Physical and Oceanographic Laboratory, Cochin.	Release of the Proceedings of the International Symposium on Ocean Electronics 2007 (SYMPOL-2007)
3.	Shri. M.Mathurakani	Naval Physical and Oceanographic Laboratory, Cochin - 682 021	Invited Talk on System Level Simulation of Sonar and Environment in connection with SYMPOL-2007
4.	Shri. V.Chander,	Formerly Director, Naval Physical and Oceanographic Laboratory, Cochin - 682 021	Invited talk on Underwater Unconventional?? in connection with SYMPOL-2007
5.	Prof. G.V.Anand,	Indian Institute of Science Bangalore - 560 012	Invited talk on Matched field Processing in Underwater Accountics in connection with SYMPOL-2007
6.	Prof. Gopu R.Potty	University of Rhode Island USA	Invited talk on Recent Trends in Acoustical Oceanography in connection with SYMPOL-2007
7.	Dr. D.Srinivasan	Formerly Director, Naval Physical and Oceanographic Laboratory Cochin - 682 021	Invited talk on Optical Studies in the Sea in connection with SYMPOL-2007
8.	Dr. R.K.Tewari,	Formerly Scientific Advisor to Chief of Naval Staff, New Delhi	Invited talk on Ocean Electronic Warfare : the Soft-kill Measures in connection with SYMPOL-2007



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Sl.No.	Name	Affiliation	Remarks
9.	Dr. Charles F.	Naval Research Laboratory Washington, USA	Invited talk on Time Reversal Mirror for Application in Underwater Communication and Sonar in connection with SYMPOL-2007
10.	Dr. D.D.Eenezer	Naval Physical and Oceanographic Laboratory Cochin - 682 0221	Invited talk on Underwater Acoustic Transducer Array Analysis in connection with SYMPOL-2007
11.	Dr. S.Kathiroli	Director, National Institute of Ocean Technology Chennai - 600 100	Invited talk on Recent advances in Ocean Technology in connection with SYMPOL-2007
12.	Prof. Rajendar Bahl,	Indian Institute of Technology	Invited talk on Application of Passive Acoustics Technology for Observation of Marine mammals in connection Marine Mammals in connection with SYMPOL-2007

13. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Development of Active Microwave Imaging Techniques for Application in Mammography	Bindu G.	Dr. K.T.Mathew
2.	Enhancement of Microwave Properties of planar filters and antennas using photonic band gap (PBG) structures	Sreedevi K.Menon	Dr. P. Mohanan
3.	Hexagonal dielectric resonator antenna- a novel DR antenna for wireless communication	Hamsakutty V.	Dr. P. Mohanan



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Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
4.	Development and analysis of a compact dual-band coplanar Antenna	Rohit K.Raj	Dr. P.Mohanan
5.	Investigations on Reconfigurable Dual frequency Microstrip Antennas controlled by PIN diodes and varactors	Shynu S.V.	Dr. K.Vasudevan
6.	Applications of fractal Based structures in Rader Cross section Reduction	Anupama R.Chandran	Dr. C.K.Anandan

14. Publications

a. Papers

Sl.No.	Name of Paper
1.	<i>An Electromagnetically coupled dual band dual polarized microstrip antenna for WLAN applications</i> Sarin V.P., Nisha Nassar, Gijo Augustine, C.K. Anandan, P.Mohanan and K.Vasudevan, <i>microwave and Optical Tehnology Letters</i> (Accepted for publication 2008)
2.	<i>Microstrip band rejection filter using open loop resonator</i> , B.Jitha, P.C.Bybi, C.K.Anandan and P.Mohanan, <i>Microwave and Optical Technology Letters</i> (Accepted for publication 2008)
3.	<i>A compact dual band planar antenna for DCS-1900, PCS, PHS, WCDMA, IMT-2000 and WLAN applications</i> , <i>IEEE Antennas and Wireless Propogation Letters</i> , Gijo augustin, Bybi P.C., Sarin V.P., P.Mohanan, C.K.Anandan and K.Vasuidevan (Accepted for publication 2008)
4.	<i>Analysis of female human breast tissues at microwave frequencies</i> , Bindu G., Mathew K.T.Mcrowave and <i>Optical Technology Letters</i> 50 (3), pp. 614-616, 2008.
5.	<i>A novel method of detecting HIV/AIDS using microwave</i> , Loanppan A., Thomas V., Bindu G., Jacob. J., Rajasekaran C., Mathew, K.T., <i>Microwave and Optical Technology Letters</i> 50 (3), pp. 557-561, 2008.
6.	<i>Comparison of microwave and electrical properties of selected conducting polymers</i> , Lakshmi K., John H., Joseph R., George K.E., Mathew K.T. <i>Microwave and Optical Technology Letters</i> 50 (2), pp. 504-508, 2008.
7.	<i>Scattering behaviour of fractal based metallo-dielectric structures</i> , Chandran A.R., Gopikrishna M., Anandan C.K., Mohanan P., Vasudevan K., <i>Progress in Electromagnetics Research</i> 2007, 69, 323-339
8.	<i>New method of detecting lymphatic doisease using microwaves</i> , Lonappan A., Thomas V., Bindu G., Jacob J., Rajasekaran C., Mathew K.T. <i>Microwave and Optical Technology Letters</i> 49 (12), pp. 3166-3169, 2007.



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9. *Characterization of benign and malignant breast tissues using 2-D microwave tomographic imaging*, Bindu G., Mathew K.T., Microwave and Optical Technology Letters 49 (10), pp. 2341-2345, 2007.
10. *Conducting polyaniline composites as microwave absorbers*, Join, H.Thomas, R.M.Jacob, J.Mathew, K.T.Joseph, R. Polymer Composites 28 (5), pp.588-592, 2007
11. *Non surgical life saving diagnostic procedure using microwaves*, Lonappan A., Thomas V., Bindu G., Jacob J., Rajasekaran C., Mathew K.T. Microwave and Optical Technology Letters 49 (10), pp. 2364-2368, 2007.
12. *Nonsurgical method of cancer using microwaves*, Lonappan A., Bindu Q., Thomas V., Jacob j. Rajasekaran C., Mathew K.T. Microwave and Optical Technology Letters 49 (10), pp. 2559-2561, 2007
13. *Diagnosis of diabetes mellitus using microwaves*, Lonappan A., Bindu G., Thomas V., Jacob J., Rajasekaran C., Mathew K.T., Journal of Electromagnetic Waves and Applications 21 (10), pp. 1393-1401, 2007.
14. *Nondestructive measurement of human blood at microwave frequencies*, Lonappan A., Thomas V., Bindu G., Rajasekaran C., Mathew K.T. Journal of Electromagnetic Waves and Applications 21(8), pp. 1131-1139, 2007
15. *Synovial fluid at microwave frequencies*, Lonappan A., Thomas V., Bindu G., Rajasekaran C., Mathew K.T., Microwave and Optical Technology Letters 49 (7), pp. 1700-1702, 2007.
16. *Determination of pregnancy using microwaves*, Lonappan A., Rajasekaran C., Thomas V., Bindu G., Mathew K.T., Microwave and Optical Technology Letters 49 (4), pp. 786-788, 2007.
17. *A wideband conical beam cylindrical dielectric resonator antenna*, Kumar A.V.P., Hamsakutty V., Yohannan J., Mathew K.T. IEEE Antennas and Wireless Propagation Letters 6, pp. 15-17, 2007.
18. *Effect of different forms of poly o-toluidine/poly vinyl chloride composites on dielectric properties in the microwave field*, John H., Joseph R., Mathew K.T., Journal of Applied Polymer Science 103 (4), pp. 2253-2260, 2007.
19. *Dielectric behaviour of natural rubber composites in microwave fields*, John H., Joseph R., Mathew K.T. Journal of Applied Polymer Science 103 (4), pp. 2682-2686, 2007.
20. *Hexagonal dielectric resonator antenna for 2.4 GHz WLAN applications*, Hamsakutty V., Kumar A.V.P., Yohannan J., Mathew K.T., Microwave and Optical Technology Letters 49 (1), pp. 162-164, 2007.
21. *A novel computer-assisted technique for pedicle screw insertion*, John P.S., James C., Antony J., Tessamma T., Ananda R., Dinesh K. International Journal of Medical Robotics and Computer Assisted Surgery, Volume 3, Issue 1, March 2007, Pages 59-63
22. *Square monopole antenna for ultra wide band communication applications*, Gopikrishna M., Krishna D.D., Chandran A.R., Anandan C.K. Journal of Electromagnetic Waves and Applications 21 (11), pp. 1525-1537



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23. *Effect of filler content on the dielectric properties of PTFE/Zn/A1₂O₄-TiO₂ composites* Sherin Thomas, V. Deepu, P. Mohanan and M.T.Sebastian, Journal of American Ceramic Society (Accepted for publication 2007)
24. *Compact asymmetric coplanar strip fed monopole antenna for multiband applications*, Deepu V., Raj R.K., Joseph M., Suma M.N., Mohanan P., IEEE Transactions on Antennas and Propagation, 2007, 55, 8, 2351-2357.
25. *Compact uniplanar antenna for WLAN applications*, Deepu, V.; Rohith, K.R.; Manoj, J.; Suma, M.N.; Vasudevan, K.; Aanandan, C.K.; Mohanan, P., Electronics Letters, 2007, 43, 2, 70-72
26. *Planar branched monopole antenna for UWB applications*, Jacob K.F., Suma M. N., Raj R.K., Joseph M., Mohanan P., Microwave and Optical Technology Letters, 2007, 49, 1, 45-47
27. *Microstrip-fed dual band folded dipole antenna for DCS/PCS/2.4GHz WLAN applications* Manoj Joseph, Rohith K.Raj, Suma M.N., C.K.Aanandan, K.Vasudevan And P.Mohanan, International Journal On Wireless and Optical Communications, Volume 4, No.1, pp. 43-51, 2007.
28. *Wideband Planar Antenna for New Generation Mobile Applications*, P. C. Bybi, B. Jitha, P. Mohanan, and C. K. Aanandan, International Journal of Antennas and Propagation, Vol. 2007, Article ID 10410, 7 pages.
29. *Planar Elliptical UWB Antenna with band-Notch Characteristics*, "Deepti Das, M.Gopikrishna, C.K.Aanandan, P.Mohanan, and K.Vasudevan, International Journal on Wireless & Optical Communications. Vol.4, No.2, May 2007.
30. *FDTD analysis of rectangular dielectric resonator antenna*, Mohanan P., Mridula S., Binu Paul, Suma M.N., Bijumon P.V., Sebastian M.T., Journal of the European Ceramic Society, 2007, 8-9 SPEC. ISS., 2753-2757.
31. *Low dielectric loss polytetrafluoroethylene/TeO₂ polymer ceramic composites*, Subodh G., Joseph M., Mohanan P., Sebastian M.T., Journal of the American Ceramic Society, 2007, 90, 11, 3507-3511
32. *PTFE/Sr₂Ce₂Ti₅O₁₆ polymer ceramic composites for electronic packaging applications*, Subodh G., Pavithran C., Mohanan P., Sebastian M.T., Journal of the European Ceramic Society, 2007, 27, 8-9 SPEC. ISS., 3039-3044
33. *A compact hybrid CPW fed planar monopole/dielectric resonator antenna*, Suma M.N., Bijumon P.V., Sebastian M.T., Mohanan P. Journal of the European Ceramic Society, 2007, 27, 8-9 SPEC. ISS. 3001-3004.
34. *Development of a Miniaturised Pressure Tag for Ocean Depth Measurements* Prajas John, Jinto George, Supriya M.H. and P.R.Saseendran Pillai, Proceedings of SYMPOL-2007, Allied Publishers, Chennai, 2007, pp.177-181.
35. *Geolocation Estimation using Light Intensity Measurements* Jinto George, Prajas John, Supriya M.H. and P.R.Saseendran Pillai, Proceedings of SYMPOL-2007, Allied Publishers, Chennai, 2007, pp.182-187.



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36. *Model studies on the Localisation of Underwater Targets using Sensor Networks* C.Prabha, Supriya M.H. and P.R.Saseendran Pillai, Proceedings of SYMPOL-2007, Allied Publishers, Chennai, 2007, pp. 257-263.
37. *Development of a Hydrophone Array Controller for Ocean Surveillance Applications* Ananthakrishnan V., Supriya M.H. and P.R.Saseendran Pillai, Proceedings of SYMPOL-2007, Allied Publishers, Chennai, 2007, pp. 264-269.
38. *Extraction of Bispectral Features using Principal Component Analysis* Mohankumar K., Supriya M.H. and P.R.Saseendran Pillai, Proceedings of SYMPOL-2007, Allied Publishers, Chennai, 2007, pp. 42-47.
39. *Hidden Markov Model Based Underwater Target Classifier* Supriya M.H. and P.R.Saseendran Pillai, Proceedings of SYMPOL-2007, Allied Publishers, Chennai, 2007, pp. 90-97
40. *Development of Drop Detection Algorithm for Acoustic Rain Gauges* T.K.Mani and P.R.Saseendran Pillai, Proceedings of SYMPOL-2007, Allied Publishers, Chennai, 2007, pp. 125-136.
41. *Estimation of Drop Size Distribution from the Low Frequency Components in the Rain Generated Underwater Acoustic Noise* Mani T.K. and P.R.Saseendran Pillai, Journal of Acoustic Society of America, 121(5, pt2), 2007. p.3033
42. *Towards Improving the Target Recognition Using Spectral and Cepstral Features*, M.H.Supriya and P.R. Saseendran Pillai, Journal of Acoustic Society of America. 121 (5, pt2), 2007, p.3046
43. *Performance Study of improved Legendre Moment Descriptor as Region-Based Shape Descriptor* Dinesh Kumar V.P., Tessamma Thomas in journal of Pattern Recognition and Image Analysis. vol. 18, no. 1, pp. 23-29, 2008.
44. *Content-based retrieval of scoliosis images* Dinesh Kumar V.P., Tessamma Thomas, K.V. Menon in Journal of Spinal Disorders and Techniques
45. *A Comparative Study of Classification Accuracy of Orthogonal Moment Based Shape-Descriptors and Neural Networks* V.P.Dinesh Kumar, and Tessamma Thomas in AMSE Periodical: I B: Signal Processing and Pattern Recognition (Accepted).
46. *A Novel Computer Assisted Technique for Pedicle Screw Insertion* P.S.John, James Chacko, Antony Joseph Thoppil, Tessamma Thomas, Ananda Resmi S., and V.P.Dinesh Kumar, International Journal of Medical Robotics and Computer Assisted Surgery.
47. *A Parallel Multiple Subsequence Structure for Wavelet Packet Transform on MPPs* Dinesh Kumar V.P., Devassia V.P., Mini M.G. and Tessamma Thomas Proc. of the International Conference on Emerging Technologies and Applications in Engineering, Technology and Sciences (ICETAETS - 2008), pp. 733-737, 2008.
48. *Fast Fractal Coding Method for the Detection of Microcalcification in Mammograms* Deepa Sankar and Tessamma Thomas, Proc. of the IEEE International Conference on Signal Processing, Communications and Networking, (ICSCN-20080, Madras Institute of Technology, Chennai, Jan. 4-6, 2008, pp.471-476



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- 49. *Clustering of Invariance Improved Legendre Moment Descriptor for Content Based Image Retrieval*, Dinesh Kumar V.P. and Tessamma Thomas, Proc. of the IEEE International Conference on Signal Processing, Communications and Networking, (ICSCN-2008), Madras Institute of Technology, Chennai, Jan. 4-6, 2008, pp.378-382
- 50. *Nonlinear Modeling of Loudspeaker using Adaptive second order Volterra Filters* Deepa Sankar and Tessamma Thomas, Proc. of the IET-UK International Conference on Information and Communication Technology in Electrical Sciences (ICTES 2007), Chennai, pp. 87-92, 2007.
- 51. *Compression of Pseudo-periodic signals using 2D Wavelet Transforms* Dominic Mathew, V.P.Devassa and Tessamma Thomas, Proc. of the IEEE International Conference on Computational Intelligence and Multimedia Applications- (ICCIMA-2007), pp.379-383, 2007.
- 52. *Content Based Image retrieval of Scoliosis Images* V.P.Dinesh Kumar, Tessamma Thomas and K.V.Menon, International Conference on Spinal Disorders, Delhi, October, 2007.
- 53. *Development of Software for Automatic Scoliosis Measurement* V.P.Dinesh Kumar, Tessamma Thomas, and K.V.Menon, National Conference on Biotechnology in Molecular Medicine, Cochin, India, 13-14 January, 2007.

b. Books

Sl.No.	Name of Book
1.	Proceedings of APSYM – 2007

15. Participation in Seminar / Conference/Refresher Courses etc by Faculty / Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr.P.Mohanan,	International Conference at Institute of Radio Physics, University of Calcutta	Invited talk
Ms. Supriya M.H.	International Symposium on Ocean Electronics (SYMPOL-2007)/CUSAT	Organization/Paper presentation
Mr. Jinto George	International Symposium on Ocean Electronics (SYMPOL-2007)/CUSAT	Organization/Paper presentation
Mr. Prajas John	International Symposium on Ocean Electronics (SYMPOL-2007)/CUSAT	Organization/Paper presentation
Mr. Ananthakrishnan	International Symposium on Ocean Electronics (SYMPOL-2007)/CUSAT	Organization/Paper presentation
Ms. Prabha C.	International Symposium on Ocean Electronics (SYMPOL-2007)/CUSAT	Organization/Paper presentation



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Ms. Deepti Das Krishna	International Conference on 'European Microwave Conference' held in Munich, October 2007	Paper presentation

16. Awards / Honours / Fellowships etc. received:

Name of Recipient	Name of Fellowship/ Honour / Award	Awarding Agency
Bybi.P.C.	UGC JRF	UGC
Gopikrishna.M	UGC JRF	UGC
Sarin.V.P.	UGC JRF	UGC
Deepti Das	WOS	DST
Jitha B.	UGC JRF	UGC
Shameena.V.A.	UGC JRF	UGC
Robin Augustine	UGC JRF	UGC
Gijo Augustine	CSIR SRF	CSIR
Prajas John	JRF DOD Project	DOD
Deepu.V.	JRF DST Project	DST
Prabha.C.	JRF DIT Project	DIT
Nishamol M.S.	JRF UGC Project	UGC
Ullas G.Kalappura	JRF UGC	UGC

17. Sponsored Research Projects

Sl. No.	Co-ordinator/ Principal Investigator/ Co-Investigator	Title of the Project	Funding Agency	Total Amount (Rs. in lakhs)
1.	D.P.Mohan Dr.K.Vasudevan Dr.C.K.Aanandan	Antenna Design fabrication and testing for a pseudorandom polarization hopping (PPA) communication systems	Polarizone Malaysia	7.60
2.	Dr.P.Mohan Dr.K.Vasudevan Dr.C.K.Aanandan	Development of an antenna for wireless sensor network.	Polarizone Malaysia	5.00
3.	Dr.K.Vasudevan	Assistance under FIST Programme	DST	59.00



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Sl. No.	Co-ordinator/ Principal Investigator/ Co-Investigator	Title of the Project	Funding Agency	Total Amount (Rs. in lakhs)
4.	Dr.P.R.S.Pillai Ms.Supriya.M.H.	Tuna Resources of the Indian EEZ –An Assessment of Growth and Migration Patterns	DOD	24.25
5.	Dr.P.Mohan Dr.K.Vasudevan Dr.C.K.Aanandan	Thermal, Elastic and Dielectric Properties of New Microwave Substrate Materials	AICTE	28.29
6.	Ms.Deepthi Das Krishna	Development and Analysis of multi-band fractual patch antennas	DST	11.96
7.	Dr. K.Vasudevan Dr.P.Mohan Dr.C.K.Aanandan	Design and Development of Re-configural Microstrip Antenna for Mobile and Sate llite Communication Systems	UGC	5.18
8.	Dr. P.R.S. Pillai Ms.Supriya.M.H.	Development of Autonomous Buoy Systems for Radio Acoustic Positioning and Tracking	DIT	211.89
9.	Dr.P. Mohanan Dr.C.K. Aanandan Dr.K.Vasudevan Dr.M.T Sebastain	Compact dual band dielectric resonator for mobile phone antenna with reduced radiation hazards	KSCSTE	9.79
10.	Dr. K.Vasudevan Dr.P.Mohan	DSA Special Assistance Programme	DSA	75.00
11.	Dr. P.Mohan	Tunable Microwave Materials and Devices based on Photonic band Gas Structures Part 1: Tunable Microwave Devices	DST	29.80
12.	Dr. Jaimon Yohannan	Compact microwave dielectric resonator antennas for communication applications	DST	15.00
13.	Dr. P.R.S.Pillai	Development of Miniaturised Archival Tags	MOES	95.00
TOTAL				577.76



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18. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1.	(i) Ultra Wide Band antennas (ii) Design and Analysis of Slot Antennas (iii) Design and development of highly compact antennas for receiving TV channels via mobile phones (iv) Design and analysis of Dielectric Diplexer (v) Design and Development of microwave tunable devices using BST Ferroelectric thin films (vi) Designing of compact microstrip filters (vii) Design of planar PIFA antennas for mobile communications (viii) Design and development of low radiation hazard antennas for mobile phones using SRR (ix) Development of novel Bioceramics for biomedical implantations (x) Body array network (xi) Band width enhancement and polarization reconfigurability in (xii) Microstrip Antenna (xiii) Design of WLAN antennas for laptops and other wireless devices	Dr. K.Vasudevan Dr. P.Mohanan Dr. C.K Anandan
2.	(i) Development of a miniaturised Pressure Taf for Ocean Depth Measurements (ii) Geolocation Estimation using Light Intensity Measurements (iii) Model Studies on the Localisation of Underwater Targets using Sensor Netwroks. (iv) Development of a Hydophone Array controller for Ocean Surveillance Applications (v) Extraction of Bispectral Features using Principal Component Analysis Hidden Markov Model Based Underwater Target Classifier.	Dr. P.R.S. Pillai Ms. M.H.Supriya
3.	(i) Application of Pitch Synchronous Wavelet Transform for Audio Signal Processing (ii) Mammographic Data Analysis for Automatic Detection of Breast Cancer (iii) Content based Image retrieval of medical images	Dr. Tessamma Thomas
4.	(i) Tracking, Guidance & Localization System for Vehicles/Personnels using GPS Module (ii) Development of a direct sequence spread spectrum wireless radio link for mobile robot vehicle control and monitoring	Dr. Tessamma Thomas Dr. James Kurian



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19. Seminar / Conference/ Workshop / Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	International Symposium on Ocean Electronics (SYMPOL-2007)	11 – 14 December 2007	Dr. P.R.S.Pillai/ Dr. K.Vasudevan/ Ms. Supriya M.H.	UGC, AICTE, MOES, DST, CSIR, KSCSTE, DRDO
2.	Workshop on Microelectronic Device Failures- Analysis & Solutions.	29-03-2008	Dr. P.Mohanan	Department of Electronics

18. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1.	Design of dielectric materials for antennas studies	Dr.K.Vasudevan Dr.P.Mohanan Dr.C.K.Aanandan	VSSC Thiruvananthapuram
2	Microwave Material Characterization & Design	Dr. K. Vasudevan Dr. P. Mohanan Dr. C.K. Aanandan	CEMET, Thrissur
3	Polarisation of agile antenna - Design & development	Dr. K. Vasudevan Dr. P. Mohanan Dr. C.K. Aanandan	Polarizone Technologies Inc. Malaysia
4.	Antenna Radiation Pattern Measurements	Dr. K. Vasudevan Dr. P. Mohanan Dr. C.K. Aanandan	Verdent Telemetry Cochin
5.	Material Characterization of metallic powders	Dr. K. Vasudevan Dr. P. Mohanan Dr. C.K. Aanandan	General Electronics, Bangalore
6.	Compact antennas for WLAN	Dr. K. Vasudevan Dr. P. Mohanan Dr. C.K. Aanandan	TCS, Bangalore

* * *



DEPARTMENT OF HINDI

Estd : 1963

The Department of Hindi, established in 1963, is one of the oldest departments of the University. It was a part of Kerala University and joined the folds of University of Cochin when it was established in the year 1971. From the period of inception it has blossomed into one of the prestigious institutions among Indian University Departments engaged in teaching and research of Hindi Language and Literature

The Department is actively engaged in research in different areas like Ancient and Modern Poetry, Fiction, Drama and Theatre studies, Criticism, Grammar, Linguistics, Comparative Studies of Languages and Literature, Folk Literature, Translation, Computer Aided Language Teaching etc.

The Department is one of the leading centers of research in Hindi and the faculty have guided about 145 Ph.Ds. The creative capabilities of four of the teaching faculty received the recognition through the award of Fellowships/Prizes. About 50 research papers, seventeen books and learned articles have been published by the faculty during the past four years. The Department has completed four research projects including one on CALT - Computer Aided Language Teaching. The DRS phase I & II has been completed by the Department.

The Department Library has about 35000 books and is currently subscribing 35 journals. The PG students and Research Scholars from various parts of Kerala use the Library as a reference centre. It has been assessed as one of the best libraries in the country. The Department has a well-equipped computer laboratory and conducts short term Computer Courses.

The Department organizes national seminar once in a year and also conducts UGC sponsored refresher programmes.

1. Programmes of Study/Research

1. M.A. Hindi Language and Literature
2. M.Phil
3. P.G. Diploma in Translation and Functional Hindi
4. Ph.D



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2. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. P.A.Shemim Aliyar	Professor and Head	M.A.Ph.D	Modern Drama and Theatre Studies Translation
2	Dr. A. Aravindakshan	Professor and Dean	M.A. Ph.D	Comparative Literature, Contemporary Poetry, Contemporary Fiction, Functional Hindi
3	Dr. N. Mohanan	Professor	M.A., Ph.D	Modern Literature
4	Dr. M. Shanmughan	Professor	M.A., Ph.D	Poetry and Fiction
5	Dr. N.G. Devaki	Professor	M.A., Ph.D	Comparative Literature. Ancient and Modern Poetry Computer Aided Language Learning and theories of Language and Functional Hindi
6	Dr. R. Sasidharan	Professor	M.A, Ph.D	Modern Hindi Drama Theatre and Criticism
7	Dr. K. Vanaja	Reader	M.A, Ph.D, D. Lit	Criticism, Comparative Literature
8.	Dr.Ajitha	Reader	M.A, Ph.D	Modern Drama and Theatre, Comparitive study

3. Visiting Faculty (If any)

Sl. No.	Name	Designation	Qualification	Specialisation
NIL				

4. Research Staff

Sl. No.	Name	Designation	Qualification	Specialisation
NIL				



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5. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Priya A		Dr.A.Aravindakshan	Adhunik Hindi Kavitha mein Lokchetana ka Vishleshanatmak Adhyayan
2	Smitha S.Nair		Dr. K.Vanaja	Maithrai Pushpa Ka Katha Sahithya - Ek Anuseelan
4	Sajeev K.Vavachan		Dr. N.G.Devaki	Kerala Ki Sthaniy Sabdavali Ke Hindi Anuvad ki Samasyayem kala aur Sanskriti ke Visesh Sandarbh mein
7	Rajgopal G. Pai		Dr. R. Sasidharan	Adhunik Hindi Natya Sameeksha Ka Vishleshanatmak Adhyayan
9	Deepak K R		Dr. N. Mohanan	Samakalin Narivadi Upanyas: Ek Adhyayan
11	Rajan T K		Dr. N. Mohanan	Hindi Ka Dalit Upanyas : Ek Vishleshanatmak Adhyayan
12	Kavitha S		Dr. M. Shanmughan	Samakalin Hindi Kavita Mein Sampradayikata - Virodhi Antardhvani
13	Shiney Kuriakose		Dr. P.A.Shemim Aliyar	Adhunik Hindi Natakomein Dharmik Sadbhavana Ek Vivechan
14	Preethi V.S		Dr.A.Aravindakshan	Samakaleen Mahila Kahanikarom Ki Kahaniyom Ka Vishleshanatmak Adhyayan
15	Preetha T.D		Dr. K. Vanaja	Samakaleen Hindi Upanyas Mein Itihasbodh Ka Vishleshan



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Sl. No.	Name	Funding Agency	Guide	Area of Work
16	Beena P.J		Dr. A.Aravindakshan	Adhunik Hindi Kahani Ka Samajasthreeya Adhyayan
17	Sreekala V. R		Dr.R.Sasidharan	Myth and rality in the contemporary Hindi Drama
18	Indu P S		Dr. M.Shanmughan	Samakaleen Upnayasom Ki Paristhithic Sajagata Ka Adhyayan
19	Teena Tomy		Dr. M.Shanmughan	Samakaleen Kahani Mein Sampradayikata Ke Bahuayani Sandarbh
20	Juliya Emmanuel		Dr.A.Aravindakshan	Official Language, Implementation and official Language Management
21	Sreeja A.S.		Dr. R. Sasidharan	Swtantryottar Hindi Natokom Mein Pryogdharmita Ke Vividh Ayam
22	Sheena N.B.		Dr. A. Aravindakshan	Samakaleen Hindi Kahani Ka Samaj Shastriya Adhyayan
23	Teena Thomas		Dr. M. Shanmughan	Nava Aupaniveshik Sandarbh Mein Samakaleen Hindi Kahani Ek Vishleshan
24	Merly K. Punnoose		Dr. N. Mohanan	Stri Vimarsh Ke Sandarbh Mein Prabhaketan Ka Upnyas. Ek Vishleshan
25	Nimmy A.A.		Dr. P.A. Shemim Aliyar	Azgar Vazhahat Ki Rachanaom Mein Samajik Chetana; Ek Vishleshnatmak Adhyayan



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Sl. No.	Name	Funding Agency	Guide	Area of Work
26.	Seema Chandran		Dr.N.Mohanan	Mridula Garg Ka Katha Sahitya EK Vishleshnatmak Adhyayan
27.	Soumya C		Dr. K Vanaja	Samakaleen Hindi Upanyasam Mein Gandhi Chintan: Ek anusheelan
28.	Joyice Tom		Dr.M. Shanmughan	Assiyothar Kahani: Avtam ke Sangharsh Ki chethana
29.	Aneesh K N		Dr. P. A.Shemim Aliyar	Swatantryottar Hindi Natak Mein Badalte Parivarik Sandharbh
30.	Ruby Elsa Jacob		Dr. K Vanaja	Samakaleen Hindi Upanyasam Mein Vishapitom ka Yatharth
31.	Ashamol S		Dr. N Mohanan	Shylesh Mathiyani ka Upanyas : Ek Vishleshnatmak Adhyayam
32.	Pradeep C. P		Dr. P.A Shemim Aliyar	Adhunik Hindi Upaniyasam mein Aupaniveshik Shakthiyom ka prathirodh
33.	Surya L S		Dr. N G Devaki	Hindi Kavyabhasha Kasivaroop Aur Vikas: Ek Eithihasik srvekshan
34.	Neelufar		Dr. R.Sasidharan	Communalism and Contemporary Hindi Novel
35.	Lovely Varghese		Dr. N G Devaki	Premchand Aur Prasad Ke Kahaniyam ke Sanivad Tatv Ka Visleshnatmak Anusheelan



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Sl. No.	Name	Funding Agency	Guide	Area of Work
36.	Remya K.R.		Dr. N.G.Devaki	Hindi Ka Yatra Sahitya
37.	Deepa P.S.		Dr. R.Sasidharan	
38.	Sheena M.A.		Dr. N.Mohanar	
39.	Sunitha T.N.		Dr. R.Sasidharan	
40.	Sujithakumar G.S.		Dr. P.A.Shemim Aliyar	
41.	Anjali N.		Dr. P.A.Shemim Aliyar	
42.	Kavitha K.		Dr. K.Vanaja	

6. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2	Junior Librarian	1
3	Assistant	2
4	Typist	2
5	Lab/Library Assistant	1
6	Peon	2
7	Sweeper-cum-Cleaner	1

7. Technical Personnel

Sl.No.	Designation	No. of Posts
	NIL	

8. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	M.A	1	24	25
2	M.Phil	2	7	9
3	P.G. Diploma in Translation and Functional Hindi	1	19	20
4	Ph. D	0	7	7

9. Research Facilities

- a. Laboratories : Computer Laboratory with 6 terminals
b. Library :

No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
Books 27296 Journals: 29	Books : 143, Journal - NIL



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a. Others

10. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1.	Krishna Murari Sharma	Dean & Professor, Aligarh University	Delivered talk to students in the Department
2.	Sirjaram Sharma, Pankaj Bisht	Hindi Directorate	Delivered talk to students in the Department
3.	Prafulla Kolkhayan	Professor, Kolkata	Delivered talk to students in the Department
4.	Jitendra Srivastav	Lecturer, Department of Hindi, IGNOU	Visited the Department on January 2008
5.	Prof. M.K.Sanu	Malayalam Writer	Delivering, Keynote address in connection with Seminar on "Contemporary Literature & Indianness held on 17th January 2008 in the department
6.	Kalpatta Narayanan	Malayalam Writer	Delivered Talk in connection with Seminar on "Contemporary Literature & Indianness held on 17th January 2008 in the department
7.	Chandrkant Devtale	Ujjain	Delivering Keynote address in connection with Seminar on "Contemporary Literature & Indianness held on 18th January 2008 in the department
8.	Jeevan Singh	Rajasthan	Delivering Special address in connection with Seminar on "Contemporary Literature & Indianness held on 18th and 19th January 2008 in the department
9.	Govind Misra	Hindi Writer	Delivering, Inagural address in connection with U.G.C. National Seminar on "Contemporary Literature & Indianness held on 17th January 2008 in the department



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Sl.No.	Name	Affiliation	Remarks
10.	Shivakumar Misra	Critic	Delivering, Keynote address in connection with U.G.C. National Seminar on "Contemporary of Ramdhari Singh Dinkar To National Intergration held on 7th and 8th February 2008 in the department

11. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Hindi Ke Visangath Natokom Mein Prayogadharmitha Ke Vinodh Ayam	Sreeja P.V.	Dr. P.A. Shemim Aliyar
2.	Samakaleen Hindi Kavitha Mein Sanskritik Sankat Ke Vividh AAyam	Rajeshwary K.	Dr. A.Aravindakshan
3.	Adhunik Hindi Geetinatyom Mein Midhak Tatwa	Jayasree B.	Dr. K.Vanaja

12. Publications

a. Papers

Sl.No.	Name of Paper
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Dr. P.A. SHEMIM ALIYAR

- 1 Samakaleen Hindi Natak -Naya Samvedana - Madhumati

Dr. A. ARAVINDAKSHAN

1. Discovering India - Adhinav Bharati (AMU journal) Aligarh
2. Culture and Criticism - Vagarth, Kolkota
3. Arun Kamal's Poems-Samved, New Delhi
4. Trilochan's Poetics--Ksham Ke Khere Mein Khira Nahi, Najeebabad (UP)
5. Meghadoot - Ek Adhunik Kahani 'Parichay' - Varanasi
6. The Status of Hindi - 'Vak' - New Delhi
7. Kamaleswar Ki Kahani 'Varthaman Sahitya' - Aligarh
8. The First Feminist of Malayalam fiction 'Varthaman Sahitya' - Aligarh
9. Satya Prakash Mishra: 'Madhyan' Bhashan
10. The Fiction and Contamparenity: Kutubnuma - Mumbai



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11. Contemporary Poetry: Sahitya Mandel Patrika - Cochin
12. Kavita Ki Dharti: Pakshadar - Varanasi
13. Indian Languages and its Potentials - Aksharparv - Shimla
14. Eco-Poetry: Lekhan Sutra - Vidisha
15. Aesthetics of Poetry - Kritiaur - Jaipur

Dr. N.Mohanan

1. Chief Ki Davath EK Punnarpat Published in a book published by M.C.C. Calicut

Dr. M. Shanmughan

1. Nav Auphavesik Paur Ki Fazivadi Vinodhi Kavita - Anuseelan - 2007
2. Desh Ki Raj Neethi Ke Kilaf Koshishom - Compiled in the book - Hindi Kahani Ki Sauv Varsh
3. An article on creativity of writers has published in Samajan Sep.-2007
An article an the study of Reghunath has published in Anuseelan 2007

Dr. R Sasidharan

1. Nai Asmitha accepted in the Journal "Sahitya Mandal Patrika for its issue January - March 2007.

Dr. N.G.Devaki

1. "Computer Mein Hindi Ka Anuprayog" (in press) 2008

Dr. K. Vanaja

1. Samakaleen Upanyasom Mein Paristhithik Sajagatha- Naya Dhara Patna
2. Samakaleen Malayalam Pathrakavitha Maksad Sedoor- Aaryakalp-Varanasi

Dr. K Ajitha

1. Nava Oupaniveshik Sandarbh me yadom Ki Clurusti aur Hindi Natak.
2. Krooratha Ke Bahane Loktantra Par Nazar
3. Sanskritik Takara Lai Ka Prathibimb - "Vapasi"

b. Books

Sl.No.	Name of Paper
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Dr. P.A. SHEMIM ALIYAR

- 1 Samakaleen Hindi Natak - Naya Samvedana

Dr. N.Mohanan

1. Aaswad Ke Aayam - Literary Criticism Book
2. Samakaleen Hindi Kahani

Dr. R Sasidharan

1. Malayalam Sahity : Vividh Ayam
2. Samakaleen Natak (Under Printing)



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Dr. N G Devaki

1. "WEB OF LANGUAGE: Random thoughts on its Science and Technology" by Dr. N.G.Devaki, Professor, Department of Hindi, CUSAT - 2008

Dr. K Vanaja

1. Hindi Upanyas-Aaj

13. Participation in Seminar / Conference/Refresher Courses etc by Faculty / Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. A.Aravindakshan	The Seminar on Poetry at Govt. Arts & Science College, Calicut	Keynote Address
	The Seminar on Novel at Maharajas College, Ernakulam	Keynote Address
	The Seminar on Official Language Management at Tolic, Cochin	Keynote Address
	The Seminar on Contribution of A.P.Khatri at Patna, Bihar	Key note address
	The Seminar on Language and Indianness at Kolkota	Key note address
	The Seminar on Potential of Indian Languages at Chennai	Key note address
	The Seminar on Translation at St. Teresas College, Ernakulam	Paper Presentation
	The Seminar on Hindi and other disciplines at Central Hindi Institute, Agra	Paper Presentation
	U.G.C. National Seminar on Dalit and Women in contempary Hindi Literature at Govt. Arts & Science College, Calicut	Paper Presentation
	Dr. M.Shanmughan	Participated in the Seminar on official language in 17th September at Govt. Arts College, Kozhikode
Participated in the National Seminar on Post-colonial Hindi Literature held at University College, Trivandrum on January 10 2008.		Participant
Dr. N.G.Devaki	Seminar on Nibandhakar Hazari Prasad Dwivedi at Sree Sankaracharya University, Thrissur Centre on 3 rd April 2007.	Inagural Speech
Dr K.Ajitha	Participanted in the Seminar on Freedom Struggle and Hindi Literature	Resource Person



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14. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
Prof. A.Aravindakshan	Received an Award instituted by April Bhasha Received 8th World Hindi Conference Award for Contribution to Hindi Language & Literature	April Bhasha, Kolkata (March 2007) New York (July-2007)

15. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	Comparitive study of contemporary Hindi and Malayalam short Story in context of their creative progress	UGC	5,44,000/-	Dr. N Shanmughan

16. Research Programmes and Activities :

Sl.No.	Problem / Topics	Investigator(s)
1	DRS III Level Assistance (SAP-UGC) 5 year Project (2007-2012)	Dr. A.Aravindakshan

17. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
1.	Seminar on 'Contemporary Literature & Indianness	3 days	Dr. A.Aravindakshan Professor, Department of Hindi	UGC
2.	UGC National Seminar on Contibution of Ramdhari Sigh Dinkar to National Integration	2 Days	Dr. N.Mohanan, Professor Department of Hindi	Department of Hindi, CUSAT

18. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consulant	Sponsoring Agency
		NIL	

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DEPARTMENT OF INSTRUMENTATION

Estd :1995

The Department of instrumentation was established in the year 1995. Though it is a relatively young teaching and research department, it has a long history of evolution as it was derived from the University Science Instrumentation Center (USIC). USIC was established in the university in 1978 as a service department with assistance from UGC. USIC has been extending instrumentation services to various science and technology departments of the university by way of design & fabrication of experimental gadgets, electronics design and fabrication, glass blowing, carpentry work etc. It has been carrying out consultancy work for other academic institution, R and D the organizations and industries as well. The center was to the status of an academic department when UGC accorded it the status of level III USIC. The department conducted a post graduate diploma programme in instrumentation for few years starting from 1994. From 1999 on wards, the department is offering four year (8 semester) B. Tech .course in instrumentation.

The department has a very active research programme in the areas of instrumentation and Applied Physics. The department has implemented several research projects sponsored by external funding agencies like DST, DAE, UGC, AICTE, KSCSTE (Kerala) and TWAS. It has been the venue for national symposia and the faculty members have published several research papers in reputed national and International journals.

1. Programmes of Study/Research:

B. Tech

Ph. D

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1	Dr. Jacob Philip	Professor (on Deputation)	Ph. D	Electronics/ Applied Physics
2	Dr. K.N Madhusoodanan	Reader & Head of the Dept.	Ph. D	Analytical Instrumentation
3	Dr. Stephen Rodrigues	Reader (On leave)	Ph. D	Electronics
4	Dr. Johney Isaac	Lecturer	Ph .D	Applied Electronic
5	Dr. Rajeev Kumar	Lecturer	Ph. D	Vacuum Technology

3. Visiting Faculty (If any) Nil

Sl.No.	Name	Designation	Qualification	Specilisation
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4. Research Staff : Nil

Sl.No.	Name	Designation	Qualification	Specilisation
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5. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Manjusha.M.V	UGRF	Dr. Jacob Philip	Photo thermal techniques
2	Reji Kumar R	P.T	Dr Jacob Philip	Design and development of an instrumentation system to determine the dry rubber content of natural rubber
3.	Maju Kuriakose	F.T.	Dr. K.N Madhusoodanan	Investigation on the thermo physical proerties of materials instrumenta-tion and studies
4.	Benjamin Varghese P.	PT	Dr. K.N Madhusoodanan	Development of fiber optic sensors and their characterization
5	Nisha R.	F.T	Dr. K.N. Madhusoodanan	Electrical characteriza-tion of some semi conductor materials for sensing application
6	Ginson T.J.	CISR-JRF	Dr Jacob Philip	Development of bio medical instrumentation system based on E-field sensors.
7	Satish John	PT	Dr. K.N. Madhusoodanan	Sensing applications of optical fibres
8	Viji C.	SC/ST Scholarship	Dr Jacob Philip	Development of a thermal wave resonant cavity set up and measure thermal properties of condensed matter.
9	Uma S.		Dr. Jacob Philip	Application of photo acoustic techniques to determine thermal properties of nanofluids.
10.	Nisha M.R.		Dr. Jacob Philip	Application of photo thermal and photo acoustic phone log techniques to determine thermal properties of films.



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6. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2	Assistant	2
3	Typist	1
4	Peon	1
5	Sweeper-Cum-Cleaner	1

7. Technical Personnel

Sl.No.	Designation	No. of Posts
1	Technical Officer	1 (with M. Tech)
2	Technician	3 (2 with Diploma & 1 with certificate)

8. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	B. Tech 2007-11 Batch	29	-	29
2.	Ph.D. 2007	-	2	2

9. Research Facilities

a. Laboratories (*List out Major equipments available*)

Ultrasonic Interfere meter
Photo acoustic and Photo thermal spectro meter
He-CD laser.
Impedance analyzer
UV-VIS Spectrometer
Process Trainers
Lock- in amplifier
ALD System

b. Library

	No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
Books	2659	80
Journals	4	-

c. Others : Nil

10. Distinguished visitors : Nil

Sl.No.	Name	Affiliation	Remarks
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11. Ph. Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Realization of a scanning photo acoustic techniques Thermal properties of bulk and film samples	O.Reghu	Dr. J. Philip

12. Publications

a. Papers

Sl.No.	Name of Paper
1	Dr. K.Rajeev Kumar 'Thin Solid Films' special issue 2007.
2	Dr. K.Rajeev Kumar Journal of Instrument Society of India (Communicated)
3	Dr. Johney Issac : Journal of Applied Physics (Communicated)
4	Dr. Johney Issac : Bulletin of Material Science (Communicated)
5	Dr. Johney Issac : J. of Instruement Society of India (Communicated)
6	Dr. Johney Issac : Ind. Journal of Pure and Applied Physics (Communicated)
7	Dr. K.N. Madhusoodanan - Thermal properties of amorphous on nanocrystalline layers prepared by ION implantation Solid State Physics (52) 987, 2007.
8	Thermal properties of polytetrafluoroethylene/Sr ₂ Ce ₂ Tc ₅ O ₁₆ Polymer ceramic composites. G.Subodh, M.V.Majusha, J.Philip, M.T.Sebastian Journal of applied polymer science (108, 3, 1716-1721, May 2008)
9	Thermal properties of Dicalcium Lead propionate across the prominent trnsition temperature M.V.Majusha and J.Philip (communicated, Ferroelectrics)
10	Thermal properties of Dicalcium Lead propionate crystals using photo thermal technique. M.V.Majusha and J.Philip (Proceeding of DAE solid state symposium).
11	Thermal transport across incommensurate phase in potassium selenate: Photophysio electric nd calorimetric measurements. J.Philip and M.V.Majusha (communicated Journal of Japanese Society)
12	Thermal transport properties of potassium selenate a photopyroelectric study (proceeding of Kerala Science Congress 2008) M.V.Manjusha & J.Philip
13	Development of a thermal wave resonant cavity setup for fluids C.Viji and J.Philip (Proceedings of NSI 2007).



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14. Design and Fabrication of automated plasma enhanced atomic layer deposition system for the deposition of ultra thin dielectric films (proceedings of NSI 2007). Anu Philip, Dr. Johney Issac, Dr. K.Rajeev Kumar.

15. Photo acoustic measurement of the thermal diffusivity of PVA dispersed with Au nanoparticles. S. Uma, J.Philip, A.K.Yadav, G. Mishra and R.R. Yadav National Symposium on ultrasonics.

13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
M.V.Majusha	DAE 2007 held at Mysore	Presentation of Paper
	Kerala Science congress 2008 at Trivandrum	Presentation of Paper
	Art of writing Research Papers and thesis- One day workshop conducted by STIC, CUSAT NSU 2007 held at STIC, CUSAT	Participation
Viji C.	Kerala Science Congress 2008 at Trivandrum	Presentation of Paper
	Art of writing research papers and thesis one day workshop conducted at STIC, CUSAT	Participation
	NSU-2007 held at STIC, CUSAT NSI032 at Thiruchengode	Local organizing Committee Presentation of Paper
Nisha M.R.	NUS-2007 held at STIC CUSAT	Local Organizing Committee member
	Art of Writing Research papers and thesis- one day workshop conducted by STIC, CUSAT	Participation
Nisha R.	DAE 2007 held at Mysore	Participation
	Art of writing research papers and thesis- one day workshop conducted at STIC, CUSAT	Participation
	NSU 2007 held at STIC 2007	Local organizing Committee member
	Matcon 2007 held at department of Applied Chemistry, CUSAT	Paper presentation



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Maju Kuriakose	Art of writing research papers and thesis one day workshop conducted at STIC, CUSAT. NSU 2007 held at STIC 2007	Participation Local organizing Committee member
Dr. K.Rajeev Kumar	“16th National Symposium on Ultrasonics” 17-19 Dec 2007, Cochin “IC SOLACE”, International Conference on Solar cells, 2007 January	Local organizing Committee member Participation
Dr. Johny Issac	16th National Symposium on Ultrasonics 17-19 December 2007, Cochin.	Local organizing Committee member
Dr. K.N. Madhusoodanan	Solid State Physics Symposium- Mysore December 2007	Paper Presentation

14. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship / Honour / Award	Awarding Agency
Dr. K.N.Madhusoodanan	Nominated as Dean Faculty of Engg. And Technology, M.G. University	M.G.University, Kottayam

15. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1.	“Investigations on the interface trap densities for MOSFET applications” -	AICTE	6.8 Lakhs	Dr. K.Rajeev Kumar

16. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1	Sensor Materials & Devices	Dr. K.N Madhusoodanan
2	Analytical Instruments	Dr. K.N Madhusoodanan
3	Process Instrumentation	Dr. Johney Isaac



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Sl.No.	Problem / Topic	Investigator (s)
4	Thin film Materials and Techniques	Dr. Rajeev Kumar
5	Microwave Electronics	Dr. Stephen Rodrigos
6	Ultra Sonics	Dr. Jacob Philip
7	Photo thermal Techniques	Dr. Jacob Philip

17. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department : Nil

Sl.No.	Title	Duration	Coordinator	Funding Agency
Nil				

18. Consultancy Work : Nil

Sl.No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
Nil			

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DEPARTMENT OF MARINE BIOLOGY, MICRO BIOLOGY AND BIOCHEMISTRY

Estd :- 1938

The Department of Marine Biology Microbiology & Biochemistry is the academic continuation of the original Department of Marine Biology and Fisheries established in 1938 under the University of Travancore. The MSc course in Marine Biology was started in 1958. Today the annual intake of students is 20. So far about 558 students have completed the course. The department has 4 Research divisions namely, Marine biology, Microbiology, Biochemistry and Algology (Marine Botany) with well maintained laboratories equipped with sophisticated instruments. At present 57 Research Scholars are working in these labs. In all, 105 Ph.D Degrees have been awarded. Eighteen externally funded research projects have been completed successfully. Major thrust areas of research include, Microbiology, Biochemistry, Fishery Biology, Fish pathology, Marine pollution monitoring, Marine benthos, Biodiversity and Marine Pharmacology. Further the department has an M.Phil Degree course in Life Science with an intake of 6 students.

1. Programmes of study / Research

1. M.Sc Marine Biology
2. M.Phil Life Sciences
3. Ph.D in all the areas specified above

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1.	Dr. Babu Philip	Professor	M.Sc. Ph.D	Marine Biochemistry
2.	Dr.Aneykutty Joseph	Professor	M.Sc. Ph.D	Aquaculture
3.	Dr. A.V.Saramma	Reader & Head	M.Sc. Ph.D	Microbiology
4.	Dr. Rosamma Philip	Sr.Lecturer	M.Sc. Ph.D	Marine Microbiology
5.	Dr.Bijoy S.Nandan	Reader	M.Sc. Ph.D	Ecology & Pollution
6.	Dr.Mohamed Hatha A.A	Reader	M.Sc. Ph.D	Fish Pathology & Nutrition

3. Research Staff

Sl.No.	Name	Designation	Qualification	Specilisation
1.	Dr. Nandini Menon	Principal Investigator DST project	M.Sc. Ph.D	Marine Biology



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Sl.No.	Name	Designation	Qualification	Specilisation
2.	Dr. T.M.Najmudeen	Principal Investigator DST project	M.Sc. Ph.D	Marine Biology
3.	Dr. Soja Louis	Post-Doctoral Fellow	M.Sc., Ph.D	Briozoans

4. Research Scholars: (Joined during 2007-08)

Sl.No.	Name	Funding Agency	Guide	Area of Work
1.	Anit M.Thomas	-	Dr. A.V.Samma	Microbiology
2.	Jini Jacob	-	Dr. R.Damodaran	Marine Biology
3.	Deepthi Augustine	-	Dr. Rosamma Philip	Microbiology
4.	Sathiavathy C.R.	-	Dr. N.R.Menon	Fisheries
5.	Sumi Liz Jose	-	Dr. K.Y.M.Salih	Ecology
6.	Nifty John	-	Dr. Mohamed Hatha	Patholog
7.	Sreedevi O.K.	-	Dr. K.Y.M.Salih	Ecology
8.	Shubhankar Ghosh	-	Dr. A.A.Mohamed Hatha	Pathology
9.	Gilcy George	-	Dr. A.A.Mohamed Hatha	Pathology
10.	Archana K.	-	Dr. Rosamma Philip	Microbiology
11.	Shameeda C.H.	-	Dr. K.Y.M.Salih	Ecology

5. Administrative Personnel

S.No.	Designation	No. of Posts
1.	Section Officer	1
2.	Selection Grade. Assistant	1
3.	Office Superintendent	1
4.	Peon	1

6. Technical Personnel

No.	Designation	No.Post
1.	Technical Assistant Grade III	1
2.	Lab Assistant	1
3.	Lab Attendant	1
4.	Specimen Collector	1

7. Students Enrollment

No.	Programmes of Study	Men	Women	Total
1.	M.sc Marine Biology	3	12	15
2.	M.Phil Life Sciences	1	5	6
3.	Ph.D	2	9	11



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8. Research Facilities

a. Laboratories (List out Major equipments available)

- 1. Marine Biology Wet Lab - Binocular Research Microscope (Olympus) Distillation Unit, Water sampler, Dredge, Grab
- 2. Microbiology Lab - BOD Incubator, Laminar flow, Autoclave, Microscopes
- 3. Biochemistry Lab - pH meter (Digital EI Model), Oven Waterbath, Centrifuge, Balance
- 4. Instrumentation lab - Filter Photo Colorimeter (Digital EI Model) UV-Visible Spectrophotometer, Electrono/ic Balance Stereozoom Microscope, HPLC, Fluorescence Spectrophotometer, Particle Size Analyser High speed Refrigerated Centrifuge, Lyophiliser
- 5. Electron Microscope Lab - Spinix Vortex Mixer, Electron Microscope Microcentrifuge, Fermentor, Laminar Flow
- 6. Algology Lab (Marine Botany) - Microscope, Environmental Chamber, Cell sonicator

Library : No separate library for the Dept.

b. Others

9. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1.	Dr.E.P.Yesodharan,	Ex. Vice President, KSCSTE	Chief guest, National Seminar
2.	Dr. Gopakumar	Former Dy. DDG, ICAR	Key-note address, National Seminar

10. Ph.D Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Taxonomy, Bionics and Biofouling of Bryozoans from the coasts of India and the Antarctic Waters	Soja Louis	Dr. N.R.Menon
2.	Studies on the Venon of the Fish Scatophagus Argus from Cochin Estuary - A Biochemical Approach	Gisha Sivan	Dr. C.K. Radhakrishnan



11. Publications

a. Papers

Sl.No.	Name of Paper
1	Annie Joseph and Rosamma Philip.2007 Acute salinity stress alters the haemolymph metabolic profile of <i>Penaeus monodon</i> and reduces immunocompetence to white spot syndrome virus infection. <i>Aquaculture</i> , 272 (1-4): 87-97.
2	Preetha R, Jayaprakash NS, Philip R, Singh ISB 2007. Optimization of medium for the production of a novel aquaculture probiotic, <i>Micrococcus</i> MCCB 104 using central composite design. <i>Biotechnology and Bioprocess Engineering</i> . 12:548-555
3	Preetha R, Jayaprakash NS, Philip R, Singh ISB (2007) Optimization of carbon and nitrogen sources and growth factors for the production of an aquaculture probiotic (<i>Pseudomonas</i> MCCB 103) using response surface methodology. <i>Journal of Applied Microbiology</i> 102(4):1043-1051
4	Sreedevi N Kutty and Philip R. 2008 Marine Yeast – A Review <i>Yeast</i> (In press).
5	Gisha Sivan, K.Venketesvaran and C.K.Radhakrishnan (2007) Biological and Biochemical Properties of <i>Scatophagus argus</i> Venom. <i>Toxicon</i> 50 (4): 563 -571
6	Gisha Sivan and C.K.Radhakrishnan (2007)Renal Lysosomal functions on exposure to <i>Scatophagus argus</i> venom in Experimental mice. <i>Toxicology Mechanisms and Methods</i> 17: 1-8
7	Aniladevi Kunjamma K.P, Babu Philip, Smitha. V.Bhanu & Jisha Jose,"Histopathological Effects on <i>Oreochromis mossambicus</i> * (Tilapia) exposed to Chlorpyrifos",Paper presented at International Congress of Environmental research, Bhopal,Dec.2007.
8	Remya,V. & Babu Philip, "Effects of the Seed Extract of <i>Croton officinalis</i> * (Alston) on the anti-oxidant status of <i>Oreochromis mossambicus</i> * (Peters), Paper presented in 8th Asian Fisheries Forum (Fisheries andAquaculture : Strategic Outlook for Asia) , Kochi, Nov.20-23,
9	Vijayagopal, P, Babu Philip & Sathyanandan, T.V. "Nutritional Evaluation of Varying Protein: Energy Ratios in feeds for Indian White Shrimp, <i>Penaeus</i> (<i>Fenneropenaeus</i>) <i>indicus</i> *, Paper presented in 8th Asian Fisheries Forum (Fisheries and Aquaculture : Strategic Outlook for Asia), Kochi, Nov.20-23,2007.Abracts- NTO-038, page-373.
10.	Aniladevi Kunjamma, K.P., Babu Philip, Smitha. V. Bhanu and Jisha Jose,"Effect of Chlorpyrifos on branchial ATP-ase enzymes of <i>Oreochromismossambicus</i> (Peters). Paper presented in International Conference onBiodiversity Conservation and Management (Ecosystems and Sustainable Dvelopment), BIOCAM-2008, CMFRI, Kochi, February 3-6, 2008. Abstracts EDB-08- page-77.



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11. Joyni Jacob, Binesh, C.P. & Babu Philip "Distribution and abundance of Holoplankton in the Slope-waters of South-West Coast of India". Presented in International Conference on Biodiversity Conservation and Management (Ecosystems and Sustainable Development), BIOCAM-2008, CMFRI, Kochi, February 3-6, 2008. Abstracts –AQB-72, pages 49, 50.
12. Prajith, K.K., Chaithanya, E.R, Abhijna, U.G. & Babu Philip, "Hydrographic Parameters of the Cochin Estuary, with special reference to primary Productivity", Presented in International Conference on Biodiversity Conservation and Management (Ecosystems and Sustainable Development), BIOCAM-2008, CMFRI, Kochi, February 3-6, 2008. Abstracts –EDB-39, pages 93,94.
13. Sincy Joseph and A.V.Saramma, Impact of cyanobacterium, *lyngbya semiplena* on antioxidant status of a tropical teleost *oreochromis mossambicus* (peters) Paper presented in the 8th Asian Fisheries Forum held at cochin from Nov. 20 to 23, 2007
14. Abhilash K.R. and A.V.Saramma, Seasonal variations in bacterial population from near shore sediments along sw coast of India Paper presented in the 8th Asian Fisheries Forum held at Cochin from Nov.20 to 23, 2007
15. Padmakumar K.B., Sanal kumar M.G., A.V.Saramma & N.R.Menon Harmful microalgae of the Indian EEZ Paper presented in the 8th Asian Fisheries Forum held at Cochin from Nov. 20 to 23, 2007
16. Meera Venugopal and A.V.Saramma: An alkaline protease from *Bacillus circulans* BM15, newly isolated from a mangrove station: Characterization and application in laundry detergent formulations, *Indian Journal of Microbiology*, 2007 47:298-303
17. Jimly C.Jacob, T.M.Shuaib, K.D.Ramya, N.Nadini Menon and A.V.Saramma: Distribution of phytoplankton in the Cochin Backwaters Paper presented in the International Conference on Biodiversity conservation and management.
18. N.Ragesh R., Ranjith Kumar, T.M.Najmudeen, Rosamma Philip and A.V.Saramma, Distribution of holoplankton along the eastern continental slope of Bay of Bengal. Paper presented in the International Conference on Biodiversity conservation and management.
19. S.Bijoy Nandan: A Perspective on the Ecology and Bioresources of the Rivers of Kerala, *Proceedings of DAE-BRNS National Symposium on Limnology (NSL-07)* p.8-14.
20. S.Bijoy Nandan : Faunal Biodiversity of Selected Wetland ecosystems of Kerala .*Proceedings of Kerala Environment Congress, p 1-19.*
21. Shristi Kumar, A.A.M.Hatha and K.Sc Christi, Diversity and effectiveness of tropical mangrove soil microflora on the degradation of polythene carry bags *International Journal of Tropical Biology and Conservation* (In press)
22. Sheeja, K.M, C. Abhirosh and A.A.M Hatha : Relative role of autochthonous bacteria and protozoan predation on the removal kinetics of *Escherichia coli* and



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- Vibrio parahaemolyticus* in Kumarakom estuary Proceedings of 19th Kerala Science Congress. pp.711-714.
23. Abhirosh Chandran, A.A.M.Hatha and Sherin Varghese : Increased prevalence of indicator and pathogenic bacteria in Vembandu lake: A function of salt water regulator along the south west coast of India. International Journal of Water and Health. (In Press), 2008
 24. Shanthi,R.T, Shirly Mathew, Annie Mathai, P.A Fathima and A.A.M.Hatha Characterisation of pesticide resistant microflora from the agricultural fields of Kothanellore, South India- Pollution Research, 25(2): 45-51. 2007.
 25. Hatha, A.A.M : Use of probiotics in ornamental fish larval rearing and culture. Proceedings of the UGC Sponsored 'National Seminar on Ornamental Fishes - 'Aqua Ornamentals 2006' at S.N.College, Nattika. pp. 32-36, 2007
 26. Aneykutty Joseph, Susheela Jose, C.Mohanakumaran Nair and K.G.Ramachandran Nair : CYCLOP-EEZ' - An alternate feed surce in Larval rearing of (*Macrobrachium rosenbergii* (*De Man*)). Abstract presented at the National Conference on "Biosecured Aquaculture - An Ecofriendly Approach, held on 28th & 29th June, 2007 at Fisheries College and Research Institute, Tamilnadu Veterinary and Animal Sciences, Thoothukudi
 27. Susheela Jose, Aneykutty Joseph, S.Shyama, M.V.Mohan and C.Mohankumaran Nair Production trends of the gaint freshwater prawn, *Macrobrachium rosenbergii* (*De Man*) in two culture strategies. In Fresh water prawns - Advances in Biology, Aquaculture and Marketing. Proceedings of the International Sysposium on Fresh water prawns; Allied Publishers Pvt. Ltd., New Delhi, India, pp. 4040-409.
 28. Thresiamma James, Aneykutty Joseph, Devika Pillai & C.MohanakumaranNair& Susheela Jose (2007) The microalgae *Isochrysts galbana citire* in the larval rearing of *Macrobrachium rosenbergii* (*De Man*). In Fresh water prawns- Advances in Biology, Aquaculture and Marketing. Proceedings of the International Symposium on Fresh water prawns; Allied Publishers Pvt. Ltd, New Delhi, India, pp:535-540.
 29. Devika Pillai, Thresiamma James, Aneykutty Joseph & K.H.Vadher (2007). Enrichment of live feed with HUFA: Effects on *Macrobrachium rosenbergii* (*De Man*) larval performance. In Fresh water prawns- Advances in Biology, Aquaculture and Marketing. Proceedings of the International symposium on Fresh water prawns; Allied Publishers Pvt. Ltd, New Delhi, India, pp:541-545.
 30. Najmudeen, T.M. Gonad maturation of the tropical abalone *Haliotis varia* Linnaeus 1758 (Vetigastropoda: Haliotidae).
 31. Najmudeen, T.M.and Sathiadas, R. Integration of shrimp and freshwater prawn culture with paddy- an economic perspective.
 32. Sanilkumar,M.G and K.John Thomas Fringe plants of Muriyad wetlands (Part of Vembanad-Kol Ramsar site) and its economic importance. Journal of Economic and Taxonomic Botany, 31:123-132.
 33. Padmakumar K.B., Sanilkumar M.G., Saramma A.V. and N.R. Menon 2007. A 'Red tide' caused by the diatom *Coscinodiscus* along he Southwest coast of India.



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- In Harmful Algae News, published by the Intergovernmental Oceanographic Commission (IOC), UNESCO, Paris No.35.
34. Padmakumar K.B., Sanilkumar M.G., Saramma A.V., Sanjeevan V.N. and N.R.Menon (2008). "Green tide" of Noctiluca miliaris in the Northern Arabian sea. Harmful Algae News, Published by the Intergovernmental Oceanographic Commission (IOC), UNESCO, Paris No. 36.
 35. Sanilkumar,M.G and K.John Thomas, 2007. Indigenous medicinal usages of some wetland/wetland associated macrophytes of the Muriyad wetland, in Vembanad- Kol, Ramsar site, Kerala. Indian Journal of Traditional Knowledge (CSIR), 6:365-367.
 36. Solja L and Menon N.R. (2008), Bryozoan species diversity in the Cochin estuary, Book of abstracts, BIOCAM, Cusat, pp.30.
 37. Solja L and Menon N.R. (2008), Bryozoans as a potential source of bioactive compounds. Book of abstracts, National seminar on Bioactive compound from marine organisms, Cusat, pp.28-29.
 38. Smitha C.K. *Numerical abundance and biomass of macrobenthos along the continental shelf of south west and south east coast of India* in the 8th Asian Fisheries Forum organized by Asian Fisheries Society held at Kochi during 20-23 November 2007.
 39. Najmudeen T.M. 2008. Ultrastructural studies on the ovary maturation of the variable abalone *Haliotis varia* Linnaeus 1758 (Vetigastropoda: Haliotidae). Aquatic Biology 2:143-151.
 40. Najmudeen T.M. and Sathiadhas R. 2008. Economic impact of Juvenile fishing in atropical multi-gear multi-species fishery. Fisheries Research 92:322-33
 41. Najmudeen T.M. 2007. Gonad maturation of the tropical abalone *Haliotis varia* Linnaeus 1758 (Vetigastropoda: Haliotidae). Molluscan Research 27(3): 140-146.
 42. Najmudeen T.M. 2007. Variation in biochemical composition during gonad maturation of the tropical abalone *Haliotis varia* Linnaeus 1758 (Gastropoda). Marine Biology Research 3(6): 454-461.
 43. Najmudeen T.M. and Sathiadhas R. 2008. Economic Efficiency of mechanised trawlers along the Kerala coast. Journal of Marine Biological Association India in press.

b. Book :

Abstract-National Seminar on Bioactive Compounds from Marine Organisms

12. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. A.V.Saramma	Symposium-8th Asian Fisheries Forum, 20-23 November, 2007	Participant
	International workshop on Taxonomy and Ecology of Harmful Algae and Study of Biotoxins, Jan21-25, 2008	Participant



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	'International Conference on Biodiversity, Conservation and Management', February 3-6, 2008, Cochin.	Co-chaired a session
Dr.Rosamma Philip	Symposium-8 th Asian Fisheries Forum, 20- 23 November, 2007 DBT sponsored training programme in " Molecular Biology training programme for personnel involved in works pertaining to Aquaculture/ Marine Biology " from 1st August to 28th September 2007 at Centre for Cellular and Molecular Biology,Hyderabad.	Participant Participant
Dr.Mohammed Hatha	'International Conference on Biodiversity, Conservation and Management', February 3-6, 2008, Cochin. 12 th World Lake Conference'	Participant Participant
Dr.Aneykutty Joseph	Curriculum Revision Workshop National Workshop on Marine Biodiversity management and Digitization of Museum specimen - Bio informatic Centre, National Institute of Oceanography, Goa.	-do-
Dr.S.Bijoy Nandan	Workshop on conservation of Dying Achencovil river held at Catholicate College, Pathanamthitta. National seminar on Aquatic Ecosystems Ozone Day UGC sponsored seminar at St.Josephs College World Water Day, on Water Conservation held at Mar Severios College of Teacher Education, Thiruvalla International Union of Biological Sciences Symposium "Biological Sciences for the 21st Century: Meeting the Challenges of Sustainable Development in an Era of Global Change" Capital Hilton Hotel, WASHINGTON DC, USA. 9 to 13, May, 2007 International Conference on Conserv-Visionin HAMILTON, NEW ZEALAND, Organized by the University of Waikato, Hamilton, July 4 th to 7 th 2007 Workshop in connection with the reviewing of the work under the 26 th Indian Expedition to Antarctica and evaluation of project proposals	Resource person Resource person Resource person Resource person -do- -do- -do-



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	for 27 th & 28 th June 10, 2007 expedition at NCAOR, GOA	
	Seminar on BIOTRENDS organised and held by SN College, KOLLAM funded by the UGC. June 21, 2007	-do-
	Ecotourism Seminar- Developmental seminar of Pathiramanel organized by the Muhamma Grama Panchayath, ALAPPUZHA	-do-
Dr.A.A.Mohamed Hatha Dr.Najmudeen	19th Kerala Science Congress at Kannur Participated in the Group Monitoring Workshop conducted by DST-SERC for the annual review of DST-SERC projects held at Marathwada University, Aurangabad, during 28-30 th April 2008. Participated in the International Conference on biodiversity conservation and management, Rajiv Gandhi Chair in Contemporary studies, CUSAT, Cochin, India, during 3-6, January, 2008. Participated and presented a poster entitled "Ultrastructure of spermatogenesis and mature spermatozoan of the tropical abalone <i>Haliotis varia</i> (Vetigastropoda: Haliotidae), in 8 th Asian Fisheries Forum held at Cochin, India, during 20-23, November, 2007.	Paper presented
Padmakumar K.B	"Training programme – Coastal Oceanography – Remote sensing and GIS Applications"- INCOIS Hyderabad	-do-
Padmakumar K.B Soja Louis, Jayanthi.T.T	Seminar on Indian Agriculture and Environment – Perspectives – 11-10-2007	Participant
Anil Kumar ,P.R Jini Jacob Abdul Jaleel	National Seminar on Possible impacts of Sethusamudram project along Kerala Coast organized by Rajiv Gandhi Chair in Contemporary studies held at Kochi on 18 th October 2007 Know Your DNA Workshop organized by PNP Division of CMFRI conducted at Kochi on 17 th November 2007 8 th Asian Fisheries Forum organized by Asian Fisheries Society held at Kochi during 20-23 November 2007 National seminar on Bioactive Compounds from Marine Organisms organized by	-do- -do- -do-



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	dept. of Marine biology, Microbiology and Biochemistry held during 14-15 March 2008	
	Marine Biodiversity: Today and Tomorrow organized by CMFRI on 22 nd May	-do-
SMITHA C.K.	National Seminar on Possible impacts of Sethusamudram project along Kerala Coast organized by Rajiv Gandhi Chair in Contemporary studies held at Kochi on 18 th October 2007	-do-
	8 th Asian Fisheries Forum organized by Asian Fisheries Society held at Kochi during 20-23 November 2007	-do-
	National seminar on Bioactive Compounds from Marine Organisms organized by dept. of Marine biology, Microbiology and Biochemistry held during 14-15 March 2008	-do-
	Marine Biodiversity: Today and Tomorrow organized by CMFRI on 22 nd May 2008	
Cilla Abraham	National Seminar on Possible impacts of Sethusamudram project along Kerala Coast organized by Rajiv Gandhi Chair in Contemporary studies held at Kochi on 18 th October 2007	-do-
	National workshop on Taxonomy, culture and industrial application of algae organized by the postgraduate and research dept. of Botany, St. Thomas College, Kozhencherry held during 10-12 October 2007	-do-
	National seminar on Bioactive Compounds from Marine Organisms organized by dept. of Marine biology, Microbiology and Biochemistry held during 14-15 March 2008	-do-
	Marine Biodiversity: Today and Tomorrow organized by CMFRI on 22 nd May 2008	-do-
Kesavan.K	8 th Asian Fisheries Forum organized by Asian Fisheries Society held at Kochi during 20-23 November 2007	-do-
	National seminar on Bioactive Compounds from Marine Organisms organized by dept. of Marine biology, Microbiology and Biochemistry held during 14-15 March 2008	-do-
	Training workshop on Taxonomy of	-do-



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	Echinodermata, organized by Dept. of Aquatic biology & fisheries, University of Kerala and Kerala State Biodiversity Board during February 26 th –29 th , 2008	
Bindya Bhargavan & Nousher Khan.K	National Seminar on Possible impacts of Sethusamudram project along Kerala Coast organized by Rajiv Gandhi Chair in Contemporary studies held at Kochi on 18 th October 2007	-do-
	National seminar on Bioactive Compounds from Marine Organisms organized by dept. of Marine biology, Microbiology and Biochemistry held during 14-15 March 2008	-do-
	National Seminar on Possible impacts of Sethusamudram project along Kerala Coast organized by Rajiv Gandhi Chair in Contemporary studies held at Kochi on 18 th October 2007	-do-
Sumi Liz Jose & Sreedevi O.K	Marine Biodiversity: Today and Tomorrow organized by CMFRI on 22 nd May 2008	-do-
Sanal Kumar.S & Padma Kumar	Participated in the National seminar on Bioactive compounds from Marine Organisms, Organized by Department of Marine Biology, Cochin University of Science & Technology, Cochin, 2008	-do-
	Participated and presented a paper in the 3 rd Kerala Environment Congress 2007, held at Thiruvananthapuram, Kerala	Presentation
	Participated in the 19 th Kerala Science Congress 2007, held at Kannur, Kerala	Participant
	Participated in the WORTIC & WOBIC, workshop held at National Facility for Marine Cyanobacteria, Bharatidasan University, Thiruchirapilly, Tamilnadu, 2007	Participant
	Participated in the National workshop on Taxonomy, Culture & industrial Applications of Algae, Organized by Department of Botany, St. Thomas College, Kozhencherry, Kerala, 2007.	Participant
	Participated in the National seminar on Possible Impacts of Sethusamudram Project along Kerala Coast, Organized by Rajiv Gandhi chair in contemporary studies, Cochin University of Science & Technology, Cochin, 2007.	Participant
Harisankar.S, Smitha V.Bhanu,	National Seminar on BIOACTIVE	-do-



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Jisha Jose &
Anila Devi Kunjamma

COMPONDS FROM MARINE
ORGANISMS(14-15 March 2008
One day workshop on THE ART
OF WRITING RESEARCH PAPERS
AND THESIS (24-11-2007)

Remya Varadarajan

8TH Asian Fisheries forum (Nov 20-23)
EFFECTS OF SEED EXTRACT OF
Croton officinalis (Alston) ON THE
ANTIOXIDANT STATUS OF Oreochromis
mossambicus (Peters)
National Seminar on BIOACTIVE
COMPONDS FROM MARINE ORGANISMS
(14-15 March 2008)
One day workshop on THE ART OF
WRITING RESEARCH PAPERS AND
THESIS (24-11-2007)

-do-

Neil Scolastin Correya

Participated in the 8th Asian Fisheries
Forum, organized by Asian Fisheries
Society, held at Kochi, November 2007.
Participated and presented a paper in
the National seminar on Bioactive
compounds from Marine Organisms,
Organized by Department of Marine
Biology, Cochin University of Science &
Technology, Cochin, 2008
Participated in the 8th Asian Fisheries
Forum, organized by Asian Fisheries
Society, held at Kochi, November 2007.

Abhilash K. R. &
Anit M. Thomas

Participated and presented a paper at the
8th Asian Fisheries Forum, organized by
Asian Fisheries Society, held at Kochi,
November 2007
Participated in the "Training workshop on
isolation and identification of marine
Actinobacteria" organized by UGC-SAP
and conducted by Centre for Advanced
Studies in Marine Biology, Annamalai
University, Tamil Nadu (March 2008).
Participated and presented a paper entitled
"Extracellular Enzymes from Marine
Actinomycetes" in the National seminar on
Bioactive compounds from Marine Organisms,
Organized by Department of Marine Biology,
Cochin University of Science & Technology,
Cochin, 2008



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	Participated in the National seminar on Possible Impacts of Sethusamudram Project along Kerala Coast, Organized by Rajiv Gandhi chair in contemporary studies, Cochin University of Science & Technology, Cochin, 2007.	
Simi Joseph	Participated in the National seminar on Bioactive compounds from Marine Organisms, Organized by Department of Marine Biology, Cochin University of Science & Technology, Cochin, 2008	Participant
Swapna P. Antony	Participated in the 8 th Asian Fisheries Forum, organized by Asian Fisheries Society, held at Kochi, November 2007. Participated and presented a paper in the National seminar on Bioactive compounds from Marine Organisms, Organized by Department of Marine Biology, Cochin University of Science & Technology, Cochin, 2008	-do-
Sreedevi N. Kutty	Participated in the National seminar on Possible Impacts of Sethusamudram Project along Kerala Coast, Organized by Rajiv Gandhi chair in contemporary studies, Cochin University of Science & Technology, Cochin, 2007. Participated and presented a paper in the National seminar on Bioactive compounds from Marine Organisms, Organized by Department of Marine Biology, Cochin University of Science & Technology, Cochin, 2008	
Manjusha K.	Participated in the National Seminar on "Bioactive Compounds from Marine Organisms" Department of Marine Biology, Microbiology & Biochemistry, CUSAT. Participated and presented a paper entitled "Application of alkaline protease from <i>Vibrio</i> sps in removal of protein stains from fabric" in the National seminar on Bioactive compounds from Marine Organisms, Organized by Department of Marine Biology, Cochin University of Science & Technology, Cochin, 2008	



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- Participated in the One day National Seminar on “Women in Science: A career in Science” Department of Marine Biology, Microbiology & Biochemistry, 5th April 2008, Cochin University of Science & Technology, Cochin.
- Participated in the National seminar on Possible Impacts of Sethusamudram Project along Kerala Coast, Organized by Rajiv Gandhi chair in contemporary studies, Cochin University of Science & Technology, Cochin, 2007.
- Sini P. J. Participated in the National seminar on Possible Impacts of Sethusamudram Project along Kerala Coast, Organized by Rajiv Gandhi chair in contemporary studies, Cochin University of Science & Technology, Cochin, 2007. Participated and presented a paper entitled “Application of alkaline protease from *Vibrio* sps in removal of protein stains from fabric” in the National seminar on Bioactive compounds from Marine Organisms, Organized by Department of Marine Biology, Cochin University of Science & Technology, Cochin, 2008
- Jisha V. K. Participated in the National seminar on Possible Impacts of Sethusamudram Project along Kerala Coast, Organized by Rajiv Gandhi chair in contemporary studies, Cochin University of Science & Technology, Cochin, 2007. Participated and presented a paper entitled “Application of alkaline protease from *Vibrio* sps in removal of protein stains from fabric” in the National seminar on Bioactive compounds from Marine Organisms, Organized by Department of Marine Biology, Cochin University of Science & Technology, Cochin, 2008
- Manoj P. Participated in the National seminar on Possible Impacts of Sethusamudram Project along Kerala Coast, Organized by Rajiv Gandhi chair in contemporary studies, Cochin University of Science & Technology, Cochin, 2007.



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Participated and presented a paper entitled
 “Application of alkaline protease from *Vibrio*
 sps in removal of protein stains from fabric”
 in the National seminar on Bioactive
 compounds from Marine Organisms,
 Organized by Department of Marine Biology,
 Cochin University of Science & Technology,
 Cochin, 2008

13. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
Dr.S.Bijoy Nandan	RECOGNITION AWARD IN 2008 of the for the contributions in the area of zoology/ life science/ environmental science. This was given at the International Conference on Biodiversity and Conservation (BIOCAM 2008) organised by the Cochin University of Science & Technology from Feb. 3-6 2008. The award has a citation, a gold medal, certificate of honour and a memento.	Zoological Society of India
	EXCELLENCE AWARD FOR CONTRIBUTIONS IN WETLAND SCIENCE in 2008 of the MSM College, Kayamkulam instituted in connection with the National Seminar on Wetland Biodiversity held at the college from 9 to 10 Feb. 2008. The award carries a citation, a certificate of honour and a memento	MSM College, Kayamkulam

14. Sponsored Research Projects

Sl.No.	Title	Sponso-ring Agency	Amount	Investigator(s)
1.	Bioprospecting for novel antimicrobial peptides from marine biota-	MoES	Rs.97 Lakhs	Dr. Rosamma Philip
2.	Microbenthos in the shelf regions of the south east and south west coast of India	MoES	Rs.80 Lakhs	Dr.Rosamma Philip
3.	Bioactive compounds from Benthic Microbes. 2005 –2008	DOD	Rs.19 Lakhs	Dr.A.V.Saramma
4.	Monitoring and Surveillance of Harmful Algal Bloom 2007-12	MoES	Rs.50 Lakhs	Dr.A.V.Saramma
5.	Benthic Fauna of Continental slope from 200 to 1000 mts Depth of Arabian sea and Bay of Bengal	DOD	Rs.80 lakhs	Dr. Rosamma Philip



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6.	Risk assessment of bivalve shellfish from Kumarakom estuary and development of a closed water depuration system with biofilter to remove the pathogenic bacteria From shellfish.	KSCSTE	Rs.8.8 lakhs	Dr.A.A.Mohamed Hatha
7.	Development of cost effective methods for the culture of benthic diatoms for the enhancement of Abalone Larval settlement	DST-SERC	Rs.9.72 lakhs	Dr.T.M.Najmudeen
8.	Studies on the optically active substances(CDOM) in the down stream reaches of Cochin Estuary and nearby coastal waters	DST -SERC	Rs.14.85 lakhs	Dr.Nandini Menon.N

15. Research Programmes and Activities:

- Dr. S. Bijoy Nandan Participated in the training programme in biodiversity assessment and evaluation based on PRIMER (Plymouth Routines in Multivariate Ecological Research) PRIMER V6 software by Primer –E Company, Plymouth Marine Laboratory,U.K.
- Participated in the External Quality Assurance Programme (EQAS) of WHO on Global Salmonella Surveillance (GSS)
- Collaborating with research on Salmonella in Eggs with Institute of Applied Sciences and School of Biological and Chemical Sciences of The University of the South Pacific, Fiji.
- Research Collaboration with University of Kuopio, Finland on survival kinetics of *E. coli* and *Salmonella* in environment.

16. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	National Seminar on Bioactive Compounds from Marine Microorganisms	March 14-15, 2008	Dr.A.A.Mohamed Hatha	DST, UGC, KSCSTE

17. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1.	Study of Flamingos and their habite in Thane Creek, Mumbai	Dr. S.Bijoy Nandan	Salim Ali Centre for Ornithology and Natural History (SACON)
2.	Consultancy from King Fahd University, Saudi Arabia	Dr.A.A.Mohamed Hatha	

* * *



DEPARTMENT OF MARINE GEOLOGY AND GEO PHYSICS

Earth Science education is enhancing its relevance and scope globally owing to recent advances in geoexploration and the role it has in environmental and development issues. CUSAT was one of the premier Universities in the country to begin a full fledged post graduate programme in Marine Geology in the year 1976 taking into account the global advancement in general and national needs in particular in the field of Marine Sciences. A 3-year M.Sc (Tech.) programme in Marine Geophysics was introduced in 1992 which has now been restructured into a 2-year M.Sc programme. Both the programmes had been designed to aim at the development of manpower in the fields of Marine Geology and Geophysics with a special emphasis on off shore areas with a view to cater the needs of various research institutions and survey organizations as well as private companies engaged in mineral exploration, sea bed surveys, remote sensing and oil and ground water prospecting. The students of this Department are absorbed as technical personnel in various central, State public sector and private organizations like ONGC, GSI, NIO, ,NGRI, CGW, CESS and Universities. Several major Research projects funded by external agencies have been undertaken /are in operation in the Department.

1. Programmes of Study/Research

1. M.Sc. Marine Geology
2. M.Sc. Marine Geophysics
3. Ph.D

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1.	Dr.C.G.Nambiar	Professor & Head	M.Sc., Ph.D	Geochemistry, Mineralogy, Petrology
2.	Dr. K.T.Damodaran	Professor	M.Sc., Ph.D	Economic Geology
3.	Dr. P. Seralathan	Professor	M.Sc., Ph.D	Marine Geochemistry, Sedimentology
4.	Dr.K.Sajan	Professor	M.Sc., Ph.D	Marine Geology Geochemistry
5.	Dr.M. Ravisankar	Reader	M.Sc., Ph.D	Optoelectronics & PC based instrumentation

* Eight faculty positions are lying vacant



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3. Research Scholars (Full time)

Sl.No.	Name	Funding Agency	Guide	Area of work
1.	Nilof S.Pasha	DST Project	Dr. M.Radhkrisna	
2.	Rekha R.	Nil	Dr.K.Sajan	
3.	Sreela S.R.	Nil	Dr.K.Sajan	An integrated hydrological study of Bharthapuzha river basin
4.	Vinu Praksh	University	Dr. A.C.Narayana	

(Part time)

Sl.No.	Name	Funding Agency	Guide	Area of work
1.	Ambili V.		Dr.A.C.Narayana	
2.	Balakrishnan P		Dr. K.T.Damodaran	Hydrogeology & Hydrogeochemistry of Periyar River basin of Central Kerala
3.	Subeer A		Dr. A.C.Narayana	Sedimentological studies of Coastal Environments
4.	Sunil Kumar V.		Dr. K.Sajan	Geotechnical properties of Sediments
5.	Vinayan V.B.		Dr.P.Seralathan	Hydrogeology, Stratigraphy and Evolution of Kole land Basin
6.	Shinu N	CSIR	Dr. A.C.Narayana	Central Kerala Environment & Climate during the Late quaternary: Inferences from Sedimentary records of southeastern



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7.	Biju Longhinos	UGC-FIP	Dr. C.G.Nambiar	Arabian Sea Quaternary deposits along the coastal of Thiruvananthapuram
8.	S.Sakkir			
9.	Vinayachandran N.		Dr. A.C.Narayana	

4. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Section Officer	1
2.	Typist (Section Officer) Hr. Gr.	1
3.	Clerical Assistant	1
4.	Assistant (Vacant)	1
5.	Peon	1

5. Technical Personnel

Sl.No.	Designation	No. of Posts
1.	Technical Assistant	1
2.	Laboratory Assistant	1

6. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1.	II Marine Geology	4	1	5
2.	IV Marine Geology	3	7	10
3.	II Marine Geophysics	8	1	9
4.	IV Marine Geophysics	6	2	8

7. Research Facilities

a) Laboratories : (List of major laboratories available)

1. X Ray Diffractrometer



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2. Differential Thermal Analyser
3. Gravity meter
4. Proton precession Magnetometer (Land)
5. Proton precession magnetometer (Marine)
6. Resistivity meters
7. Echosounder
8. Sub-bottom profiler
9. Fluxgate magnetometer
10. Petrological Microscope
11. Section Cutting and Grinding Machine
12. Leica Steroscope Microscope with CCT camera
13. Binocular Microscope
14. Electronic Balances
15. Magnetic Separater

b) Library

No of book and journals as 31 March of the previous year	Additions during the current year
4	20

c) Others

8. Distinguished Visitors

Sl.No.	Name	Affiliation	Remarks
1	Dr. Alexander Lalomov	Institute of Geology of Ore Deposits, Petrography, Mineralogy & Geochemistry of Russian Academy of Science, Staromonetny, 35, Moscow, 1190017, Russia	Gave a talk on 'Interrelation of Fluvial-coastal-shallow sea cenozonic Ti-Zr placer formations of West Siberia (Russia)
2	Dr. Anna Bochnerova	Institute of Geology of Ore Deposits, Petrography, Mineralogy & Geochemistry of Russian Academy of Science, Staromonetny, 35, Moscow, 1190017, Russia	Gave a talk on 'Interrelation of Fluvial-coastal-shallow sea cenozonic Ti-Zr placer formations of West Siberia (Russia)

9. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Crustal structure and Tectonic Evolution of Southwestern Granulite Terrain of Indian	Sunil P.S.	Dr. M.Radhakrishna



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2	Peninsular Shield based on Gravity data Metamorphism and fluid block inclusion studies of charnockites and associated rocks from the Madurai Gramulite Southern India with special reference to graphite mineralization	Baiju K.R.	Dr.C.G.Nambiar
3	Texture Mineralogy and Geochemistry of sediments from the coastal plain between Kodungallur & Chellanum, Central Kerala, India	R.V.Rajan	Dr.P.Seralathan
4	Hydrological, Geophysical & Geochemical studies in parks of coastal and mid land areas, Central Kerala	Santhosh Kumar R.	Dr.S.Rajendran

10. Publications

Sl.No. Name of Paper, Authors, Journal Vol. & Pages

1. Priju, C.P. and Narayana, A.C. 2007. Particle size characterization and Late Holocene depositional processes in a lagoonal system, SW coast of India: Inferences from Suite Statistics. *Journal Geological Society of India*, v.69: 311-318. (0.4)
2. Narayana A.C. 2007. Peat Deposits of West Coast of India: Implications for Environmental and Climate changes during Late Quaternary. *Journal of Coastal Research*, Sp. Issue No.50 pp. 683-687
3. Narayana A.C., Tatavarti R., Shinu N. and Subeer A. 2007. Tsunami of December 2004 on southwest coast of India: post-tsunami geomorphic and sediment characteristics. *Marine Geology*. Doi:10.1016/j.margeo.2007.03.012
4. Dinesh Kumar. P.K, Girish Gopinath, Laluraj.C.M, Seralathan. P. and Mitra. D. (2007) Change detection studies of Sagar island, India, using Indian Remote Sensing Satellite 1C Linear Imaging Self Scan Sensor III Data. *Jour. Coastal Res.* 23, 1498-1502.
5. Sivanandan Achari, V., Jaison, C.A., Alex, P. M., Seralathan P., Pradeepkumar A.P., and Shaji, E. (2007). Tsunami on Kerala coast: A study of groundwater quality along the Arattupuzha and Alappad coast. *Icfai. Jour. Environ. Sci.* 1, pp 43-54
6. Priju, C.P. and Narayana, A.C. 2007. Trace metals in Vembanad Lagoon Sediments. *International Journal of Environmental Research*, V.1(4), 280-289
7. Valdiya, K.S. and Narayanan a.C. (2007). River response to Neotectonic activity: Example from Kerala, India. *Jour. Geological Society of India*. V.70, pp. 427-443



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- 8 Particle size characterization and hale holocene depositional process in Vembanad logon, Kerala inference from suite statistics *A.C.Narayana Geological Society of India, 2007, Vol.69, pp. 311-318*
- 9 Girish Gopinath and Seralathan P. and Dinesh Kumar P.K. (2007). Application of Remote Sensing and GIS for the demarcation of groundwater potential zones of a river basin in Kerala, India, *Internat. Jour.Remote Sensing Vol.28, pp. 5583-5601.*
- 10 Maya K., Babu K.N., Padmalal D. and Seralathan P. (2007) Hydrochemistry and dissolved nutrient flux of two catchment rivers, Southwest India. *Chemistry and Ecology, Vol.23, pp13-27.*

11. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr.P.Seralathan	International Conference Asia Oceania Geosciences Society during 30.7.07 to 4.8.07	To present Paper
Dr.C.G.Nambiar	Academic visit to Kochi University, Japan during 10-15 Jan. 2007	Invited to present paper & for project discussion
Dr.A.C.Narayana	Brainstorm session on High Resolution Monsoon Reconstruction since the last Glacial Maximum during 20-21 July 2007	Participant

12. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount (Lakhs)	Investigator(s)
1.	Coral Mannar	DST	19.7	Dr. P.Seralathan
2.	Burried placers	DOD	8.2	Dr. P.Seralathan & Dr. C.G.Nambiar
3.	Clay	DOD	27.2 Lakhs	Dr. A.C.Narayana
4.	Estimation of Suspended Sediment concentrations from Velocity	NRB	49,98,000	Dr. A.c.Narayana
5.	Benthic foraminiferal and pteropod response in the Arabian Sea	DST	13,05,000	Dr. N.R.Nisha

* * *



DEPARTMENT OF MATHEMATICS

Estd: 1996

The combined Department of Mathematics and Statistics came in to existence in November 1976, with the major objective of developing it to a Centre of Excellence in this region in mathematical sciences and applications and to provide facilities for training, study and research in these areas. This Department was bifurcated to form an independent Department of Mathematics on 1st January, 1996. The Department conducts two Masters Degree programmes, one in Mathematics and another in Operations Research and Computer Applications, an M.Phil. Programme in Mathematics and Ph.D. programme. The students of the M.Sc. (O.R. and C.A) programme find employment in software development centers and R & D institutions. Students of M.Sc. (Mathematics) generally take up teaching positions or opt for research. The Department has produced about 60 Ph.D.s and has published about 270 research papers in refereed journals. Apart from giving instruction in post graduate courses, the Department has from the very beginning taken the leadership in promoting research in mathematics and its applications, especially in this part of the country. This was realized in a two-fold way one, by guiding young researchers to do their doctoral work and two, by conducting extension programmes which will improve the instruction at the P.G. level in colleges and encourage youngsters to take up research. Thrust areas of research are Stochastic Control theory, Retrial Queues, Mathematical Finance, Graph Theory, Combinatorial Convexity Theory, Algebra, Fuzzy Mathematics, Wavelet Analysis, Operator Theory, Fractal Geometry, Topology, Topological Dynamics and Fluid Mechanics. The department has been receiving a library grant from NBHM since 1991. The department library has about 7500 books and subscribes 12 Indian and 3 foreign journals, Mathematical Reviews and Mathscinet. Also, the department has been co-ordinating the Mathematical Olympiads and related training programmes for school children with the assistance of NBHM since 1990.

1. Programmes of Study/Research :

- (1) M.Sc. Mathematics
- (2) M.Sc. in Operations Research & Computer Applications
- (3) M.Phil Mathematics
- (4) Ph.D.

2. Faculty members :

Sl.No.	Name	Designation	Qualification	Specialisation
1.	A.Krishnamoorthy	Professor Head	M.Sc., Ph.D.	Probability Theory, Stochastic Processes, Operations Research
2.	M.Jathavedan	Professor	M.Sc., Ph.D.	Fluid Mechanics, Non-linear Waves, Differential Equations.



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Sl.No.	Name	Designation	Qualification	Specialisation
3.	R.S.Chakravarti	Reader	M.Sc., Ph.D.	Algebra-Ring Theory
4	A.Vijayakumar	Reader	M.Sc., Ph.D.	Graph Theory, Convexity Theory
5	M.N.Narayanan Namboodiri	Lecturer	M.Sc., Ph.D.	Functional Analysis, Operator Theory
6.	B.Lakshmy	Reader	M.Sc., Ph.D.	Mathematical Statistics , Stochastic Processes, Operations Research

3. Visiting Faculty (If any) :

Sl.No.	Name	Designation	Qualification	Specialisation
Nil				

4. Research Staff :

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Sanjay Varma	Project Assistant	B.Sc. Mathematics	-

5. Research Scholars:

Sl.No.	Name	Funding Agency	Guide	Area of work
1.	Aparna Lakshmanan	-	Dr. A. Vijayakumar	Some Problems in Graph Theory and Coding Theory
2.	Seema Varghese	-	Dr. A. Vijayakumar	Problems in Graph Theory and Related Areas
3.	Ratheesh.R	-	Dr. T. Trivikraman	Algebra and Geometry
4.	Anu. V	-	Dr. M.N. Narayanan Namboodiri	Theory of Fractals and Wavelets
5.	Robert Victor Edward.J	-	Dr. M.N. Narayanan Namboodiri	Functional Analysis
6.	Sajeev S. Nair	-	Dr. A. Krishnamoorthy	Stochastic modeling
7.	Resmi.T.	-	Dr. B. Lakshmy	Stochastic modelling
8.	Manju K. Menon	-	Dr. A. Vijayakumar	GraphTheory and related topics



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9.	Shiny Philip	-	Dr. R. S. Chakravarthy	Some Problems in Topology
10.	Sudin.S	-	Dr. T. Trivikraman	Mathematical Theory of Computer Science
11.	Krishnadas. G	-	Dr. R. S. Chakravarthy	Topics in Ring Theory
12.	Lexy Alexander	-	Dr. M.N. Narayanan	Wavelets on frames and Operator Theory
13.	Resmi Varghese	-	Dr. B. Lakshmy	Stochastic modelling
14.	Ajayakumar C.B	-	Dr. A. Krishnamoorthy	Stochastic modeling Analysis and application
15.	Deepthi C.P	-	Dr. A. Krishnamoorthy	Stochastic modeling analysis and application
16.	Gireesan K.K	-	Dr. T. Trivikraman	Some Problems in Topology Fuzzy Topology and Related Areas
17.	Jaya.S	-	Dr. B. Lakshmy	Stochastic Processes
18.	Lakshmy V.P	-	Dr. T. Trivikraman	Problems in topology Fractals and Related Areas
19.	Jayaprasad P.N	-	Dr. T. Trivikraman	Algebra and Geometry
20.	Gopakumar.B	-	Dr. A. Krishnamoorthy	Stochastic Modelling
21.	Sreenivasan.C	-	Dr. A. Krishnamoorthy	Study of multi commodity inventory system with service time

Full-time

1.	Santhosh Kumar Pandey	UGC	Dr. R.S. Chakravarthy	Algebra Geometry and Theories of matter
2.	Pramod P.K	UJRF	Dr. A. Krishnamoorthy	Stochastic Modelling
3.	Viji.M	UGC	Dr. R.S. Chakravarthy	Studies on some Non Commutative rings
4.	Pravas.K	UGC	Dr. A. Vijayakumar	Some problems in graph theory and related topics
5.	Lalitha .K	FIP	Dr. A. Krishnamoorthy	Stochastic Modelling
6.	Tresa Mary Chacko	UGC	Dr. B. Lakshmy	Stochastic modeling analysis and application
7.	Tonny K.B	CSIR	Dr.T. Thrivikraman	Some problems in Topology and Related areas



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6. Administrative personnel:

Sl.No.	Designation	No. of posts
1.	Assistant	1
2.	Section Officer	1
3.	Selection Grade Assistant	1
4.	Office Superintendent	1
5.	Peon	1
6.	Sweeper-cum-Cleaner	1

7. Technical personnel:

Sl.No.	Designation	No. of posts
	Nil	

8. Students enrollment:

Sl.No.	Programme of Study	Men	Women	Total
1.	M.Sc. Mathematics	1	29	30
2.	M.Phil (Mathematics)	5	6	11
2.	Ph.D.	8	1	9

9. Research Facilities:

a. Laboratories (List out Major equipments available)

Computer Lab

More than 20 Computers connected through Local Area Network and all with hi-speed Internet Connectivity. Printers are also made available. Each of the faculty members, office and department library are also provided with computers with hi-speed Internet connectivity. Besides above, there is one lap-top computer, LCD projector, OH Projector etc to support academic activities.

b. Library

No. of books and journals as on 31 st March of Previous year	Additions during the current year
7275	219

c. Others

Separate room with furniture and computer with Internet connectivity are given to research scholars to support their research activities.



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10. Distinguished Visitors:

Sl.No.	Name	Affiliation	Remarks
1.	Prof. R.P. Pakshirajan	Retd. Prof. & Head, Dept. of Statistics, University of Mysore	May 21-26, 2007 – Series of lectures on Martingale Theory and Stochastic calculus
2.	Prof. Hermann Thorison	University of Island, Island	December 17, 2007 – To give a talk on Compiling of Random variables
3.	Prof. D.Rein Nobel	Dept. of OR & Econometrics, Vrije University of Amsterdam, Netherlands	January 8 – 12, 2008 – To give a series of talks on Discrete Time Queues
4.	Prof. Vinod Sharma	Dept. of Electrical, Electronics & Communication Engineering, IISc, Bangalore	January 19, 2008 – To give a talk on Network Queues in Communication Engineering
5.	Prof. T. Thirvikraman	Retd. Prof. & Head, Dept. of Mathematics, CUSAT	February – March, 2008 – A series of lectures on Foundations of Mathematics
6.	Prof. B.V. Limaye	Dept. of Mathematics, IIT, Mumbai	December 3, 2007 Functional Analysis
7.	Prof. Nirmala Limaye	Emeritus, Dept. of Mathematics, University of Bombay	December 3, 2007 Graph Theory
8.	Prof. R. Sivaramakrishnan	Retd. Prof. of Mathematics, University of Calicut	December 15, 2007 Algebraic Number Theory in connection with Euler Centenary Celebration
9.	Prof. T. Sankaran	IMSc, Chennai	September 29, 2007 Abdi Memorial Lecture
10.	Dr. Acuth Shankar S. Nair	Director, Centre for Bio Informatics, University of Kerala, Trivandrum	Talk on Visual Mathematics August 6, 2007

11. Ph.D. awarded:

Sl.No.	Title of the thesis	Research Scholar	Supervising Guide
1.	Stochastic Inventory with / without Service Time, Reneging & Retrial of Customers	Jose K.P	Dr. A. Krishnamoorthy



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2.	Impact of self-generation of priorities and Non-preemptive service in Single /Multi server Queues	Babu.S	Dr. A. Krishnamoorthy
3.	Topological Invariants in Hydrodynamics and Hydromagnetics	Subin . S	Dr. M. Jathavedan
4.	Box products in Fuzzy Topological spaces and related topics	Susha.D	Dr. T. Trivikraman
5.	A study on Vortex knots	Rajeshwari Devi	Dr. M. Jathavedan
6.	A study of Elementary Operators	Sindhu G. Nair	Dr. M.N. Narayanan Namboodiri
7.	Studies on the Spectrum and the Energy of Graphs	Indulal.G	Dr. A. Vijayakumar

12. Publications

a. Papers

Sl. No.	Name of Paper
1.	Dr. A Krishnamoorthy, Viswanath C. Narayanan & T.G.Deepak "Reliability of a k-out-of n system with Repair by a service station attending a Queue with Postponed work, International Jl. Of Quality, Reliability and Safety (2007)" 14(2007)379
2.	T.G. Deepak, A Krishnamoorthy, Viswanath C. Narayanan, K. Vineetha "Inventory with Service Time and Transfer of Customers and/Inventory" to appear in Annals of Operations Research, June 2008 160(2008)191
3.	A Krishnamoorthy, S.Babu and Viswanath C. Narayanan "MAP/(PH,PH)/1 Queue with Self-generation of Priorities" to appear in European Journal of Operations Research 2008 (in press)
4.	A Krishnamoorthy, Viswanath C. Narayanan and T.G.Deepak "Optimal Utilization of Service Facility for a k-out-of-n System with Repair by Extending Service to External Customers in a Retrial Queue" Journal of Applied Mathematics & Computing, 25(2007)351
5.	A Krishnamoorthy, K.P. Jose "Matrix Analytic Solution to an Inventory with Service, Reneging of Customers and Shortage" OPSEARCH, 44(2007)159
6.	A Krishnamoorthy, K.P. Jose "Comparison of Three Inventory Systems having Service Time, Positive Lead-time, Loss and Retrial of Customers" Int. Jl. Mgmt. & Inf., 2007
7.	A Krishnamoorthy, K.P. Jose "Comparison of Three Production Inventory Systems having Service Time, Loss and Retrial of Customers" Jl. Appl. Math. & Stoch. Anal. (on line), 2008



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8. A KrishnaMoorthy “Maximization of Reliability of a k-out-of-n system with repair by a facility attending external customers in a Retrial Queue” appeared in the Electronic Jl. Of Reliability:Theory & Applications, June 2007.
9. A KrishnaMoorthy, Viswanath, Deepak and Krishnakumar (s,S) Inventory with Policy with Service Time, Vacation to Server and Correlated Lead Times , Journal Quality Technology and Quality Management, 2008.
10. A KrishnaMoorthy, Alexander Dudin and Viswanath, Idle Time Utilization Through Service to Customers in a RetrialQueue High System Reliability:Maintaining to appear in the Journal of Mathematical Sciences, January/ February 2008 (Journal of Soviet Mathematics)
11. A KrishnaMoorthy, B.Krishnakumar, Powai Madheswari and Sadiq Basha Transient Analysis of a single server queue with Catastrophes, Failures and Repairs, Queueing Systems, 56,133-141,2007
12. A KrishnaMoorthy, S.Babu and Viswanath C. Narayanan, MAT/(PH,PH)/c Queue with Priority Generation and Nonpreemptive Service, Jl. Stoch. Anal. & Appl. (2008)
13. Dr. A Vijayakumar, K.S.Parvathy on the cyclic convexity of a graph – Indian Journal of Pure and Applied Mathematics 38 (5) (2007), 451-456.
14. Dr. A Vijayakumar, S B Rao On the median and the antimedian of a cograph -International Journal of Pure Applied Mathematics, (to appear in 2008).
15. Dr. A Vijayakumar, S B Rao, Aparna Lakshmanan S Cographic and global cographic domination number of a graph (to appear in 2008)
16. Dr. A Vijayakumar, S B Rao, Aparna Lakshmanan S. Gallai and anti- Gallai graphs of a graph Mathematica Bohemica,132, No.1 (2007), 43-54.
17. Dr. A Vijayakumar, Manju K Menon The P3 intersection graph - Utilitas Mathematica (to appear in 2008)
18. Dr. A Vijayakumar, Aparna Lakshmanan, S.On the $\langle t \rangle$ property of some classes of graphs - Discrete Math .(to appear in 2008).
19. Dr. A Vijayakumar, G. Indulal Energies of some non regular graphs - Journal of Mathematical Chemistry (Springer) , 42 , (2007) , 377- 386.
20. Dr. A Vijayakumar, G. Indulal Equi energetic self complementary graphs- Czech Math.Jl (to appear in 2008).
21. Dr. A Vijayakumar, G. Indulal On Turker Equivalent graphs – Graph Theory Notes of Newyork (2008).
22. Dr. A Vijayakumar, Manju K Menon On the edge C4 graph of a graph - communicated.
23. Dr. A Vijayakumar, G. Indulal, Some New Integral graphs - Applicable Analysis and Discrete Math. 1, 420-426, (2007).
24. Dr. A Vijayakumar, Aparna Lakshmanan.S., The clique graph of a cograph , Proceedings of the International Conference on Discrete Mathematics and Applications (to appear in 2008).



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25. Dr. A Vijayakumar, G. Indulal, A note on energy of some graphs, MATCH, Communications in Mathematical and Computational Chemistry,59 (2008), 269-274.

a. Books

Sl.No.	Name of Book
NIL	

13. Participation in Seminar/Conference/Refresher courses etc., by the Faculty Members/Students:

Name of Participant	Name of Seminar/Conference/Workshop	Role
Dr. A. Krishnamoorthy	XIII INFORMS Applied Probability Conference, Technical University of Eindhoven, Eindhoven, The Netherlands, July 2007	Invited Speaker
Dr. A. Krishnamoorthy	Visit to Munchen University for Collaboration Research, July 2007	Collaborative Research
Dr. A. Krishnamoorthy	International Conference of Industrial & Applied Mathematics, Zurich University & ETH, Zurich, July 2007.	Contributed speaker
Dr. A. Vijayakumar	Seminar talks at Department of Mathematics, Simon Fraser University, Canada	Delivered a Talk

14. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour/ Award	Awarding Agency
Dr. A. Vijayakumar	Broad Outlook Learner Teacher (BOLT)	Air India
Dr. A. Vijayakumar	Nominated to Editorial Board of Resonance	
Dr. A. Krishnamoorthy	Nominated to Editorial Boards of (i) Electronic Journal of Reliability: Theory & Applications (Gnedenko Forum, Russia) (ii) OPSEARCH as area Editor of Queueing Theory	

15. Sponsored Research Projects:

Sl No.	Title	Sponsoring Agency	Amount (lakhs)	Investigator(s)
1.	DAE Project – Retrial Self	DAE, Govt of	3.5	Dr. A.Krishnamoorthy



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Generation of Priorities and postponement of work in queues Inventory and Reliability	India		
2. Queues with Interruption of Service and Repair / Resume of service	General Motors India Science Lab	5	Dr. A. Krishnamoorthy

16. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1.	Classical & Retrial queues with self-generation of priorities, Single & Multicommodity Inventory with service time, Vacation to the server and / perishability / pilferage, vacation queueing models and some problems in Reliability, Random walk and Branching processes	Dr. A. Krishnamoorthy
2.	Topological Fluid Mechanics	Dr. M. Jathavedan
3.	Metric Graph Theory, Graph Dynamics, Graph Energy, Graph Classes	Dr. A. Vijayakumar
4.	Algebra & Foundations of Physics	Dr. R.S.Chakravarthy
5.	Multi Commodity inventory Problem	Dr. B. Lakshmy
6.	Spectral Theory & Stochastic Processes, Applications, Signal Processing, Cryptography	Dr. M.N. Narayanan Namboodiri

17. Seminar / Conference / Workshop / Refresher Course conducted by the Department

Sl No.	Title	Duration	Co-ordinator	Funding Agency
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Dr. A. Krishnamoorthy

Organised a series of sessions on Applied Probability, Stochastic Processes and Operations Research in connection with International Conference held during January 2-5, 2007 at Kochi (jointly with Department of Statistics, CUSAT, International Indian Statistical Association)

18. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
		NIL	

* * *



DEPARTMENT OF PHYSICS

Estd:1962

The Department of Physics was established in 1962 as a research and postgraduate teaching Department of the erstwhile Ernakulam Centre of the University of Kerala. When University of Cochin was established in 1971, it became part of it. The name of the University was changed into its present form in 1986.

The Department has maintained a credible record of postgraduate teaching and research. It has produced over 150 Ph. Ds and has more than 1150 research publications in leading international/national journals and conference proceedings and 7 books to its credit. About 10 % of the former students are employed in R&D institutions in India and abroad, 60 % as faculty in universities/colleges in India and 30% in other sectors. The department has obtained financial support from various funding agencies for research. UGC has supported the department under DRS, DSA and COSIST programmes, AICTE under MODROBES, IUCAA Reference Centre (IRC) established by IUCAA, Pune and Research Centre for 'National Renewable Energy Fellowships' are functioning in the department. The department has received financial support from DST under FIST programme and from KSCSTE under SARD programme.

1. Programmes of Study/Research:

M.Sc., M.Phil. and Ph.D. (Full time and Part time).

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1	Dr.M.Sabir	Professor	M.Sc.; Ph.D.	Theoretical Physics
2	Dr. K.P.Vijayakumar	Professor	M.Sc.; Ph.D	Thin film solar cells Semiconductor studies
3	Dr. Ramesh Babu T	Professor	M.Sc.; Ph.D	Theoretical Physics
4	Dr. L. Godfrey	Professor	M.Sc., Ph.D	Experimental Solid state Physics, Electronic Instrumentation Astrobiology
5.	Mr.P.K.Sarangadharan	Reader	M.Sc.	Solid State Physics
6	Dr.B.Pradeep	Reader	M.Sc.; Ph.D	Thin films
7	Dr.M.R.Anantharaman	Reader	Ph.D (IIT Bombay)	Experimental Solid state Physics-Nano science and Nanotechnology
8	Dr.S.Jayalekshmi	Reader	M.Sc.; Ph.D	Conducting Polymers, Polymer Thin Films, Lithium battery materials.



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Sl.No.	Name	Designation	Qualification	Specilisation
9	Dr.C.Sudha Kartha	Reader	M.Sc.; Ph.D	Holography , Semiconducting thin films
10	Dr.M.K.Jayaraj	Reader	M.Sc.; Ph.D	Opto-electronic devices&transparent conducting oxides
11	Dr. M.Junaid Bushiri	Reader	M.Sc., Ph.D	Electronics
12	Dr. Titus K.Mathew	Reader	M.Sc, Ph.D	Gravitation and Cosmology and Quantum computation
13	Dr.T.M. Abdul Rasheed (On long leave)	Reader	M.Sc.; Ph.D	Laser Spectroscopy of Molecules, Overtone Absorption Spectroscopy, Photothermal Studies on thin films
14	Dr.V.C.Kuriakose (Retired in April 2007)	Professor	M.Sc.; Ph.D	Nonlinear Dynamics, Cosmology, Astrophysics

3. Visiting Faculty (If any)

Sl.No.	Name	Designation	Qualification	Specilisation
Nil				

4. Research Staff

Sl.No.	Name	Designation	Qualification	Specilisation
1	Dr.Asha Mary John	PDF	M.Sc.; Ph.D	Nanotechnology

5. Research Scholars

Sl.No.	Name	Funding Agency	Guide	Area of Work
1	Arun V	KSCSTE	Dr. B.Pradeep	Compound Semi conducting Thin film
2.	Reena Rajan	CUSAT	Dr.B.Pradeep	Thin Films
3.	Joshy N.V	UGC	Dr.M.K.Jayaraj	Plasma studies
4.	Anila E.I	UGC	Dr.M.K.Jayaraj	Electroluminescence devices
5	Anoop.G	Kerala State	Dr.M.K.Jayaraj	Electroluminescence devices



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Sl.No.	Name	Funding Agency	Guide	Area of Work
6	Aneesh.P.M	KSCSTE	Dr.M.K.Jayaraj	Nanotechnology
7	K.J.Saji	UGC	Dr.M.K.Jayaraj	Transparent electronics
8	Arun Aravind	DST	Dr.M.K.Jayaraj	Nanotechnology
9	MiniKrishna	CSIR	Dr.M.K.Jayaraj	Electroluminescence devices
10	Reshmi.R	NPOL	Dr.M.K.Jayaraj	Ferroelectrics
11.	Sreeja R	KSCSTE	Dr.M.K.Jayaraj	Non linear optics
12.	Krishnaprasad S	DST	Dr.M.K.Jayaraj	Ferroelectrics
13.	Radhakrishnan R	Part time	Ramesh Babu T	Atomic Physics
14.	Anoop P D	Part time	Ramesh Babu T	Bose Einstein condensate
15.	Priyesh K. V.	Part time	Ramesh Babu T	Quantum Optics
16.	Pijitha R. G.	Part time	Ramesh Babu T	Astrophysics
17.	Shaju K. Y.	Part time	Ramesh Babu T	Astrophysics
18.	Mridula N	CSIR	Dr.M.Sabir	Quantum Information Processing
19.	Sudheer Sebastian		Dr.M.Sabir	Control of Chaos
20.	Nima		Dr.M.Sabir	Synchronization of Chaos
21.	Vineeth T M		Dr.M.Sabir	Complex Networks
22.	V.C.Kishore	DST	Dr.C.Sudha Kartha	Development of Photorefractive polymers
23.	V.Pramitha	DRDO	Dr.C.Sudha Kartha	High efficient photopolymers for holographic recording
24.	Tina Sebastian	DRDO	Dr.C.Sudha Kartha	Electrical studies on semi conducting thin film
25.	K.G.Deepa	DRDO	Dr.C.Sudha Kartha	Preparation and characterization of Copper iNdium Selenide films
26.	Rajesh C.S.	KSCSTE	Dr.C.Sudha Kartha	Holography
27.	Poornima.N.		Dr.C.Sudha Kartha	Photoluminescence of thin films
28.	Sreeroop S.S.	DRDO	Dr.C.Sudha Kartha	Dyedoped photopolymers for optical recording
29.	Veena Gopalan E	-	Dr.M. R.Anantharaman	Magnetic nano materials
30.	Vijutha Sunny	UGC-RFSMS	"	Magnetism and nanocomposites
31.	Senoy Thomas	NSC	"	Nanostructured amorphous alloys
32.	T N Narayanan	KSCSTE	"	Studies on magnetic nano structures



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Sl.No.	Name	Funding Agency	Guide	Area of Work
33.	Sagar S	Part Time	Dr.M. R.Anantharaman	Giant Magneto resistance materials
34.	Reena Mary A P	Part Time	"	Magneto optical properties of Ferro fluid thin films
35.	Hysen Thomas	Part Time	"	Nano crystallisation studies on metglas films
36.	E M A Jamal	"	"	Magnetic and electric properties of normal and inverse spinels in the nano regime
37.	Tom Thomas	"	"	Magneto optical properties
38.	Chitra R. Nayak	Full Time	Dr.V.C.Kuriakose	Josephson Junctions
39.	Sini. R.	"	Dr.V.C.Kuriakose	Cosmology
40.	Nijo Varghese	"	Dr.V C Kuriakose	Gravitation/Cosmology
41.	Jisha C.P.	"	Dr.V.C.Kuriakose	Optical Sol tons
42.	Rajesh Menon M.R.	"	Dr.K P Vijayakumar	Preparation and characterization of Poly Thin films for Solar cell applications
43.	Vimal Kumar T.V.	"	Dr.K.P. Vijayakumar	Solar thermal Energy
44.	Rajeshmon V.B.	"		
45.	Sreekumar. R.	"	Dr.K.P Vijayakumar	Ion implantation on semiconductor thin films and its characterisation.
46.	T.H. Sajeesh	"	Dr.K.P Vijayakumar	
47.	Vivek. M.	"	Dr. V.C. Kuriakose	Astrophysics/Astronomy
48.	Jafar M.P.	"	Dr.K.P Vijayakumar	
49.	Vinayaraj O.K.	"	Dr.V C Kuriakose	Astrophysics/Cosmology
50.	R. Jayakrishnan	"	Dr. K.P.Vijayakumar	Photoluminescence studies for defect analysis of compound semiconductors useful for photovoltaic device fabrication.
51.	Angel Susan Cherian	"	Dr.K P Vijayakumar	Strucutral and Optical characterization of absorber and window layers of this film Solar cells



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Sl.No.	Name	Funding Agency	Guide	Area of Work
52.	Anita R. Warriar	"	Dr.K.P. Vijayakumar	Characterisation of semiconductor thin films using photothermal deflection spectroscopy.
53.	James K.K.	Part Time	Dr. M.K. Jayaraj	
54.	Rajive Tomy	"	Dr. S. Jayalekshmi	
55.	K. Raveendranath	"	Dr.S.Jayalekshmi	Synthesis and characterization of lithium containing complex oxides.
56.	Thomas P.Zachariah	"	Dr.T.M. Abdul Rasheed	Spectroscopy of Materials
57.	P.I.Kuriakose	"	Dr.V.C.Kuriakose	Cosmology
58.	Jeeju P.P.	"	Dr.S.Jayalekshmi	Synthesis of Polymer nanocomposites and their characterization
59.	Sajimol Augustine	"	Dr.S.Jayalekshmi	Laser Plasma investigations
60.	Arun K.J.	"	Dr. S. Jayalekshmi	Growth and characteristics of transparent organic crystals for applications in non linear optics.
61.	Meril Mathew	"	Dr.C.Sudha Kartha	Investigation of semiconductor thin films for photovoltaic applications.
62.	Vanaja K.P.	"	Dr.S.Jayalekshmi	Synthesis and characterization of wide band gap semiconductor oxides
63.	Amrithesh. M.	"	Dr.S. Jayalekshmi	Synthesis and characterisation of conducting polymer thin films for opto-electronic device applications.

6. Administrative personnel :

Sl.No.	Designation	No. of posts
1.	Section Officer	1
2.	Assistants	3
3.	Typist/Steno	1
4.	Peon	2
5.	Sweeper-cum-cleaner	1



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7. Technical personnel :

Sl.No.	Designation	No. of posts
1.	Technical Officer	2
2.	Store Keeper	1
3.	Lab. Assistants	3
4.	Asst. Librarian	1
5.	Library Asst.	1

8. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	Ph.D 2007	7	1	8
2	M.Phil. 2007-08	3	5	8
3	M.Sc.2007-09	12	12	24

9. Research Facilities

a. Laboratories (List out Major equipments available)

The major experimental facilities in the department include:

X-ray Powder Diffractometer, UV-Visible NIR Spectrometer, Differential Scanning Calorimeter, Hall effect measuring equipment, Nd-Yag Laser and Diode Laser, Electrical and Optical characterization of materials equipment, Optical microscope, Thin film coating units, Crystal growth unit, Plasma Polymerization units, Furnaces, Impedance Analyzer, Workstation(HP), Liquid Nitrogen plant, Flourimeter, Table top hydraulic press.

He-Cd Laser (dual wavelength), He-Ne laser, Nd:YAG diode pumped, Ar⁺ laser, High Voltage Power supply, Sr830 Lock-in-amplifier, USB 2000 and NIR 512 spectrophotometers for photoluminescence studies, amplified photodetectors.

LCR Meter (HP 4285A - 75 KHz to 30 MHz)

High Energy Ball Milling Unit P-7 (Fritsch)

Lock In Amplifier, (EG & G Instruments DSP Model 7260)

Dielectric Cells (For Bulk sample & Thin films) With Necessary Accessories

I-V Characterization System, (Keithley Model 487)

Dual Trace Analog Oscilloscope, (Philips Model Os-5020p)

Digital Real Time Storage Oscilloscope, (Tektronix Model TDS 220)

Function Generator, (Tektronix Model CFG 253)

Hysteresis Loop Tracer, High Field & Low Field

AC plasma polymerization coating unit (Polymer Thin film)

A Magneto optics Laboratory complete with vibration free table.



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RF plasma polymerization coating unit (Polymer Thin film)
 High Vacuum Metal Coating Unit
 High Temperature Furnaces (Upto 1600°C)
 Electronic Balance
 Ultra Sound Cleaner, Cole Palmer (Model 8610)
 Electromagnet which can go upto 10000 Gauss
 Two Port Vector Network analyzer(R&S)
 Spin Coater(SPI)

a. Library

No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
12876	88

c. Others

10. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1.	Prof. Ajith Kembhavi	IUCAA, Pune	
2.	Dr.A.Sundaresan	Jawaharlal Nehru Centre for Scientific and Advanced Research, Bangalore.	Superconductivity Ferroelectrics and nano materials.
3	Prof.Lalit M.Kukreja	CAT, Indore	Thin Films, Nanostructures, PLD.
4	Prof.Z.Z.Le	Zhejiang University, China	P-type ZnO, Optoelectronics
5	Prof.Claus Klingshirn	University of Karlsruhe, Germany	Optoelectronics
6	Prof.Mohan Rao	IISC, Bangalore	Thin films, Microelectronics.

11. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Optimization of two stage process for the growth of In ₂ S ₃ , CuInSe ₂ and CuIn (Se _{1-x} S _{1-x}) thin films for solar cell application	Rahana Yoosuf	Dr.M.K.Jayaraj



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2	RF Magnetron sputtered perovskite oxide electrodes for ferroelectric RAM	Asha.A.S	Dr.M.K.Jayaraj
3	Growth and Characterization of ZnO based Heterojunction diodes and ZnO Nanostructures by Pulsed Laser Ablation	Ajimsha.R.S	Dr.M.K.Jayaraj
4	Spray pyrolysed zinc oxide thin films: effect of doping and ion beam radiation	P.M.Ratheesh Kumar	Dr.K.P.Vijayakumar
5	Development of solar air heaters & thermal energy storage system for drying applications in food processing industries	A.Sreekumar	„
6	Investigation on the effect of excitonic confinement of nano magnetic materials and studies on the optical properties of ferrofluids	Swapna S Nair	Dr.M R Anantharaman
7	Plasma polymerised organic thin films; a study on the structural, electrical and non linear optical properties for possible applications	Sajeev U S	Dr.M R Anantharaman
8	Studies on the effect of high energy ball milling on the structural, electrical and magnetic properties of some normal spinels in the ultra fine regime	Santhosh D Shenoy	Dr.M R Anantharaman

12. Publications

Sl.No.	Name of Paper
1.	E.I. Anila, Arun Aravind and M.K. Jayaraj, photoluminescence of SrS:Cu nanophosphor, Nanotechnology 19, (2008)145604
2.	M.K. Jayaraj, K.J. Saji, K. Nomura, T. Kamiya and . Hosono, optical and electrical properties of amorphous zinc tin oxide thin films examined for thin film transistor application, Journal of Vacuum Science and Technology B: Microelectronics and Nanometer structures (In press)
3.	G. Anoop, K. Mini Krishna and M.K. Jayaraj, The effect of Zn co-doping on structural and optical properties of Mg ₂ GeO ₄ :Mn phosphor, Journal of Alloys and Compounds (In press)



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Sl.No.	Name of Paper
4.	K.J. Saji, M.K. Jayaraj, K. Nomura, T. Kamiya and H. Hosono, optical and carrier transport properties of co-sputtered multicomponent amorphous oxide, Zn-In-Sn-O, films and their application to thin film transistor, Journal of Electrochemicalsociety (In Press)
5.	R. Manoj, M. Nisha, K.A. Vanaja, M.K. Jayaraj, effect of Oxygen intercalation on the properties of sputtered CuYO ₂ for potential use as p-type transparent conducting films, Bulletin of Materials Science (In press)
6.	B.Vineetha, K. Manzoor, R.S. Ajimsha, P.M. Aneesh and M.K. Jayaraj, synthesis of highly luminescent, bio-compatible ZnO quantum dots doped with Na, Synthesis, Reactivity in Inorganic and Nano-metal Chemistry 38; (2008)1-5,
7.	R.S. Ajimsha, M.K. Jayaraj, and L.M. Kukreja, electrical Characteristics of n-ZnO/p-Si Heterojunction Diodes Grown by Pulsed Laser Deposition at Different Oxygen Pressures, Journal of Electronic Materials (In press)
8.	G. Anoop, K. Mini Krishna and M.K. Jayaraj, influence of dopant source on structural and optical properties of Mn doped ZnGa ₂ O ₄ thin films, Applied Physics A: Materials Science and Processing 90, (2008) 711
9.	K.A. Vanaja, R.S. Ajmsha, A.S. Asha, K. Rajeev Kumar and M.K. Jayaraj, pulsed Laser Deposition of p-type a- AgGaO ₂ thin films. Thin Solid Films 516 (7), (2008)1426
10.	K.J. Saji and M.K. Jayaraj, optical and electrical properties of co-sputtered amorphous zinc indium tin oxide, Thin solid films (In press)
11.	R.S. Ajimsha, G. Anoop, Arun Aravind and M.K. Jayaraj, luminescence from surfactant free ZnO quantum dots prepared by laser ablation in liquids, Electrochemical and Solid State Letters 11(2), (2008) K14
12.	G. Anoop, K. Mini Krishna and M.K. Jayaraj, the effect of Mg incorporation on structural and optical properties of Zn ₂ GeO ₄ :Mn ²⁺ phosphor, Journal of Electrochemical society 155, (2008) J7
13.	A.S. Asha, M.T. Sebastian and M.K. Jayaraj, Structural and Electrical properties of La _{0.5} Sr _{0.5} CoO ₃ thin films by rf magnetron sputtering, Journal of Alloys and compounds 449 (1-2), (2008) 68
14.	P.M. Aneesh, K.A. Vanaja and M.K. Jayaraj, synthesis of ZnO nanoparticles by hydrothermal method, Proc. SPIE .(2007) 6639,
15.	K. Mini Krishna, G. Anoop and M.K. Jayaraj, host sensitized white luminescence from ZnGa ₂ O ₄ :Dy ³⁺ phosphor, Journal of Electrochemical society 154, (2007)J310
16.	Rahana Yoosuf, and M.K. Jayaraj, study on sulfur diffusion in CuInSe ₂ thin films using two thermal profiles, Thin Solid Films, 515 (15), (2007)6188
17.	R. S. Ajimsha, K. A. Vanaja, M. K. Jayaraj, P. Misra, V. K. Dixit and L. M. Kukreja. Transparent p-AgCoO ₂ /n-ZnO Diode Heterojunction Fabricated by Pulsed Laser Deposition, Thin solid film 515, (2007) 7352
18.	K. Mini Krishna, G. Anoop and M.K Jayaraj, structural and luminescent characteristics of ZnGa ₂ O ₄ :Dy ³⁺ thin films by rf magnetron sputtering, Journal of Electrochemical Society 154, (2007)J379 .



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19. Sini R and V.C. Kuriakose absorption cross section and Emission spectra of Schwarzschild black hole Dirac field, Modern Physics Letters A(to appear).
20. Sini R and V.C. Kuriakose, absorption cross section of RN black hole Intr. J. Mod. Phys.D(to appear).
21. Chitra R. Nayak and V.C.Kuriakose,Phase synchronization in an array of driven Josephson junctions Chaos(to appear).
22. C.P. Jisha , V.C. Kuriakose and K.Porsezian, Modulational instability and beam propagation in photorefractive polymer, J.Opt. Soc. Am. B (to appear).
23. C.P.Jisha, V.C.Kuriakose and K.Porsezian,Dynamics of a light induced self-written waveguide directional coupler in a Photopolymer; Opt.Commun. 281,(2008) 1093
24. P.A. Subha and V.C.Kuriakose,Stable diffraction managed spatial solitons in bulk cubic-quintic media, J.Mod. Optics , 54, (2007)1827
25. P A Subha, C.P. Jisha and V. C. Kuriakose,Nonlinearity management and diffraction management for the Stabilization of two dimensional spatial solitons , Pramana-J.Phys. 69, (2007)229
26. Chitra R. Nayak and V.C.Kuriakose,Dynamics of coupled Josephson junctions under the influence of applied fields, Phys. Lett. A, 365,(2007) 284
27. Sini R and V.C. Kuriakose,Absorption cross section of Schwarzschild-de Sitter black hole, Intr. J. Mod. Phys.D16, 105 (2007)
28. V. C. Kishore, R. Dhanya, K Sreekumar, on the Dipole Moments and First -order hyperpolarizability of N, N-bis (4-bromobutyl)-4-nitrobenzamine, Rani Joseph and C Sudha Kartha, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy
29. R.Jayakrishnan, Teny Theresa John , C.Sudha Kartha, K.P.Vijayakumar, Deepthi Jain, Sarath Chandran and V.Ganeshan.Do the grain boundaries of α -In₂S₃ thin films have a role in sub band gap photosensitivity to 632.8 nm? J. Appl. Phys.(2008)
30. R. Sreekumar, R. Jayakrishnan, C. Sudha Kartha, K. P. Vijayakumar, S. A. Khan, and D. K. Avasthi enhancement of band gap and photoconductivity in gamma indium selenide due to swift heavy ion irradiation J. Appl. Phys. 103, 023709 (2008)
31. R. Sreekumar, R. Jayakrishnan, C. Sudha Kartha, K.P. Vijayakumar S. A. Khan, D. K. Avasthi, enhancement of band gap and photoconductivity in gamma indium selenide due to SHI irradiation, J. Appl. Phys. 103 (2008) 023709
32. V. C. Kishore, R. Dhanya, C. Sudha Kartha, K. Sreekumar and Rani Joseph. Photoconductivity in molecularly doped poly (methyl methacrylate) sandwich cells, J. Appl. Phys. 101, (2007)063102, .
33. Teny Theresa John, C. Sudha Kartha, K. P. Vijayakumar, T. Abe and Y. Kashiwaba, effects of incorporation of Na in spray pyrolysed CuInS₂ thin films, Physica B, 388 (2007)
34. Beena Mary John, Ushamani M, K.Sreekumar, Rani Joseph, C.Sudha Kartha, Enhancement of Diffraction Efficiency and Storage Life of Poly (Vinyl Chloride) Based Optical Recording Medium with the Incorporation of an Electron Donor, Appl. Opt.,(2007)46
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- 42 Visible Luminescence Centers in Zinc Oxide Films Deposited by Spray PyrolysisJournal of Optoelectronics and Advanced Materials. 9 (2007) 3740-43.
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- 47 Studies on the vibrational spectra of the non-linear optical crystal L-Alaninium Oxalate; American Institute of Physics Publications,2008
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- 49 Enhanced luminescence observed in polyaniline-polymethylmethacrylate composites, Journal of Alloys and Compounds (in press)
- 50 Polyaniline doped with orthophosphoric acid—A material with prospects for optoelectronic applications , Journal of Alloys and Compounds(in press)
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- 52 S. Swapna Nair, Francis Xavier, P A Joy, S D Kulkerni and M R Anantharaman, Enhanced Shape anisotropy and magneto optical birefringence by high energball milling in Ni_xFe_{1-x}Fe₂O₄ ferrofluids, Journal of Magnetism and Magnetic Materials,2007 (Accepted)
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- 55 K H Prema, Philip Kurian, P A Joy, M R Anantharaman; Physicomechanical and Magnetic properties of Neoprene based rubber composites, Polymer Plastics Technology and Engineering 47, 137-146, 2008
- 56 Senoy Thomas, Sarith K Nair, E Muhammed Abdul Jamal, S H Al-Harhi, Manoj Raama Varma and M R Anantharaman; Size dependent surface plasmon resonance in silver silica nanocomposites, Nanotechnology (2008)

b. Books

Sl.No.	Name of Book
Nil	

13. Participation in Seminar / Conference/Refresher Courses etc by Faculty / Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. L. Godfrey	New Horizons in Theoretical and Experimental Physics (NHTEP-2007) Oct 8-10, 2007, Department of Physics. CUSAT	Participant, Member organizing committee and Chaired a session
Dr. L. Godfrey	IC-SOLACE 2008, Jan 21-23, 2008, CUSAT	Participant, Member organizing committee and Chaired a session
Aneesh.P.M	SPIE Optics & Photonics-07, CTMS-07	Delegate
Saji.K.J	IC- SOLACE-08, NHTEP	Delegate
Arun Aravind	Knowledge Materilas	Delegate
Ajimsha. R.s	ICMAT-07	Delegate
Anila.E.I	NCSE-07, MATCON	Delegate
Mini Krishna	CTMS-07	
Reshmi. R	COLA-07, NCSE-07	Delegate
Dr.M.K.Jayaraj	NSOP-07	Invited Speaker
Dr.M.K.Jayaraj	IC- SOLACE- 08	Organizing committee
Dr. V.C.Kuriakose	UGC Refresher course in Physics, University of Kerala, 31-07-07 and 1-08-07	Resource Personnel
Dr. V.C.Kuriakose	Seminar on Astronomy and Astrophysics, University of Calicut, Aug. 9- 10, 2007	Invited Talk
Dr. V.C.Kuriakose	Mini School on Astronomy and Astronomical Data Analysis, Newman College, Thodupuzha September 19-22, 2007	Invited Talk



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Dr. V.C.Kuriakose	Vlth International Conference on Gravitation and Cosmology, IUCAA, PuneDec.17-21, 2007	Co author of contributed papers
Dr. V.C.Kuriakose	International Conference on Recent Developments in Nonlinear Dynamics, Bharathidasan University, Tiruchirappalli, Feb. 13-16, 2008	Invited Talk
C P Jisha	International Conference on Optics and Optoelectronic Materials and Applications, Queen Mary University of London, July 21	Contributed paper
Sini R	Vlth International Conference on Gravitation and Cosmology, IUCAA, PuneDec.17-21, 2007	Contributed paper
P I Kuriakose	Vlth International Conference on Gravitation and Cosmology, IUCAA, PuneDec.17-21, 2007	Contributed paper
Vivek M	Workshop on Astronomy with Virtual Observatories October 15-19, 2007IUCAA, Pune	Participant
Bhavya B	Young Astronomers Meet, M.G.University, Kottayam, January	Participant
Vinayaraj O K	Young Astronomers Meet, M.G.University, Kottayam, January 3-5, 2008	Participant
Chitra R Nayak	International Conference on Recent Developments in Nonlinear Dynamics, Bharathidasan University, Tiruchirappalli, Feb. 13-16, 2008	Contributed paper
Dr. Sudha Kartha	The International Conference on Optical, Optoelectronic and Photonic Materials and Applications. ICOOPMA 2007, 30 July - 3 August, 2007, London, UK	Presented a research paper and Chaired a session
Dr. Sudha Kartha	31 st Optical society of India symposium on contemporary optics and applications (organized by OSI and M.S university), Baroda	Invited speaker
Dr. Sudha Kartha	International conference on Solar cells – IC Solace 2008	Organizing committee member
Dr. K.P.Vijayakumar	18 th AGM and the national Conference organized by the Materials Research Society of India [MRSI] in NPL, New Delhi [2007] National Conference on 'Development of materials for energy sources' organized by the Vellalar College for Women, Erode [2007]. National Conference on 'Organic Electronics' organized by the S.N.College, Kollam [2007].	Invited Speaker



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Dr. K.P.Vijayakumar	National conference on 'Current Trends in Materials Science' [CTMS 07] organized by the Dept of Physics, Christian College, Chengannur [2007]. National Seminar on "New Trends in Materials Science" organized by the department of Physics, Nirmalagiri College, Thalassery [2007].	Invited Speaker
Dr.M.Junaid Bushiri	Kerala Science Congress	Delegate
Dr.M.Junaid Bushiri	National Seminar on Advanced Materials, M.S.University, Tirunelveli ,India	Delegate
Dr.M.Junaid Bushiri	International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS2008)	Delegate
P.K.Sarangadharan	International Conference on Solar Cells	Participant & MemberLocal Organizing Committee
Arun K.J.	International Conference on Vibrational Spectroscopy, March 2008, held in Trivandrum	Student participant presenting a paper
K. Ravindranath	International Conference on Advances in Energy Research , December 2007, IIT.Mumbai International Conference on Solar Cells, January, 2008, CUSAT	Student participant. presenting a paper
Rajive Tomy	International conference on Laser Ablation, September 2007, Spain	Student participant, presenting a paper
Senoy Thomas	National Conference on Smart Electro ceramics (NCSE- 2007), Kerala, India.	Student participant presenting a paper
Vijutha Sunny	National Conference on Smart Electro ceramics (NCSE- 2007), Kerala, India.	
Vijutha Sunny	International Conference on Nanomaterials and its Applications (ICNA 2007.), NIT-Trichy, India	
Reena Mary A P	National Conference on Smart Electro ceramics (NCSE- 2007)	
Prema K H	National Conference on Smart Electro ceramics (NCSE- 2007), Kerala, India.	
Veena Gopalan E	MatCon2007, CUSAT, Kerala, India	
Narayanan T N	Current Trends in Materials Sciences 07, Chengannur Christian college, 26 March 2007.	
Vijutha Sunny	International Conference on Nanomaterials and its Applications (ICNA 2007.), NIT-Trichy, India	



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Veena Gopalan E	Current Trends in Materials Science (CTMS-07), Department of Physics, Christian College, Chengannur. March 25-27,2007.
Veena Gopalan E	National Conference on Smart Electro ceramics (NCSE- 2007), Kerala, India
Vasudevan Namboothiri	National Conference of New Horizons in Theoretical and Experimental Physics (2007).

14. Awards/ Honours/ Fellowships etc. received:

Name of Recipient	Name of Fellowship/ Honour/Award	Awarding Agency
C.P.Jisha	CSIR Senior Research Fellowship	CSIR
Dr. M.R. Anantharaman	Two papers entitled Structural and Electrical studies on Tetrameric Cobalt Phthalocyanene and polyaniline composites Investigations on the electrical and structural properties of polyaniline doped with camphor sulphonic acid Have been selected as top 25 hottest articles in <i>Materials Science and Engineering B & Journal of Physics and Chemistry of Solids (Science Direct)</i>	

15. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	A comparative study of optical and electrical characterization of Silver Selenide thin films and Silver Selenide thin films doped with rare earth metals, for the fabrication of solar cells.	KSCSTE	9.79lakhs	Dr.B.Pradeep
2	Tunable micro -wave materials and devices based on photonic band gap structures	DST	29.8 lakhs	Dr.M.K.Jayaraj
3	Nanophosphors for flat panel displays and quantum well structures grown by pulsed laser deposition technique	DST	85 lakhs	Dr.M.K.Jayaraj
4	Pulsed Laser Deposition of PZT and PLZT thin films	NPOL/CARS	5 lakhs	Dr.M.K.Jayaraj



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5	Development of Electroluminescent and photovoltaic optoelectronic devices	KSCSTE-SARD	32 Lakhs	Dr.M.K.Jayaraj
6	“Fluxon dynamics in Josephson junction and Its implementation in Quantum Computing”	DRDO	Rs 7,12,800/-	V.C.Kuriakose(PI) Ramesh Babu T (PI) Chitra R. Nayak (Research Fellow)
7	“Black Holes, Information loss and entanglement”	UGC	Rs. 7,86,600/-	V C Kuriakose(PI) Ramesh Babu T (Co-PI) Sini R(Research Fellow)
8	Development of novel photorefractive Polymers for optical recording	DST		
9	Electrical characterization of semiconducting thin films using photoconductivity & Thermally stimulated Current Measurements	DRDO		
10	Studies on CuIn/Cu A based Cd free thin film Solar Cell.			
11	Standardization of automated Spray Pyrolysis Unit for fabrication of all sprayed thin film SolarCell.			
12	Development of highly efficient photopolymers films for holographic applications	IRDE-DRDO	40.12	Dr.C. Sudha Kartha, Dr.Rani Joseph & Dr.K. Sreekumar
13	Study on Eosin Dye Sensitized Polymers for Holographic Applications	KSCSTE	5.3625	Dr.C.Sudha Kartha, Dr.Rani Joseph & Dr.K.Sreekumar
14	Studies on Cu/In and Cu/Al based Cd free thin film solar cells”	Department of Science &	Rs. 24,00,000/-	Prof.K.P.Vijayakumar Dr.C.Sudha Kartha
15	“Standardisation of automated spray pyrolysis unit for the fabrication of all sprayed thin film solar cells” sanctioned by the Kerala State Council for Science,Technology and Environment, Govt of Kerala. [Amount Rs.3,41,000/-]	Technology, Govt of India		
16	Synthesis and characterization of carbon nanotube-polymer composite films of polyaniline and polypyrrole for LRD applications	UGC	Rs 8,81000	Dr.S.Jayalekshmi, Dr.M.K.Jayaraj



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17 Primordial Nucleosynthesis with neutrino Degeneracy UGC Rs.65000/- Dr. Titus K. Mathew

16. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1	Investigation on the red rain Phenomenon of Kerala	Dr. L. Godfrey
2	Black holes: scattering and Quasi normal mode calculations	V.C.Kuriakose(F) R Sini (RS) Nijo Varghse(RS)
3	Black Holes: Entropy calculations	V C Kuriaksoe(F) P. I Kuriaksoe(RS)
4	Quasar studies	V C Kuriakose(F) Vivek M (RS)
5	Neutron star studies	V C Kuriakose(F) Vinayaraj O K (RS)
6	Young star cluster studies	V C Kuriakose(F) Bhavya B (RS)
7	Spatial Solitons in Kerr and Non-Kerr media	V C Kuriakose(F) PA Subha (RS)
8	Photorefractive solitons	V C Kuriakose(F) C P Jisha (RS)
9	Chaotic behaviour of coupled Josephson Junctions	V C Kuriakose(F) Chitra R. Nayak(RS)
10	Control of chaos in Rossler and Lorenz systems by hybrid control method	M.Sabir and Sudheer Sebastian
11	Adiabatic quantum computation	M Sabir and Mridula N
12	Studies on semiconducting thin films for solar cells	Dr. K.P.Vijayakumar Dr.C.Sudha Kartha
13	Development of photo polymers	Dr.C.Sudha Kartha Dr.Rani Joseph, Dr. K. Sreekumar
14	Thin Film Solar Cells, Optical & Electrical characterization of semiconductor	K.P.Vijayakumar & C.Sudha Kartha
15	Growth & Characterisation of Ferroelectric Dicalcium Lead Propionate Crystals Synthesis Crystal Growth and Characterisation of TGS Crystals Growth and Characterisation of ZTS Single Crystals	P.K.Sarangadharan
16	Polymer nanocomposites for LED applications	Dr.S.Jayalekshmi, Sreekanth Varna
17	Nanostructured Lithium Phosphates for Battery Applications	Dr.SJayalekshmi, Rajive Tomy



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17. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	International Conference on Solar cells [IC SOLACE 2008	3 DAYS 21-23 Jan 2008	K.P.Vijayakumar	DST,DRDO,ISRO, ANERT
2	National Conference on "New Horizons in Theoretical and Experimental Physics]" NHTEP2007	3 days; 8-10 October 2007	Dr.S.Jayalekshmi	DST,BRNS,CSIR, UGC

18. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Preparation of device quality TCO films for solar cells	Prof K.P.Vijayakumar	Ms.Hind High Vac Company, Bangalore
2	Deposition of CIS layer over metallic substrates	,,	Ms.CORUS Group, The Netherlands

* * *



DEPARTMENT OF PHYSICAL OCEANOGRAPHY

Oceanography is a subject of past, recent and future, aimed at exploring the horizons of knowledge pertaining to the hydro environment of this planet – as we also attempt to search extra terrestrial bodies, probing for H₂O. As a course designed for graduates, teaching and research commenced way back 40 years in erstwhile Kerala University (in 1965) and evolved to mature into a full-fledged program of this department. The master's programme now covers topics on air-sea interaction, coastal and estuarine oceanography, coastal zone management, sea-state analysis, modeling, environmental oceanography etc. Placements are at NIO, CESS, NPOL, NIOT, IISc, IIT, SAC, NRSA and so on, while some find positions abroad and private. The M. Tech. Ocean Technology program further supports in depth studies in such frontier areas of Oceanography like acoustics, dynamics, coastal structures, instrumentation and so on, aimed to mould skilled candidates in this realm. The department also give emphasis to doctoral programs in the thrust areas of oceanography and the recent awardees have theses in the topics like dredging impact assessment, coastal inlet dynamics, coastal zone management and GIS, open ocean processes and so on.

This department has a dedicated lifeline of highly qualified decorated scientists and researchers serving the nation in varied capacities. Also, time in and out, valued projects from DOD, DST, MHRD, AICTE, MEF & UGC have been executed by the faculty attached to this department. Members have often associated themselves with international bodies/ scientists & teachers from foreign countries in their pursuit for academic excellence. A number of students have qualified the NET – CSIR – UGC test to secure positions in national laboratories/institutions. The department houses sophisticated instruments like ocean current meters, automatic sedimentation analyzer, bathythermograph, echo sounder, tide cum wave gauges, ship borne data acquisition systems, CTD etc.

1. Programmes of Study/Research:

- (1) M.Sc. Oceanography
- (2) M Tech Ocean Technology
- (3) Ph.D Programme in Oceanography

2. Faculty Members:

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr.A.N.Balchand	Professor and Head	M.Sc Ph.D	Environmental Oceanography
2	Dr. R Sajeev	Reader	M. Sc Ph.D	Coastal Oceanography
3	Sri. P K Saji	Lecturer	M Sc	Ocean Circulation

3. Visiting Faculty (If any) contract Lecturers

Sl. No.	Name	Qualification	Specialisation
1	Dr. Benny N Peter	Ph.D	Polar Oceanography



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2	Dr. K.Rasheed	Ph.D.	EIA
3	Dr. K.M.Santosh	Ph.D.	Remote Sensing

4. Research Scholars:

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Rajesh.G	National Institute of Ocean Technology	Dr.R.Sajeev	Wave studies
2	Jossia Joseph K.	Part Time National Institute of Ocean Technology	Dr. A.N. Balachand	Ocean Response to Atmospheric Forcing
3	Thara.K.J	DPO, Full Time	Dr.R.Sajeev	Physical state of oceans and impacts on marine fisheries.
4	Smitha B.R.	CMLRE, MoES	Dr. R.Sajeev	Coastal Upwelling systems in the north Indian Ocean with special reference to south west coast of India
5	Vimalkumar K.G	Fugro Survey India, Bombay	Dr. R.Sajeev	Mesoscale processes in Arabian Sea and Bay of Bengal

5. Administrative Personnel:

Sl. No.	Designation	No. of posts
1	Section Officer (Higher Grade)	1
2	Selection Grade Assistant	1
3	Sr. Gr. Typist/Steno	1
4	Peon	1

6. Technical Personnel:

Sl. No	Designation	No. of posts
1	Vacant	1

7. Student Enrollment:

Sl. No.	Programme of Study	Men	Women	Total
1	M.Sc Oceanography I Sem	8	3	11
2	M.Sc Oceanography III Sem	6	1	7
3	M Tech Ocean Technology	0	0	0



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8. Research Facilities:

a) Laboratories (*List out Major equipments available*):

Lynz water level recorder
Water distilling apparatus
Ocean current meter
Under water measurement system
Universal data logger
Connecting cable for digital storage recorder (no:32)
Salinometer and bathy thermograph
Electronic balance
Marine navigation system g.p.s.receiver
Digital water analyser
U V visible spectrometer
Lynx current meter
Photometer
Current meter
3 D ACM Current Meter
Van Dorn Water Sampler
Portable Echo Sounder
Wave Cum Tide Guage
Dumpy Level
GPS
CTD

9. Distinguished Visitors

Sl. No.	Name	Affiliation	Remarks
1	Dr Chris Reason, Professor	University of Cape Town, South Africa	Official visit on MOU
2	Dr. A.D.Rao, Professor	IIT, Delhi	Official

10. Publications (duplication may be avoided):

(a) Papers

Sl. No	Name of paper
1.	Ocean part of coastal zone good practices for sustainable development, by Balchand A.N., inchoe 2007, 746-753
2.	Suspended sediment transport by modelling in cochin estuary, by Dr. K.Rasheed and



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- Balchand A.N., inchoe 2007, 645-652
3. Computation of sedimentation in a tropical estuarine harbour, K.Rasheed and Balchand A.N., Kerala Science Congress, 2008.
 4. Management strategies for urban coastal zones: integrating DPSIR concepts with GIS tools in people's participatory programs, by Balchand A.N., M.S.Madhusoodhanan and C.Reghunathan, 2007, IHDP Update on International Human Dimensions Programme on Global Environmental Change, 2, 19-23.
 5. Beaches of Kerala State : The digital library, Balchand A.N., K.Rasheed & E. Hari Krishnan, Kerala Science Congress, 2008
 6. Role of wind on zonation and circulation of the Antarctic Ocean South o Africa, Polar Dynamics Conference, Bergen, Norway, 2007.

(b) Books

Sl. No	Name of paper
1.	Internet publication Keralabeachesv3.12gbfree.com

11. Participation in Seminar / conference / Refresher courses etc. by faculty / Students.

Name of Participant	Name of Seminar/Conference/Workshop	Role
Dr. A.N.Balchand	INCHOE, Suratkal, December 2007	Paper presentations - 2
Dr. A.N.Balchand	Kerala Science Congress, Trivandurm, January 2008	Paper and Poster presentation - 1
Dr. R.Sajeev	National Symposium on Emerging trends in Ocean Science and technology, OSI, Cochin	participation
Dr. A.N.Balchand Dr. R.Sajeev, Sri. P.K.Saji	Workshop on Vagaries of monsoon, DAS, Cochin	Active participation
Dr. Benny N.Peter	Polar Dynamics Conference, Bergen Norway, August 2007	Paper presentation

12. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/Honour/Award	Awarding Agency
Dr. A.N.Balchand	Best poster award-Kerala Science Congress, 2008	Kerala State Committee on Science, Technology and Environment



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13. Sponsored research projects

Sl. No.	Title	Sponsoring agency	Amount Rs lakhs	Investigator(s)
1	ARMEX	MoES	10,.00	Dr. R Sajeev
2	Dynamics of the coastal waters of south west coast of India and its impacts on fisheries	INCOIS	27.00	Dr. R.Sajeev
2	Synergistic application of scatterometer and ocm data form oceans at-II for the stueis of coastal upwelling in the SW coast of India	DOS	10.20	Dr.K.Ajith Joseph and Dr.A.N.Balchand (Multi-institutional)

14. Research programmes and activities

Sl. No.	Problem / Topic	Investigator(s)
1	Coastal Zone Management	A N Balchand
2	Coastal Oceanography	R Sajeev
3	Ocean Circulation	P K Saji
4	Southern Oceans and Antarctic Studies	Benny N Peter
5	Modelling of Sediment Dynamics	Dr.K.Rasheed
6	Ocean colour application studies	Dr.K.M.Santosh

* * *



DEPARTMENT OF POLYMER SCIENCE AND RUBBER TECHNOLOGY

Estd : 1972

Recognizing the importance of natural rubber and its significance in the Indian economy, the Department of Polymer Science and Rubber Technology was instituted by the University in 1972 in collaboration with the Rubber Research Institute of India (RRII), Kottayam. The B.Tech course was started in 1972. The M.Tech course in Polymer Technology was started in 1985 with assistance from UGC and AICTE. Professionals belonging to the past batches now adorn various high positions in polymer industries and research institutions in India as well as abroad. The Department is also actively engaged in research in the frontier areas of Polymer Science /Technology.

Periodically the Department organizes conferences and seminars to bring polymer scientists, technologists and engineers of academic and research institutions and industrial organizations to a common platform and deliberate on the status of plastics and rubber technology and discuss the latest developments. A series of national seminars on "Advances in Polymer Technology" (APT) have been organized by the Department in 1991, 1996 1998, 2002 and 2004. The Department is organizing the next edition of the International Conference (APT '08) during September 25 – 28, 2008.

1. Programmes of Study/ Research:

- 1 B.Tech Course in Polymer science & Rubber Technology
- 2 M.Tech Course in Polymer Technology
- 3 Ph.D. Programme in Polymer Technology

2. Faculty Members:

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. Thomas Kurian	Head of the Department	B.Sc. (Kerala Uty). B.Tech. (Cochin Uty.) M.Tech (CUSAT) Ph.D. (I.I.T Kharagpur) Post-doc (Japan) M.B.A. (CUSAT)	Polymer Technology
2	Dr. K.E.George	Professor	B.Sc.Engg. (Calicut Uty), M.Tech. (I.I.T Madras) Ph.D. (CUSAT)	Chemical Engineering, Polymer Technology



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3	Dr. Rani Joseph	Professor	M.Sc (Kerala Uty.), B.Tech. (CUSAT) Ph.D. (CUSAT)	Polymer Technology
4	Dr. Philip Kurian	Reader	B.Sc. (Kerala Uty.), B.Tech (Cochin Uty), M.Tech (CUSAT) Ph.D. (CUSAT)	Polymer Technology
5	Dr. Eby Thomas Thachil	Reader	B.Sc.Engg. (Calicut Uty.) M.Tech (I.I.T. Madras), Ph.D (I.I.T Madras)	Polymer Technology
6	Dr. Sunil K. Narayanankutty	Reader	M.Sc.(CUSAT) M.Tech(CUSAT) Ph.D. (I.I.T. Kharagpur)	Polymer Technology
7	Ms. Jayalatha Gopalakrishnan G	Lecturer	B.Sc.(M.G.Uty), B.Tech (Cochin Uty), M.Tech (CUSAT)	Polymer Technology
8	Ms. Renjitha R.	Lecturer (Ad hoc)	B.Tech, M.Tech	Polymer Technology
9	Ms. Jasmine T.	Lecturer (Ad hoc)	B.Tech, M.Tech	Polymer Technology

3. Visiting Faculty (If any)

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. N.M.Mathew	Visiting Professor (Former Director of RRII, Kottayam)	M.Sc.(Kerala Uty) Ph.D (IIT, Kharagpur) Licentiate of Plastic & Rubber Institute, London	Rubber Technology
2	Prof. K.N. Ninan	Visiting Professor (Deputy Director, VSSC, Thiruvananthapuram)	M.Sc., Ph.D	Polimer Science



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4. Research Staff:

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. Sreekala	Pool Officer	Ph.D.,	Polymer Science

5. Research Scholars:

Sl.No.	Name	Funding Agency	Guide	Area of Work
1	Jenish Paul		Dr. Eby Thomas Thachil	Modification of Epoxy Resins by Reactive Blending
2	Vidya Francis		Dr. Eby Thomas Thachil	Effect of Matrix Toughening on the properties of Thermoset Composites
3	Ajalesh B. Nair		Dr. Eby Thomas Thachil	Modification of rubbers using cardanol formaldehyde resin
4	Neena George		Dr. Rani Joseph	Nanocomposites
5	Dennymol P. V.		Dr. Rani Joseph	Nanocomposites
6	Vidhya G.		Dr. Rani Joseph	Studies on conjugated polymers
7	Elizabeth Francis		Dr. Rani Joseph	Studies on Polymer composites
8	Nimmy K.P.		Dr. Rani Joseph	Polymers for Holographic Recording
9	Muraleedharan M.N		Dr. Thomas Kurian	Studies on Elastomers
10	Anna Dilfi K.F		Dr. Thomas Kurian	Modification of Biodegradability of Polymers
11	Resmi V. C.		Dr. Sunil K. Narayanankutty	Development of low free formaldehyde PF resin

6. Administrative Personnel:

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2.	Office Superintendent	1
3	Assistant	2 (1 Vacant)
4	Peon	1
5	Sweeper-cum-Cleaner	1 (Vacant)



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7. Technical Personnel:

Sl.No.	Designation	No. of Posts
1	Librarian	1
2	Store Keeper	1
3	Technician	1
4	Attender	1 (vacant)

8. Students Enrollment:

Sl.No.	Programme of Study	Men	Women	Total
1	M.Tech.	6	5	11
2	B.Tech.	13	-	13

9. Research Facilities:

a) Laboratories (List out Major equipments available)

Sl.No.	Name of the Equipment	Cost (Rs.in Lakhs)	Model and Make
1.	Universal Testing Machines	40	Shimadzu Atograph 50 kN and 10 kN (2002)
2	Dynamic Mechanical Analyzer	50	TA Q800 (2004)
3	DSC	12	TA Q100 (2002)
4	TGA	12	Ta Q50 (2002)
5	Rheomix	30	Thermo Haake Poly Lab System 600-P (2003)
6	HPLC	15	Waters 515 (2003)
7	Stereo Microscope	5	Carl Zeiss (1998)
8	Two roll mill	3	SMX Lab-613, Santhosh (2002)
9	Hydraulic press (3 Nos)	10	SHP-50, Santhosh (2002)
10	Abrader DIN (2 Nos)	9	Zwick Germany ATSFAAR, Italy
11	Impact Tester	4	CEAST Italy (2007)
12	FTIR	6	Bruker (2005)
14	Refractometer	4	Atago (2005)
15	Nanovolt meter	5	Keithley (2005)
16.	Buchi Syncore Parallel Evaporator	7	Buci Switzerland (2007)
17.	Mooney Viscometer	10	EKTRON (EKT-2001 M, Taiwan 2007)



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18.	Flexometer	13	EKTRON (EKT 2002 GF, Taiwan 2007)
19.	Resil Impactor	5	CEAST, Italy, 2007

b) Library:

No. of Books/Journals on 31 st march of Previous Year		Additions During The Year
Books	3375	114
Journals	8	

c) Others

Magazines

10. Distinguished Visitors:

Sl.No.	Name	Affiliation	Remarks
1	Prof. Alain Dufrense	EFGP-INPG, France	Talk on Bio- Nanocomposites
2	Prof. Dr. rer.nat. Wener Mormann	Germany	Talk on Modified Cellulose
3	Prof. Dr. Huang, Song-Jeng	National Chung Cheng University Taiwan	Talk on Fracture Mechanics
4	Prof. Koichi Goda	Yamaguchi University, Japan	Lecture on Green Composites
5	Prof. Hiroshi Takagi	Tokushima University, Japan	Lecture on Polymer Nanocomposites
6	Dr. El Mostafa Zindine	Director, FCI Corporate Research Center, France	Talk on R & D, FCI
7	Dr. Surendra U. Kulkarni Dr. Adil Dhalla Dr. Sanjay Charati	GE Global Research Science	Talk on Innovations in Polymer
8	Siby Jose	Group Manager, Apollo Tyres Ltd.	Talk on Six Sigma
9	Dr. James Jacob	Director RRII, Kottayam	Talk on Kyoto Protocol
10	Takashi Eguchi	Yamagata University, Japan	Talk on student-life in Japan
11	Dr. K.R. Dayas	Director, CMET	Talk on Electronic Applications of Polymers
12	Dr. P. Ramesh	Scientist, SCTIMST	Talk on Bio Medical Applications of Polymers



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Sl.No.	Name	Affiliation	Remarks
13	Michael Wasowicz	Polish Academy of Sciences, Poland	Talk on Biosensors
14	Dr. Gopiraj P.A. Unni	MGR Medical University	Dental Applications of Polymers

11. Ph.D Awarded:

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising guide
1	Short Isora Fibre Reinforced Natural Rubber Composites	Lovely Mathew	Dr.Rani Joseph
2	Radio opaque Materials from Natural Polymers	Nisha V S	Dr.Rani Joseph
3	PET – SWNT Nano Composites	Anoop Anand	Dr.Rani Joseph
4	Novel Adhesive systems based on neoprene-phenolic blends	Litty Alan Varghese	Dr. Eby Thomas Thachil
5	Novel Applications of Cashewnut Shell Liquid in the polymer field	Luby Mary C	Dr. Eby Thomas Thachil

12. Publications

a. Papers

Sl.No.	Name of Paper
1	Dynamic Melt Rheological Properties of Ionomers based on Poly (ethylene-co-acrylic acid) and Poly (ethylene-co-methacrylic acid), <i>Intern. J. Polymeric Mater.</i> , 56, 135, 2007.
2	Reprocessable Zinc Sulfonated Ionomers based on Natural Rubber, International Conference on Rubber and Rubber-Like-Materials, Indian Institute of Technology, Kharagpur, January 8-10, 2008.
3	Novel Bio-degradable Plastics based on LDPE and LLDPE, Poly Char 16- World Forum on Advanced Materials, World Unity Convention Centre, Lucknow, India, 17-21 February 2008.
4	Novel Bi-Plastics based on Polyethylenes, Poly Char 16- World Forum on Advanced



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- Materials, World Unity Convention Centre, Lucknow, India, 17-21 February 2008
- 5 Bio-degradable film grade plastics based on LDPE, and LLDPE, International Conference on Biodiversity, Conservation, and Management, February 3-6, 2008, CMFRI (ICAR) Cochin.
 - 6 Thomas N. Abraham and K.E. George, - Recyclable Nylon reinforced HDPE composites: Effect of fibre diameter. Progress in Rubber, Plastics and Recycling Technology Vol. 23, No. 3 (2007) 155-117
 - 7 Thomas N. Abraham and K.E. George - Short nylon fibre reinforced PP: Melt Rheology Polymer Plastics Technology and Engineering Vol. 46 No. 3 (2007) 321-325
 - 8 K. Lakshmi, K.E. George and K.T. Mathew - Comparison of Microwave and Electrical Properties of Selected Conductive Polymers Microwave and optical Technology Letters 504-508 (2008)
 - 9 Dr. Rani Joseph, Preparation of insitu precipitated silica filled Acrylonitrile butadiene rubber composites. Progress in Rubber, Plastics and Recycling Technology Vol 23 No 4 PP 209-221
 - 10 M K Joshy , Lovely Mathew & Rani Joseph - Effect of alkali treatment on the properties of unidirectional Isora Fibre reinforced Epoxy Composites Plastics Rubber & Composites Vol 36 No 6 PP 1-7
 - 11 M K Joshy Lovely Mathew & Rani Joseph - Studies on interfacial adhesion in unidirectional Isora fibre reinforced Polyester Composites
 - 12 Maya K S , Rani Joseph , Jacob Varkey and Benny George - Epoxidised Natural Rubber as a coupling agent in in situ precipitated silica - natural rubber s composites
 - 13 Anoop Anand K, U S Agarwal, Anuya Nisal, Rani Joseph - PET- SWNT nanocomposites through Ultrasound assisted dissolution-evaporation - European Polymer Journal 2007 pp 2279-2285
 - 14 Lovely Mathew, K U Joseph , Rani Joseph - Isora Fibre Morphology, Chemical Composition, Surface modification, Physical Mechanical and Thermal Properties – A potential Natural Reinforcement - Journal of natural Fibres Vol 3(4) 2007
 - 15 K Lakshmy, Honey John, Rani Joseph, K E George, K T Mathew - Comparison of Microwave and electrical properties of selected conducting polymers - Microwave and Optical Technology Letters Vol 50 No2 Feb 2008 pp 504-508
 - 16 Ansu Jacob, Philip Kurian, Abi Santhosh - ApremCure Characteristics and Mechanical Properties of Natural Rubber–Layered Clay Nanocomposites. International Journal of Polymeric Materials, Vol. 56(2007), 593–604.
 - 17 Ansu Jacob, Philip Kurian, Abi Santhosh - Aprem Transport Properties of Natural Rubber Layered Clay Nanocomposites. - Journal of Applied Polymer Science (In Press)
 - 18 Mary Alexander, Philip Kurian and Eby Thomas Thachil - Effectiveness of Cardanol as Plasticiser for Silica-Filled Natural Rubber. - Progress in Rubber, Plastics and Recycling Technology, Vol. 23, No.1 (2007), 43-56.
 - 19 P V Sreenivasan and Philip Kurian - Mechanical Properties and Morphology of Nitrile Rubber Toughened Polystyrene. International Journal of Polymeric Materials, ; Vol. 6(2007), 1041-1050.



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- 20 Ansu Jacob, Philip Kurian, Abi Santhosh Aprem, Preparation and Characterization of natural rubber organoclay nanocomposites, Vol. 56(2007),593-604, Journal of Polymeric Materials.
- 21 Dr. Eby Thomas Thachil “Particle board from Cashew Nut Shell Liquid (CNSL)” *Polymers and Polymer Composites*, Vol.15, No1, 2007
- 22 Lity Alen Varghese and Eby Thomas Thachil -“Effect of composition on adhesive blends consisting of neoprene and phenol-cardanol- formaldehyde copolymer”, *International Journal of Polymeric Materials*, Vol. 56, pp.1-13(2007).
- 23 A.B.Chерian and E.T.Thachil, “Modification of unsaturated polyester by polyethylene glycol” *Plastics Rubber and Composites*, 2007, Vol36, No.3, 1-6
- 24 Priya Viswanath and Eby Thomas Thachil“Properties of polyvinyl alcohol cement pastes” - *Materials and Structures*, (2008) 41:123-130
- 25 “Effect of Phenol- CNSL- Formaldehyde on Thermal Ageing of Elastomers” *International Journal of Polymeric Materials*, 56:697-713,2007
- 26 Mary Lubi C and Eby Thomas Thachil,“Particle board from Cashew Nut Shell Liquid (CNSL)-II” *Polymer Plastic Technology and Engineering*, in press
- 27 ‘Influence of ether linkages on the properties of resol phenolic resin’ by P.S.Parameswaran and Eby Thomas Thachil, *International Journal of Polymeric Materials* 56:177-185, 2007
- 28 Mary Alexander, Phillip Kurian and Eby Thomas Thachil,“Effectiveness of cardanol as plasticizer for silica-filled natural rubber” *Progress in Rubber, Plastics and Recycling Technology*, Vol.23, No1, 2007
- 29 Raju P., Nandan V. and Sunil K. N. Kutty, - Castor oil as plasticizer in NR compounds, *Prog. Rubber Plastics and Recycling Technology*, 23(3), 153-164, 2007
- 30 Raju P., Nandan V. and Sunil K. N. Kutty, - Coconut oil as plasticizer in NR compounds, *J. Nat. Rubber Research*, 10(1), 16-Jan, 2007
- 31 Bipinbal P.K and Sunil K. N. Kutty,Proceedings of The 19th Kerala Science Congress Mechanical Properties of Short Nylon Fiber – Natural Rubber Composite prepared by Latex Masterbatching, , 2007

a. Books

Sl.No.	Name	Name of Book
1	Dr. Rani Joseph	Contributed one chapter to Macro and Nano Science and Technology

13 . Participation in Seminar/Conference/Refresher course etc. by Faculty Students:

Name of Participant	Name of Seminar/ Conference/Workshop	Role
Dr. Thomas Kurian	National Workshop on Emerging Trends in Polymer Applications, January 04, 2008	Coordinator



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Dr. Thomas Kurian	Applications and Statistical Aspects of Six Sigma and All Electrical Injection Molding Technology	Organizer
Dr. Thomas Kurian	AICTE sponsored National Workshop on Nano Science & Nanotechnology from May 14 – 18, 2007 at the Department of Mechanical Engineering, Amrita School of Engineering, Amrita Vishwa Vidyapeetham, Amritapuri campus, Kollam.	Participant
Dr. Thomas Kurian	DST-SERC School on “polymer based Composites & Nanocomposites” from November 26 to December 1, 2007 at Indian Institute of Technology (IIT), New Delhi.	Participant
Dr. Thomas Kurian	One day Workshop on “Technology Entrepreneurship Education” held on December 5, 2007 at Tiruchirappalli Regional Engineering College Science and Technology Entrepreneurs Park (trec-step), Tiruchirappalli.	Participant
Dr. Thomas Kurian	International Conference on Natural Polymers, Bio-Polymers, Bio-Materials, their Composites, Blends, IPNs and Gels, Macro to nano Scales, 19-21 November 2007, Kottayam.	Participant
Dr. K.E. George	India International Rubber Conference & Expo 2007 1-3 November, 2007, Udaipur, India	Chaired one session & presented one paper
Dr. K.E. George	International Conference “Material for the future” 17-19 January '08 Govt. Engineering College, Thrissur, Kerala. Chaired the seminar on “Material Characterisation”	Chaired one session & presented an invited lecture on Carbon Nanotube: The ultimate reinforcing agent in polymer
Dr. K.E. George		Presented a paper on Carbon Nanotube as nucleating agent in polymer crystallization.
Dr. K.E. George Vijayalekshmi V.	International Conference on Materials Science Research and Nanotechnology held on 27-29 February 2008 (ICMSRN 2008)	Presented a paper on Cure, Mechanical and Swelling Characteristics of Maleated



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Dr. K.E. George Sinto Jacob, Suma K.K., Abhilash G.	International Conference on Materials Science Research and Nanotechnology held on 27-29 February 2008 (ICMSRN 2008) –	Presented a paper on Improvement of Mechanical Properties of Polypropylene with Nano SiO ₂ –
Dr. K.E. George <i>Jacob Sinto, Mendaz Jude Martin, Abhilash G</i>	Polychar 16 World Forum on Advanced Materials held at World Unity Convention Centre, Lucknow on 17-21 February 2008-	Presented a paper on Modification of Polypropylene with Micro/Nano Hybrid Fillers
Dr. K.E. George <i>Vijayalekshmi V Pavithran C</i>	Polychar 16 World Forum on Advanced Materials held at World Unity Convention Centre, Lucknow on 17-21 February 2008-	Presented a paper on Use of Maleated NR for Developing Natural Rubber Clay Nanocomposites
Dr. Rani Joseph	ACS Rubber Division Fall Meeting Held at Cleveland Ohio USA	Invited speaker
Dr. Rani Joseph	ICRRM held at IIT Kharagpur	Invited speaker
Dr. Rani Joseph	ICNP held at M G University , Kottayam	Invited speaker
Dr. Rani Joseph	International Conference on Materials Science Research and Nanotechnology held on 27-29 February 2008 (ICMSRN 2008)	Presented a paper on Observation of Photoconductivity in Poly (6-Tertiary- Butyl-3-Phenyl-3, 4- Dihydro-2H-1, 3- Benzoxazine)
Dr. Rani Joseph	International Conference on Materials Science Research and Nanotechnology held on 27-29 February 2008 (ICMSRN 2008)	Presented a paper on Studies on Utilization of Vinyl Acetate – Butyl Acrylate Copolymer for Coating Applications
Dr. Rani Joseph	International Conference on Materials Science Research and Nanotechnology held on 27-29 February 2008 (ICMSRN 2008)	Presented a paper on Single Walled Carbon Nanotubes Reinforced Natural Rubber Com- posites through Latex Compounding
Dr. Rani Joseph	Polychar 16 World Forum on Advanced Materials held at World Unity Convention Centre, Lucknow on 17-21 February 2008 –	Presented a paper on Carboxy Methyl Chitosan: A Novel



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		Natural Polymer in Reducing Protein content in Natural Rubber Latex
Dr. Rani Joseph	Polychar 16 World Forum on Advanced Materials held at World Unity Convention Centre, Lucknow on 17-21 February 2008	Presented a paper on Photophysical and Electrochemical Investigations on Photoconducting Poly (6-Tertiary-Butyl-3, 4-Dihydro-2H-1,3-Benzoxazine)
Dr. Rani Joseph	Polychar 16 World Forum on Advanced Materials held at World Unity Convention Centre, Lucknow on 17-21 February 2008	Presented a paper on The photocurrent Action Spectrum of Poly(6-tert-butyl-3-mehtyl-3, 4-dihydro-2H-1, 3- benzoxazine) -3-methy methacrylate)
Dr. Rani Joseph Suma K.K	Polychar 16 World Forum on Advanced Materials held at World Unity Convention Centre, Lucknow on 17-21 February 2008	Presented a paper on Paint Formulation using water based binder and property studies.
Dr. Philip Kurian	International Conference on Nanomaterials and its Applications. (ICNA-2007), 4-6 February 2007, NIT, Trichy.	Presented a paper on Effect of Magnetic Nanoparticles on Cure Characteristics and Mechanical Properties of Neoprene Rubber.
Dr. Philip Kurian	National Seminar in Frontiers in Organic Chemistry (FOCY 2007), conducted by Dept. of Chemistry, Calicut University, January 11-12 (2007)a.	Presented a paper on Effect of Ferrite Fillers on Cure Kinetics and Dielectric Behavior of RFCs.
Dr. Philip Kurian	Kerala Science Congress, 2007, 29th-31th January. 2007, Kannur	Presented a paper on Mechanical Properties and Swelling



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Characteristics of Nitrile Rubber

Based Clay Nano composites,

Dr. Philip Kurian ICMSRN – 2008, 27th – 29th February, 2008, Mother Teresa Women’s Universtiy, Kodikanal, Tamil Nadu. Presented a paper on Effect of Nanoclay on carbon black filled NR Composites

Dr. Eby Thomas Thachil 19th Kerala Science Congress 29-31 January 2007 Kannur Parameswaran P.S & Eby Thomas Thachil Presented a paper on Modification of Phenolic resol resin by liquid rubbers

Jayalatha Gopalakrishnan.G One day workshop in “Emerging Trends in Polymer Applications” held in the Dept. of PS &RT on Jan 04,2008 Participant

14. Awards/ Honours/ Fellowships etc. received : Nil

Name of Recipient	Name of Fellowship / Honour / Award	Awarding Agency
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15. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
	Innovation of Technology for the manufacture of re-dispersible natural rubber	AICTE	Rs. 12.70 lakhs	Dr. Thomas Kurian (PI) and Dr. Philip Kurian

16. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1.	Synthesis of novel Ionomers	Dr. Thomas Kurian
2.	Bio-Polymers based on LDPE	Dr. Thomas Kurian and Dr.Saritha G Bhat
3.	Bio-Polymers based on LLDPE	Dr. Thomas Kurian and Dr.Saritha G Bhat
4.	Latex stage Compounding	Dr. Thomas Kurian and Dr. Rosamma Alex
5	Development of partition boards from waste plastics District Industries Centres	Dr. K.E. George



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6	Development of Biodegradable thermoplastics Industry Institute Collaboration	Dr. K.E. George
7	Development of Photorefractive and photoconducting polymers	Dr. Rani Joseph, Dr. Sudha Kartha, Dr. Sreekumar
8	Development of Photopolymers for holographic recording	Dr. Rani Joseph, Dr. Sudha Kartha, Dr. Sreekumar
9	Electron Beam Curing	Dr. Rani Joseph, Mr. Jose Paul Dr. Abhinav Dubey
10	Development of CNT Modified Composites	Dr. Rani Joseph
11	Synthesis of New Nano materials and Composites	Dr. Rani Joseph
12	Development of Novel Conjugated Polymers for Optical Applications	Dr. Rani Joseph

17. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	Emerging Trends in Polymer Applications	One Day	Dr. Thomas Kurian & Dr. Philip Kurian	CUF
2.	Applications and Statistical Aspects of Six Sigma	One Day	Dr. Sunil Narayanankutty & Dr. Thomas Kurian	CUF

18. Consultancy Work :

Sl.No.	Name of Consultancy	Name of consultant	Sponsoring Agency
1	Compound Development	Rani Joseph	Vajra Rubber Products
2	Development of low cost phenolic resin	Rani Joseph Thomas Kurian	Saint Gobain, Bangalore
3	New Tread rubber Compound	Rani Joseph	Lanxess, Germany
4	Development of test procedure for determination of starch content	Rani Joseph	Rubber Flex Sdn Bhd Malasia

* * *



DEPARTMENT OF SHIP TECHNOLOGY

The Department of Ship Technology is one of the pioneers in the field of Naval Architecture education in this country. The Department was established with an aim to create a new and dynamic generation of Naval Architects to meet the requirements of Indian Shipbuilding Industry, Ship classification Societies, R&D organisations, Indian Navy, and related institutions. With this in view, a B.Tech course in Naval Architecture and Shipbuilding was started in 1975. This department maintains active collaboration and interaction with IITs, foreign universities, shipyards and other industries. These institutions have been generous in extending their facilities and expertise to impart training to our students. The fruitful collaboration of this department with Rostock University, Germany dates back to 1978 and remains as an important milestone in the growth of this department. Currently the Department has entered into a collaboration with School of Aerospace and Naval Architecture, Chosun University, Koera, for exchange of students and research scholars and for cooperative research programmes. The B. Tech. course was accredited by the Royal Institution of Naval Architects, London, for five years from 1994. The Ministry of Surface Transport, Govt. of India approved this course for the M.O.T. Certificate Examination, thus enabling our graduates to venture into the field of Marine Engineering also. Indian Navy has recognised this department as a centre for the higher education of their officers.

The curriculum was drawn up and updated in consultation with experts from various walks of the field. This has brought the course curriculum in conformity with international standards. The department has a highly qualified and dedicated faculty, an excellent library, computer centre, laboratories and workshops. The quality of education imparted and the resulting professional competence of the graduates enabled the department to achieve a unique record of 100% placement to its graduates in India and abroad.

The intake of students, based on the Common Admission Test (CAT), is limited to 39 (of which 12 seats are reserved for cadets from Indian Navy) and 2 seats for Foreign students and one seat for sports quota. An M.Tech. degree programme in Computer Aided Structural Analysis and Design, having a very promising employment potential, was started in 1995 with an intake of 10 students later increased to 15 students. This department also offers Ph.D. programmes in Naval Architecture, Ocean Engineering and related fields.

1. Programs of study

- | | |
|---------------------------|--|
| 1. Bachelor of Technology | (Naval Architecture and Ship Building) |
| 2. Master of Technology | (Computer Aided Structural Analysis & Design) |
| 3. Doctor of Philosophy | (Hydrodynamics, Structural Analysis, Strength of Materials, Ship design, Offshore Structures, Ship Motions, Ship & Submarine Controllability, Resistance and Propulsion, Stability, Ship Production, CAD/CAM). |



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2. Faculty Details

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. Dileep K Krishanan	Reader	B.Tech.(Hons) N.A., IIT Kharagpur, M.E. Ocean Engg.(Stevens Tech USA) Ph.D (Southampton UK	Ship Controllability Ship Manoeuvrability, Computer Simulation
2	Dr. K.P.Narayanan	Reader	B.Tech.(NA&SB) CUSAT Dr. Ing. (Rostock Univ. Germany)	Ship Structures and strength
3	Dr. S.K. Pyarilal	Reader	B.Tech.(NA&SB) CUSAT Dr. Ing. (Rostock Univ. Germany)	Ship Design, Marine Hydrodynamocs
4	Dr. C.G. Nandakumar	Reader	B.Tech. (Civil Engg) M.Tech (Ocean Engg, IIT Madras) Ph.D. (IIT Madras)	Strength of ships Finite element method
5	Dr. K. Roby	Reader	B.Tech. Naval Architecture (CUSAT), M.Tech.(Comp.Science IITMadras), Ph.D. (Osaka Prefecture University, Japan)	Naval Architecture, Computer Science
6	Mr. James Joseph Kattady	Reader & Head	B.Sc. Engg Mech. Dip.Ing (Rostock Germany) MBA (CUSAT)	Marine Engineering Thermodynamics
7	Mrs.Mariamamma Chacko	Reader	B.Tech.(Elect. Engg.) M.Tech. (Electronics	Fault tolerant CPU architecture
8	Mr. Mathiazhagan A.	Sr. Lecturer,	M.Sc.(Applied chemistry, Guindy) M.E.(Metallurgy, REC,Trichy	Material Science and Corrosion Engineering
9	Dr. Sudheer C.B.	Lecturer,	B.Tech. Naval Architecture (CUSAT), Dr. Ing. (Rostock University, Germany)	Production Engg. Ship Production, CAD/CAM



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Sl.No.	Name	Designation	Qualification	Specialization
10	Mr. Sivaprasad K	Reader	B.Tech. Naval Architecture (CUSAT), M.Sc. (Ship production technology, Strathclyde University, Glasgow)	Ship Building technology
11	Mr. B. Mohanbabu	Reader	B.Sc Engg (Mech) M.S.c Engg (Mech, Kerala Univ)	Fluid Mechanics & Applied Mechanics

3. Research scholars

Sl No.	Name	Funding Agency	Guide	Area of work
1	Baiju.M.V.	Nil	Dr. P.Krishnankutty	Investigation of directional stability of a fishing vessel during traveling
2	Bindumol.T.V.		Dr. C.G.Nandakumar	Stochastic Finite Element analysis of plates
3	Dileeplal		Dr.K.P. Narayanan	Reliability based Engg design in shipbuilding
4	Shine.U.P.		Dr. E.M.S. Nair	Fatigue and Fracture studies on structural components
5	Simon.K.A.		Dr. E.M.S. Nair	Marine engg. Training in India
6	Sivaprasad.K.		Dr. C.G. Nandakumar	Ship Recycling
7	Sunil Kumar.P.G.		Dr. C.G.Nandakumar	Stochastic method in ships strength estimation
8	Vikas V Shenoy		Dr. C.G. Nandakumar	Investigation on analysis design & construction management of port and harbor structure



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Sl No.	Name	Funding Agency	Guide	Area of work
9	Prabha C		Dr. C.G.Nandakumar	Analysis of Stiffened Cylindrical Shell with Openings
10	Santhosh B		Dr. C.G.Nandakumar	Thermo structural analysis of 3D Composites
11	Nandagopan O.R.		Dr. C.G.Nandakumar	Numerical Investigations on shock response of submarine cylindrical shells
12.	P.P.Lalu		Dr. K.P.Narayanan	
13.	Baiju Sasidharan		Dr. C.G.Nandakumar	

4. Administrative personnel

Sl.No.	Designation	No. of posts
1	Section Officer	1
2	Assistants	4 (2 vacant)
3	Typists	2 (2 vacant)
4	Clerical Asst	1
5	Peon	2
6	Asst. Librarian	1
7	Professional Assistant	1 (1 Vacant)
8	Store Keeper	1 Vacant
9	Sweeper	1

5. Technical personnel

Sl. No.	Designation	No. of posts
1	Technical Officer Gr. I	1
2	Tech. Assistant Gr.II	1 (On Leave)
3	Technician Gr.II	4 (2 Vacant)
4	Lab. Assistant	1
5	Ammonia Print-cum-Photocopier operator	1



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6. Students enrollment

Sl No	Programme of study	Men	Women	Total
1	B.Tech (NA&SB)	36	Nil	36
2	M.Tech(CASAD)	6	8	14

7. Research facilities

a) Laboratory

1. Fluid Mechanics, Material testing, Instrumentation
2. Computer lab
3. Workshops- Carpentry, M/C Shop, Welding shop, Fitting shop & Model making.

b) Library

No. of Books/Journals on 31st March of previous year	Additions during the year
Books - 8279	59
Journals - 10	

c) Others

Nil

8. Distinguished visitors

1. Bishawadeep Banarjee, Principal Surveyor, ABS, Cochin
2. Tamiki Takagi, DOE, ABS, Pacific

9. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
	Analytical Investigations on Collapse of Cylindrical Submarine Shells	Smt. Alice Mathai	Dr. C.G.Nandakumar

10. Publications

A) Papers (only papers published/accepted to be included)

1. Manu Mathew , C.G.Nandakumar, Analytical Investigations on Stiffened Plates Subjected to Impact Loads, Vol 4, No1, January 2008



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2. Jayakumar.S, C.G.Nandakumar, "Displacement Based Stress Field Consistent Finite Elements for Plate Bending" Proceedings of International Conference on Modeling and Simulation, Combatore, August 2007.
3. Naveen Kumar K.U, Sujesh Sreedharan, C.G.Nandakumar, Muraleedharan CV, "A Methodology for Studying the Characteristics of Expansion of Stent Like Structures in a Hyper Elastic Artery Model, pp498-502, Proceedings of International Conference on Modeling and Simulation, December 2007
4. Jobil Varghese. C.G.Nandakumar "Analysis of Spar Structures" Proceedings of 8th National Conference on Technological Trends, December 2007
5. C.G.Nandakumar, Suby Elias, " Finite Lement Analysis of Sandwich Barges" Proceedings of 20th Kerala Science Congress, January 2008.

Sri.Mohan Babu

1. Arbitrary lifting bodies. University Rostock

b) Books

Nil

15. Details of Short term courses attended/ Participation of Seminar/conference/ Refresher course/ etc. by the Faculty members/students.

Nil

16. Awards/Honours/Fellowship etc received

NIL

17. Sponsored research projects

Sl.No.	Title	Sponsoring Agency	Amount	Inverstigators
1	Numerical Estmation of Second Order Wave Forces on Ship and Ocean Platforms	Naval Research Board, Indian Navy	Rs. 19 Lakhs	Dr. P.Krishnankutty Dr. Dileep Krishnan

18. Research programmes and activities

Sl.No.	Name of Consultancy	Name Consultant	Sponsoring Agency
Nil			



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19. Seminar / Conference / Workshop / Refresher course conducted by the Department

Nil

20. Consultancy work

Sl.No.	Name of Consultancy	Name Consultant	Sponsoring Agency
1	Tender Design of 5 vessels IWAI, Kochi	Dr.Dileep K.Krishnan	Inland Water Authority of India, Kochi.
2	Design of 79 Passenger Tourist Boat for Kerala Forest Department	Dr.Sudheer C.B, Mr.Sivaprasad K	Steel Industries Kerala Ltd, Kannur
3	Inspection of Construction of Steel Boats	Dr.Sudheer C.B & Mr.Sivaprasad K.	Steel Industries Kerala Ltd, Kannur
4	Preliminary Design of Survey Launch	Dr.Dileep K.Krishnan	Inland Water Authority of India
5	Design of 75 Passenger Ferry Boat for Kerala State Water & Transport Department	Sri.Sivaprasad K.	Kerala Government
6	Design of Multi purpose vessel for Inland Water Authority of India, Kochi Division	Sri.Sivaprasad K.	Government of India
7	Numerical Investigations on Structural Performance of Panels, Sponsoring Agent	C.G.Nandakumar	DRDO
8	Recommended Practices of Ship Recycling Process in India	C.G.Nandakumar	Class NK
9	Inspection and Analysis of warf at Naval Base Cochin	C.G.Nandakumar	Indian Navy

21. Departmental Publications, if any

Vol. XVI Shipstechnic, Annual Technical Journal, Published by SNAS

22. Extra curricular activities

Various activities organised by Society of Naval Architecture Students.

* * *



DEPARTMENT OF STATISTICS

Estd: 1996

The Department of Statistics was established in 1996 by bifurcating the School of Mathematical Sciences into two Departments. The Department offers a four semester M.Sc. Programme in Statistics and an M.Tech Programme in Engineering Statistics besides research programmes leading to Ph.D degree. The thrust areas of research in the department includes Distribution Theory, Bayesian Inference, Time Series Analysis, Inference in Stochastic Processes, Reliability Modelling and Information Theory.

The M.Sc. course is intended to provide a platform for talented students to undergo higher studies in the subject as well as to train them to suit for the needs of society.

The M.Tech. course is intended to provide a vehicle for interaction between the modern approaches to quality and reliability engineering, statistical methodology and industrial engineering aspects, thereby facilitating integration of appropriate techniques.

The UGC has recognized the Department under the Special Assistance Programme at DRS level. An amount of Rs. 32.00 lakhs have been sanctioned for five years to develop research facilities. The Department is being identified by the DST under the FIST programme. Under this programme DST has sanctioned an amount of Rs. 19.5 lakhs for infrastructural development.

Four UGC sponsored minor research projects have already been completed and one major research project sponsored by DST is ongoing. The Department has so far conducted three international seminar, one workshop at international level besides several national conferences. During 2007-08 one national conference and one international conference was hosted by the Department.

The Department has been identified as a Centre for organizing refresher courses for College/University teachers since 1993. The Department is offering consultancy services to various industrial establishments and R&D institutions in the State in data analysis, planning of surveys, reliability modeling and quality improvement. The departmental library has about 2000 books and is presently subscribing to 25 journals. The Department has a well-equipped computer lab with internet facility. The department has acquired the latest computer soft wares such as SPSS, MATLAB, MATHEMATICA, SYSTAT, SAS so as to meet the needs of the students. In addition, a well-equipped engineering laboratory with metrological instruments is set up for the use of the M.Tech. students.

To enhance academic pursuits in socially relevant and scientifically interesting fields a Centre for Population Studies has been established in the Department. The centre is aimed at conducting research in Demography, Community, health and related fields of Social Sciences. This centre has conducted two surveys on Health and Population in Cochin and submitted the reports to the Corporation of Cochin.



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1. Programmes of Study/Research

1. M.Sc. (Statistics)
 2. M.Tech (Engineering Statistics)
 3. Research (FT & PT)
-

2. Faculty Members:

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr.V.K.Ramachandran Nair	Professor (On deputation as Controller of Examinations)	M.Sc., Ph.D	Queuing Theory Probability Distributions, Stochastic Processes, Multivariate Analysis
2.	Dr. K.R.Muraleedharan Nair	Professor	M.Sc., M.Phil, Ph.D	Distribution Theorm Reliability Modelling Information Theory
3.	Dr.N.Balakrishna	Professor & Head	M.Sc., M.Phil., Ph.D	Stochastic Process&Inference, Time Series Models,Data Analysis,Chaos & Non linear time Series
4.	Sri. K.C. James	Reader	M.Tech	Industrial Engineering, DEA,TQM & ISO 9000
5.	Dr. Asha Gopalakrishnan	Reader	M.Sc., Ph.D.	Distribution theory, Discrete Reliability theory
6.	Dr. P.G.Sankaran	Reader	M.Sc., Ph.D	Distribution Theory Reliability Theory Data Analys
7.	Dr. S.M. Sunoj	Lecturer	M.Sc., Ph.D	DistributionTheory Reliability Theory Data Analysis



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3. Research Staff:

Sl.No.	Name	Designation	Qualification	Specialisation
1	Jagathnath Krishna	Project Fellow	M.Sc.	Reliability Theory
2	Dr. Bismi G.Nadh	Project Fellow	M.Sc.	Reliability Engineering

4. Research Scholars:

Sl.No.	Name	Supporting Agency	Guide	Area of Work
1.	Haritha N.Haridas	UGC SRF	Dr.K.R.Muralee-dhanran Nair	Distribution theory
2	Gleeja V.L.	CSIR/SRF	Dr.P G Sankaran	Distribution theory
3.	Maya S.S.	UGC JRF	Dr. S.M.Sunoj	Weighted distribution
4.	Sreeja V.N.	SRF	Dr.P.G.Sankaran	Reliability analysis
5.	Sudheeshkumar Kattumannil	UGC SRF	Dr.N.Unnikrishnan Nair	Reliability analysis
6	Stephy Thomas	CSIR JRF	Dr.V.K.Ramachandran Nair	Reliability analysis
7	Noushida N.A	UJRF	Dr.N.Balakrishna	Stochastical properties and applications of some stochastic processes
8	Smitha S.	Nil	Dr.K.R.Muraleedharan Nair	Distribution theory
9	Anisha P.	-do-	Dr. P.G.Sankaran	Survival analysis
10	Manjusha P.	Nil	Der. S.M.Sunoj	Weighted distribution
11	Vinesh Kumar	Nil	Dr.N.Unnikrishnan Nair	Reliability analysis
12	Hareesh, G.	Part-time	Dr.N. Balakrishna	Time series analysis.
13	Sujith P.	-do-	Dr.N. Balakrishna	State-space models and their applications



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14	Angel Mathew	-do-	Dr.N.Balakrishna	in time series Inference for stochastic process
15	Sreedevi.E.P	-do-	Dr.P.G.Sankaran	Survival Analysis
16	Rajeesh C.John	-do-	Dr.Asha - Gopalakrishnan	Distribution Theory Models in reliability analysis
17	Preeth M.	-do-	Dr. N.Unnikri- shnan Nair	Distribution theory
18	S.Prasad	-do-	Dr. P.G.Sankaran	Reliability analysis

5. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Section Officer	1
2.	Sr.Gr. Assistant	2
3.	U.D.Typist	1
4.	Peon	1
5.	Sweeper-cum-Cleaner	1
6.	Professional Asst. Gr.II	1

6. Students Enrollment:

Sl No.	Programme of study	Men	Women	Total
1.	Ph.D (FT)	8	9	17
2.	Ph.D (PT)	5	—	5
3.	M.Sc. Statistics	6	14	20
4.	M.Tech Engg. Statistics	2	—	2

7. Research Facilities:

(a) Laboratories (List out Major equipments available)

1. Computer Lab with 34 computers
2. Internet facility
3. Metrology Laboratory



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(b) Library

No. of Books/Journals on 31 st March of the 2007		Additions during the current year
Books	2026	62
Journals		
Foreign	25	14
Indian	17	6
Govt. Pub.	1	Nil

8. Distinguished Visitors :

Sl.No.	Name	Affiliation	Remarks
1.	Dr. Dario Gasbarra	University of Helsinki, Finland	For interaction with the faculty and students and to deliver lectures during 13.11.2007-3.1.2008.
2.	Prof. A.J. Lawrance	University of Warwick, England	For interaction with the faculty and students and to deliver lectures during 5.1.2008 to 10.1.2008
3.	Prof. Byron Schanuland	University of Alberta, Canada	For interaction with the faculty and students and to deliver lectures on 8.1.2008
4.	Prof. Bovas Abraham	University of Waterloo, Canada	For interaction with the faculty and students and to deliver lectures during 28.1.2008 to 30.1.2008
5.	Dr. Asokan M.V.	Texas A&M University, USA	For interaction with the faculty and students and to deliver lectures on 17.3.2008
6.	Prof. M.B.Rajarshi	University of Pune	For interaction with the faculty and students and to deliver lectures 27.1.2008 to 31.1.2008
7.	Dr. Arnab Bhattacharjee	University of St. Andrews, UK	For interaction with the faculty and students and to deliver lectures during 28.1.2008 to 4.2.2008.



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9. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	On Finite Mixture of Pareto to Beta Distributions	Maya T Nair	Dr. P.G.Sankaran

10. Publications

(a) Papers

1. E.I.Abdul Sathar, R.P.Suresh and K.R.Muraleedharan Nair A vector valued bivariate Gini index for truncated distributions, *Statistical Papers*, 48,(2007):543-557.
2. Haritha N.Haridas, N.Unnikrishnan Nair and K.R.Muraleedharan Nair Modelling income using the Lambda distribution, *Journal of Income Distributions* (2008): (to appear).
3. A.J.Lawrence and N.Balakrishna Statistical Effects from Discretizing Chaos, *International Journal of Chaos and Bifurcation*, (2008): (to appear)
4. P.G.Sankaran and Sreeja V.N. Proportional hazards model for multivariate failure time data, *Communications in Statistics- Theory and Methods*, 36(8),(2007):
5. P.G.Sankaran and K.Jayakumar On proportional odds models, *Statistical Papers*,(2007): (to appear)
6. Bovas Abraham, N.Unnikrishnan Nair and P.G.Sankaran Characterization of some continuous distributions by properties of partial moments, *Journal of Korean Statistical Society*, 36(3),(2007): 357-365
7. P.G.Sankaran, Gleeja V.L. and T.M.Jacob Non parametric estimation of reversed hazard rate, *Bulletin of Calcutta Statistical Association*, 36(3),(2007):357-365
8. P.G.Sankaran and Ansa Alphonsa Antony Non-parametric estimation of bivariate survivor function under masked causes of failure, *Journal of Nonparametric Statistic*, 20,(2007): 77- 89.
9. P.G.Sankaran and Gleeja V.L. Proportional reversed hazard and frailty models, *Metrika* (2007):(to appear).
10. P.G.Sankaran and Sreeja V.N. Proportional mean residual life model for gap time distributions of recurrent events, *Metron*(2007): (to appear)
11. N.Unnikrishnan Nair and P.G.Sankaran Characterizations of multivariate distributions, *Journal of Multivariate Analysis* (2008):(to appear)



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- 12. P.G.Sankaran and Ansa Alphonsa Antony Bivariate competing risk models under random left truncation and right censoring, *Sankhya* (2008):(to appear)
- 13. Sunoj S.M., Sankaran P.G. and Maya S.s. Characterizations of distributions using log odds rate, *Statistics*, 41(5),(2007): 443-451.
- 14. G.Asha and Rajeesh C.John On boundary class of increasing and decreasing reversed hazard rate, *Calcutta Statistical Bulletin*, 59,(2007): 233-234.
- 15. N.Unnikrishnan Nair and Sudheesh K.K. Some Results on Lower Variance Bound Useful in Reliability and Estimation, *Annals of the Institute of Statistical Mathematics* (2008):(online first).
- 16. N.Unnikrishnan Nair and M.Preeth On some properties of equilibrium distributions of order(2008): (to appear)

b. Book

- 1 **P.G.Sankaran and S.M.Sunoj (2007):** *The Collected Papers of N.Unnikrishnan Nair*, Published by Department of Statistics, CUSAT.

11. (a) Participation in Seminar/Conference/Refresher Courses etc by Faculty

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Prof. V.K.Ramachandran Nair	Workshop on Health and wellness, Department of Statistics, Cochin University of Science and Technology, November 29-30, 2007, Cochin-682 022	Participant
Prof. V.K.Ramachandran Nair	National Seminar on Statistical Methods and Reliability Analysis, Department of Statistics, Cochin University of Science and Technology, January 28-30, 2008 Cochin-22	Participant
Prof. K.R.Muraleedharan Nair	Workshop on Health and wellness, Department of Statistics, Cochin University of Science and Technology, November 29-30, 2008, Cochin-22	Participant
Prof. K.R.Muraleedharan Nair	National Seminar on Statistical Methods and Reliability Analysis, Department of Statistics, Cochin University of Science and Technology, January 28-30, 2008 Cochin-22	Participant



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Prof. K.R.Muraleedharan Nair	Workshop in Statistics, organized by the Department of Statistics, Pondichery central University, March 13-15, 2008	Participant Delivered an in- vited talk on "Re- liability Theory'
Dr. N.Balakrishna	Workshop on Health and wellness, Department of Statistics, Cochin University of Science and Technology, November 29-30, 2008, Cochin-22	Participant
Dr. N.Balakrishna	National Seminar on Statistical Methods and Reliability Analysis, Department of Statistics, Cochin University of Science and Technology, January 28-30, 2008, Cochin-22	Participant
Dr. N.Balakrishna	National Seminar on Recent advances in Statistics, Farook College, Calicut, March 15-17, 2008	Participant Delivered an invited talk on "Product form of Gamma stochastic volatility models"
Dr. N.Balakrishna Lawrance A.J.	International Workshop in Applied Probability 2008, at the Technological University of Compiègne, Compiègne, France, on July 7-10, 2008	Invited talk on
Sri. K.C.James	Workshop on Health and wellness, Department of Statistics, Cochin University of Science and Technology, November 29-30, 2007, Cochin-22	Participant
Sri. K.C.James	National Seminar on Statistical Methods and Reliability Analysis, Department of Statistics, Cochin University of Science and Technology, January 28-30, 2008, Cochin-22	Participant



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Sri. K.C.James	XIth Annual International Conference of Society of Operations Management, Symbiosis Institute of Operations Management, Dec. 21-23, 2007	Participant Presented a paper entitled "Modelling and analysis of some strategic and tactical problems in a rail yard using discrete-event simulation"
Sri. K.C.James M.Bhasi	Operational Research Society 4th Simulation Conference (SW08) Scheduled for 1-2 April 2008, at the Abbey Hotel Golf and Country Club Worcestershire, England	Participant presented a paper on A Frame Work For Conceptual Modelling of Logistic Terminals
Dr. P.G.Sankaran	Mathematical Methods in Reliability Conference, Glasgow, U.K., July 1-4, 2007.	Participant Delivered a talk on "Nonparametric estimation of bivariate survivor function under masked cause of failure"
Dr. P.G.Sankaran	National Conference on Statistical Methods and Reliability Analysis, Cochin, January 28-30, 2008	Participant Delivered an invited talk on 'Proportional mean residual life models for recurrent event data'
Dr. P.G.Sankaran	National Seminar on Recent Advances in Statistics and Analysis of Non-Conventional Data, Farook College, Kozhikode, March 15-17, 2008	Participant Delivered an invited talk on "Proportional hazards model for bivariate competing risks data"
Dr. P.G.Sankaran	Workshop on 'Health and Wellness', Cochin, 29-30, November 2007	Co ordinator
Dr. S.M.Sunoj	Workshop on Health and Wellness, held at the Department of Statistics, Cochin University of Science and Technology, Cochin-682 022, November 29-30, 2007	Participant



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. S.M.Sunoj	National Seminar on Statistical Methods and Reliability Analysis, held at the Department of Statistics, Cochin University of Science and Technology, Cochin - 682 022, January 28-30, 2008	Participant Delivered an invited talk on 'Some generalized information measures in the context of weighted models'
Dr. Asha Gopalakrishnan	Workshop on Health and wellness Department of Statistics, Cochin University of Science and Technology, November 29-30, 2007, Cochin 682 022	Participant
Dr. Asha Gopalakrishnan	National Seminar on Statistical Methods and Reliability Analysis, Department of Statistics, Cochin University of Science and Technology, January 28-30, 2008, Cochin - 22	Participant

(b) Participation in Seminar/Conference/Refresher Courses etc by Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Sudheesh Kumar Kattumannil	International Conference on Statistics, 31st May to 22nd June 2007, Department of Statistics	Presented Paper
Sudheesh Kumar Kattumannil	Workshop on Health and Wellness, November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Participant
Sudheesh Kumar Kattumannil	Hyderabad Symposium in Probability & Statistics, December 17-19, 2007, Department of Mathematics and Statistics, University of Hyderabad, Hyderabad	Participant
Sudheesh Kumar Kattumannil	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Presented paper



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Sudheesh Kumar Kattumannil	International Workshop/Conference on Bayesian Statistics and its Applications, Feb 18th to March 1st, 2008, Department of Statistics, Banaras Hindu University, Varanasi.	Participant
Gleeja V.L.	Workshop on Health and Wellness, November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Participant
Gleeja V.L.	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Presented paper
Sreeja V.N.	Workshop on Health and Wellness, November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Participant
Sreeja V.N.	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Presented paper
Stephy Thomas	Workshop on Health and Wellness, November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Participant
Stephy Thomas	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Participant
Jagathnath Krishna K.M.	Workshop on Health and Wellness, November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Participant
Jagathnath Krishna K.M.	Hyderabad Symposium in Probability & Statistics, December 17-19, 2007, University of Hyderabad, Hyderabad	Participant
Jagathnath Krishna K.M.	International Conference on Statistics, 31st May to 2nd June 2007, Department	Presented Paper



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Jagathnath Krishna K.M.	of Statistics, University of Mumbai National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Participant
Noushida N.A.	Workshop on Health and Wellness, November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Participant
Noushida N.A.	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Participant
Smitha S.	Workshop on Health and Wellness, November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Participant
Smitha S.	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Presented Paper
Angel Mathew	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Presented Paper
Hareesh G.	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Presented Paper
Rajeesh C.John	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Participant
Preeth M.	Workshop on Health and Wellness,	Participant



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Name of Participant	Name of Seminar / Conference/ Workshop	Role
Preeth M.	November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Presented Paper
	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	
Anisha P.	Workshop on Health and Wellness, November 29--30, 2007, Department of Statistics, Cochin University of Science & Technology, Cochin-22, India	Participant
Anisha P.	National Seminar on Statistical Methods and Reliability Analysis, January 28-30, 2008, Department of Statistics, Cochin University of Science & Technology, Cochin - 22, India	Presented Paper

12. Awards/ Honours/ Fellowship etc. received :

Name of Recipient	Name of Fellowship/Honour/Award	Awarding Agency
Dr. N.Balakrishna	Research Fellowship under the scheme "UK India Education and Research Initiative (UKIERI)"	British Council

13. Sponsored Research Projects

Sl.No	Title	Sponsoring Agency	Amount	Investigator(s)
1	Reliability Modelling & Analysis	UGC	Rs.32.00 lakhs	Dr.K.R.Muraleedharan (for 5 years) Nair
2.	Modelling and Analysis of Preventive Maintenance by Reliability Characteristics"	DST	Rs.8.35 lakhs (for 3 years)	Dr. Asha Gopalakrishnan

14. Research Programmes and Activities:

Sl.No	Problem / Topic	Investigator (s)
1,	Reliability Analysis	All the faculty
2.	Discrete Reliability modeling	Dr. Asha Gopalakrishnan



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15. Seminar/Conference/ Workshop/ Refresher course conducted by the department

Sl.No	Title	Duration	Coordinator	Funding Agency
1	Workshop on Health and Wellness	2 days	Dr. P.G.Sankaran	UGC
2	International conference on Statistics, Probability and Related Areas	4 days	Dr. P.G.Sankaran	IISA, DST, UGC, DAE, etc.

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SCHOOL OF ENGINEERING

School of Engineering was established in 1979 as School of Technology for offering part-time M .Tech in Civil, Mechanical, Electrical and Chemical Engineering for helping practicing engineers in and around Cochin. Research activities were started from 1981 with Ph.D. Programme in Civil Engineering. This School introduced B. Tech programme in the 5 major disciplines viz Civil, Mechanical, Electronics, Computer Science and Information Technology on cost sharing basis in 1995 which played a significant role in the development of this school. Considering the increased demand of student community, this school introduced B. Tech in Safety & Fire Engineering in 1996 , Marine Engineering in 2001 and Electrical & Electronics Engineering in 2003. The Division of Marine Engineering has become an independent Department in June 2007.

Due to the increased demand, M. Tech (Part time) in Civil and Mechanical branches reinstated in 2003. Besides in 2002 this school started a Post Graduate Diploma in Coir Technology in collaboration with Coir Board, which has also got good response.

7 students have completed their Ph.D. in Civil Engineering and at present doctoral programme is offered under Civil Engineering, Mechanical Engineering Safety & Fire Engg. and Electronics & Communication Engineering. Besides, a new research programme ME (By Research) was introduced in 2001 in all the six disciplines. At present this school has a strength of 52 doctoral, 7 Master of Engg.(By Research) , 87 M. Tech (Part-Time) and nearly 2000 B.Tech students making it the largest academic unit of the University in the campus which forms 75% of the student community and faculty strength of campus.

The School functions through its divisions Civil, Mechanical, Electrical, Electronics, Computer Science, Safety & Fire and Information Technology.

School of Engineering has been well accepted as a research center and a major consultancy center. A number of research projects have been sanctioned to school by agencies like DST, ISRO, AICTE, UGC, Coir Board etc.

1. Programmes of Study/Research:

- B.Tech
- M.Tech
- ME by Research
- Ph.D.

2. Faculty Members :

(1) CIVIL ENGINEERING DIVISION

Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
1	Dr. Benny Mathews Abraham	Professor	Ph.D.	Geo Technical Engg.



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Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
2	Dr. K.S.Beena	Reader	Ph.D.	Geo Technical Engg.
3	Ms. Sobha Cyrus	Reader	M.Tech	Geo Technical Engg.
4	Sri. Abdul Rahman.K.U.	Lecturer	M.Tech	Hydraulics
5	Sri. Arun Kumar.T.	Lecturer	M.Tech	Environmental Engg.
6	Dr.Renu Pawels	Lecturer	M.E	Environmental Engg.
7	Smt.DeepaBalakrishnanS	Lecturer	M.Tech	Structural Engg. & Costruction Mgt.
8	Sri. Narasimha.D.S.	Lecturer	M.Tech	Structural Engg.
9	Sri. Ramadas.S.	Lecturer	M.Tech	Structural Engg.
10	Dr.Job Thomas	Lecturer	M.Tech	Structural Engg.
11	Ms. Glory Joseph	Reader	M.Tech	Offshore Structures
12	Dr. Subha.V.	Lecturer	Ph.D.	Housing, Building Technology
13	Dr. Deepa. G.Nair	Lecturer	Ph.D.	Habitat Engg.
14	Ms. Bindu. C.S.	Reader	M.Tech	Transportation Engg.
15	Sri. Roy .M.Thomas	Lecturer	M.E	Environmental Engg

(2). SAFETY & FIRE ENGINEERING

Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
1	Dr.G.Madhu	Professor	Ph.D	Process Safety Engg., Environmental Enginnering
2	Dr.M.N. VinodKumar	Reader	Ph.D.	Safety Management Engineering Design
3	Dr.George Mathew	Reader	Ph.D.	Fire Engineering, Structural Safety
4	Sri.Dipak Kumar Sahoo	Reader (deputed for higher studies under QIP)	M.Tech	Construction Safety. Fire Engineering



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Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
5	Sri. A.Nirmal Job	Reader	M.Tech	Engg. Safety , Manufacturing Engg.
6	Sri.V.R. Renjith	Lecturer (Senior Scale)	M.Tech	Industrial Safety Engg Fire Engg.

(3) ELECTRICAL ENGINEERING

Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
1	Sri.C.A.Babu	Reader	M.Tech	Power Electronics
2	Smt. Asha Elizabeth Daniel	Lecturer	Ph.D.	Microwave Engg.
3	Smt. K.M. Sheena	Lecturer	M.Tech	Electrical Machines
4	Smt. Usha Nair	Lecturer	M.Tech	Control System
5	Smt. P.G. Latha	Lecturer	M.Tech	Energetic

(4) COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
1	Dr. David Peter .S	Reader & HOD	M.Tech	Computer Science & Engineering
2	Smt. Sheena Mathew	Reader	M.Tech	Computer Science & Engineering
3	Sri.Sudeep Elayidam	Lecturer	M.Tech	Computer Science & Engineering
4	Smt. Latha. R. Nair	Lecturer	M.Tech	Computer Science & Engineering
5	Smt. Preetha.S.	Lecturer	M.Tech	Computer Science & Engineering
6	Smt. Ancy Zachariah	Lecturer	M.Tech	Computer Science & Engineering
7	Sri.Pramod Pavithran	Lecturer	M.Tech	Computer Science & Engineering
8	Sri. Damodaran. V	Lecturer	B.E.	Computer Science & Engineering



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9	Vinod kumar. P.P	Lecturer	M.Tech	Computer Science & Engineering
10	Sheena.S	Lecturer	M.Tech	Computer Science & Engineering

(5) MECHANICAL ENGINEERING DIVISION

Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
1	Dr.P.S.Sreejith	Professor &Head	Ph.D.	Manufacturing Engg.
2	Sri.K.P.Sankaranarayan Nair	Reader	M. Tech, MBA DISE	Production Technology, Operation Mgt, Safety Mgt.
3	Sri.A.B.Bhasi (under QIP)	Lecturer	M. Tech MBA, DIS	Management
4	Sri.Ajith Kumar.G.	Sr.Lecturer	M. Tech	Management.
5	Sri. Biju.N. (under QIP)	Senior Lecturer	M.Tech	Production Engg.
6	Sri.Franklin John	Lecturer	M.Tech	Industrial Engg.
7	Sri.GireeshKumaran Thampi	Sr.Lecturer	M. Tech	Production Engg.
8.	Dr.James Varghese	Lecturer	M. Tech	Thermal Engg..
9.	Sri.Jayadas.N.H.	Senior Lecturer	Ph.D.	Tribology
10	Sri.Joshi.P.J.	Lecturer	MS	Fluid Mechanics
11.	Dr.V.N.NarayananNampoothiri	Lecturer	Ph.D	Manufacturing Engg.
12	Sri.RadhakrishnaPanicker. M.R. (under QIP)	Senior Lecturer	M.Tech	Material Engg
13	Sri.Saju.K.K.	Senior Lecturer	M.Tech	Thermal Engg
14	Sri.Tide.P.S. (under QIP)	Senior Lecturer	M. Tech	Aerospace Engg -
15	Sri.VincentKuriakose(onLWA)	Lecturer	M. Tech	Production Engg.
16	Sri.Jacob Elias	Lecturer	M.Tech, MBA	Thermal Engg.

(6) INFORMATION TECHNOLOGY

Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
1	Dr.Varghese Paul	Reader	Ph. D	Computer Science & Engineering



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Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
2	Sri. Philip Samuel	Reader	Ph.D.	Computer Science & Engineering
3	Sri.SanthoshKumar.(on leave)	Lecturer	B. Tech	Computer Science & Engineering
4	Smt. Binsu. C. Kovoov	Sr. Lecturer	M. Tech	Computer Science & Engineering
5	Smt.Renumol.V.G.(on leave)	Lecturer	M.Tech	Data Structure Networking
6	Sri. Shelbi Joseph	Sr. Lecturer	M.Tech	ECommerce Web Oriented Design
7	Smt. Sariga Raj (on leave)	Lecturer	B.Tech	Real Time Systems AI
8	Sri.Dileesha Viswanathan	Sr. Lecturer	M.Tech	Neural Network
9	Smt. Shalet. M.P.(on leave)	Lecturer	M.Tech	Computer Science Engineering
10	Remya mol R.	Lecturer (on contract)	B.Tech.	Information Technology
11	Mrs. Reshmi M.S.	Lecturer (on contract)	B.Tech	Information Technology
12.	Suja C.Nair	Lecturer (on contract)	B.Tech	Information Technology
13	Mrs. Aysha Noori	Lecturer (on contract)	B.Tech	Information Technology

(7) ELECTRONICS & COMMUNICATION ENGINEERING

Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
1	Dr.R.Gopikakumari	Reader & Head	Ph.D.	Neural Networks & Image Processing
2	Sri.ShaluThomas(on leave)	Reader	M.Tech	Micro Electronics
3	Ms. Rekha K.James	Reader	M.Tech	VLSI
4	Dr. P.Mythili	Sr. Lecturer	Ph.D	Microwave & Genetic Alogarithm
5	Dr. Mridula.S.	Reader	Ph.D	Microwave
6	Dr. Binu Paul	Reader	Ph.D	Microwave



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Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
7	Mr.Unni.A.M.	Sr. Lecturer	ME	Electronics & Comn.
8	Mr.Abdulla.P.(onleave-QIP)	Lecturer	M.Tech	Microwave Electronics
9	Mr.Jibukumar.M.A.	Sr. Lecturer	M.Tech	Opto Electronics
10	Mr.Premkumar.C.V.	Sr. Lecturer	M.Tech	Electronics and Communication
11	Ms. Anju Pradeep (On LWA for M.Tech)	Lecturer	B.Tech	Electronics and Communication
12	Ms. Shahana.T.K.	Sr. Lecturer	M.Tech	VSLV
13	Ms.Deepa Sankar	Sr. Lecturer	M.Tech	Image Processing
14	Ms.Babitha Roselind Jose	Lecturer	M.E, M.S	Micro Electronics
15	Ms. Rani Mathew	Contract Lecturer	B.E.	Electronics and Communication
16.	Ms. Divyasree S	Contact Lecturer	B.Tech	Electronics and Communication
17.	Mr. Binesh K	Contact Lecturer	B.Tech	Electronics and Communication
18	Ms.Susmine Joseph	Contract Lecturer	BE	Electronics and Communication
19	Ms.Najmah K	Contract Lecturer	B.Tech	Electronics and Communication
20	Ms.Sony Francis	Contract Lecturer	M.Tech	Electronics Microwave
21	Preetha Chandran	Contract Lecturer	B.Tech	Sensors system Technology
22	Divya T V	Contract Lecturer	B.Tech	Electronics and Communication
23	Rastiha K R	Contract Lecturer	BE	Electronics and Communication
24	Dhanya P K	Contract Lecturer	B.Tech	Electronics and Communication

(9) SCIENCE

Sl. No.	Name	Designation	Highest Academic Degree	Specialisation
1	Dr. T. P. Johnson	Reader	Ph. D	Mathematics
2	Shri. Sasi Gopalan	Reader	M.Sc. M.Phil	Mathematics



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3. Visiting Faculty (If any) – Guest Faculty

(1) Safety & Fire Engineering

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr.K.V.Chacko	Chief Medical Officer, Social Hospital, Kalamassery	MBBS,DTMH,MBA	Industrial Hygiene

2) Electronics & Communication

Sl.No.	Name	Designation	Qualification	Specialisation
1	Shinoy George	Lecturer	M.Sc	Maths
2	K Radhakrishnan	Lecturer	B.Sc. Engg.	ECE

4. Research Staff

Sl.No.	Name	Designation	Qualification	Specialisation
1	Sreeja S	Project Fellow	B.Tech.	Electronics & Communication

5. Research Scholars:

Sl. No.	Name	Funding Agency	Guide	Area of Work
1.	Josephkunju Paul C		Dr.P.S. Sreejith	
2.	Roy V Paul		Dr.P.S. Sreejith	
3.	Latha P.G.		Dr.P.S. Sreejith	
4.	Saju.K.K.		Dr.P.S. Sreejith	
5.	Devi Prasad Varma P R		Dr.P.S. Sreejith	
6.	Usha Nair		Dr.V.N.N. Namboothiri	
7.	Jacob Elias		Dr.V.N.N. Namboothiri	
8.	Ansalam Raj T G		Dr.V.N.N. Namboothiri	
9.	Oommen Thomas		Dr.V.N.N. Namboothiri	
10.	Satheeshkumar.K.	Nil	Dr.G.Madhu	Human Factors Engg.
11.	Rajendran.C	Nil	Dr.G.Madhu	Wind Mill Technology
12.	Praveensal	Nil	Dr.G.Madhu	Reliability Engineering
13.	Ramesh A	"	Dr.G.Madhu	Energy Management
14.	V.R.Renjith	"	Dr.G.Madhu	Hazard Analysis
15.	Mathews M Paul	Nil	Dr.George Mathew	Structural Engg.



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Sl. No.	Name	Funding Agency	Guide	Area of Work
16.	Sri.D.S.Narasimha	"	Dr.George Mathew	Structural Engg.
17.	Georgekutty	Nil	Dr.George Mathew	Construction Management
18.	Binu M Issac	Nil	Dr.GeorgeMathew	Structural Engg.
19.	Prince Mathew	Nil	Dr.GeorgeMathew	Structural Engg.
20.	Sri.Rajesh Cherian Roy	"	Dr.R.Gopikakumari	Intelligent Image processing
21.	Bhadran V	"	Dr.R.Gopikakumari	Intelligent Image processing
22.	Meenakshi .K	"	Dr.R.Gopikakumari	Intelligent Image processing
23.	Rajesh M V	"	Dr.R.Gopikakumari	Intelligent Image processing
24.	Ananthanarayanan S		Dr.R.Gopikakumari	
25.	Rajesh C B		Dr.R.Gopikakumari	
26.	Baby Paul	Nil	Dr.P.Mythili	Genetic algorithms & Image Processing
27.	Shanavas K T	Nil	Dr.P.Mythili	Genetic algorithms & Image Processing
28.	Paul A J	Nil	Dr.P.Mythili	Genetic algorithms & Image Processing
29.	Justin Jose P	Nil	Dr.P.Mythili	Genetic algorithms & Image Processing
30.	Babita Roslind Jose	Nil	Dr.P.Mythili	Sigma Delta modulator for wide band receivers
31.	Agnes Jacob	Nil	Dr.P.Mythili	Emotional analysis using GA
32.	Santhosh Kumar T.G	Nil	Dr.Benny Mathews Abraham	
33.	Roy M Thomas	Nil	Dr.Benny Mathews Abraham	
34.	Cyriac Davies	Nil	Dr.Benny Mathews Abraham	
35.	Anitha G Pillai	Nil	Dr.Benny Mathews Abraham	
36.	Subramania Prasad.C.K.	Nil	Dr.Benny Mathews Abraham	



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Sl. No.	Name	Funding Agency	Guide	Area of Work
37.	Mariamamma Joseph	Nil	Dr.Babu.T.Jose	
38.	Ajit Haridas	Nil	Dr.Babu.T.Jose	
39.	Sobha Cyrus	Nil	Dr.Babu.T.Jose	
40.	Anil K.R	Nil	Dr.K.S.Beena	
41.	Meril George	Nil	Dr.K.S.Beena	
42.	Bindu.C.S	Nil	Dr.K.S.Beena	
43.	Josephkutty Jacob	Nil	Dr.G.Madhu	
44.	Ajithkumar.G	Nil	Dr.M.Bhasi	
45.	James K.J	Nil	Dr.M.Bhasi	
46.	Vinodkumar Jacob	Nil	Dr.M.Bhasi	
47.	Biju Augustine P	Nil	Dr.M.Bhasi	
48.	Thankachan T.Pullan	Nil	Dr.M.Bhasi	
49.	Jasmin E.A	Nil	Dr.Jagathy Raj.V.P	
50.	Pramelakumari.K	Nil	Dr.Jagathy Raj.V.P	
51.	Shelbi Joseph	Nil	Dr.Jagathy Raj.V.P	
52.	Nirmal Job.A	Nil	Dr.K.E.George	

6. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Assistant Registrar	1
2	Section Officers	3
3	Assistants	10
4	Peons	8
5	Pool Officer	1
6	Typists	3
7	Duplicator Operator	1
8	Librarian	2
9	Professional Assistant	1
10	Library Assistants	2
11	Sweeper Cum Cleaner	2

7. Technical Personnel

Sl.No.	Designation Grade III - I	No. of Posts
1	Technical Assistant Grade - II	3
2	Technical Assistant Grade - I	6



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3	Technician	5
4	Technician Grade II	3
5	Lab Attendant	4
6	HDV Driver	2
7	LDV Driver	1
8	Bus Conductor	2

8. Students Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	Ph.D	11	3	14
2	ME By Research	2	0	2
3	M.Tech (PT)	40	3	43
4	B.Tech (Civil)	68	21	89
5	B.Tech (Safety & Fire)	29	1	30
6	B.Tech (EEE)	53	9	62
7	B.Tech Computer Science	76	14	90
8	B.Tech (Mechanical)	89	1	90
9	B.Tech (IT)	70	23	93
10	B.Tech (Electronics & Communication Engg.)	78	18	96

9. Research facilities

(a) Laboratories (List out Major equipments available) :-

1. Universal Testing Machine
2. Compression Testing Machine
3. Torsion Testing Machine
4. Hardness Testing Machine
5. Spectro photometer
6. Total Station (survey instrument) etc.
7. Industrial Hygiene Laboratory
8. Novell Netware LAN lab
9. Data Structure Lab
10. O/S & Network lab
11. CAD/CAM Lab, Thermal Lab, Hydraulics Lab, Metrology Lab
12. Multimedia Lab
13. PC H/W Lab



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14. 20 MHz Digital storage CRO
15. Logic Analyser
16. EPROM Programmer
17. Spectrum Analyzer
18. Sun Workstation
19. 6KVA UPS
20. 500Mhz Digital Phosphor Oscilloscope
21. PCB Film maker
22. PCB curing Machine
23. PCB Etching Machine
24. PCB Drilling Machine
25. Roller tinning Machine
26. Shearing Machine
27. DSP starter Kit
28. VLSI Trainer Kit
29. PIC 16F877 Development Board
30. Embedded system Development kit

b) Library

No. of Books/Journals on 31 st March of previous year		Additions during the year	
Books : 19302	Journals : 12	Books : 1292	Journals : 2

C) Others : Nil

10. Distinguished Visitors

1.	Prof.A.Sridharan	Hon.Professor IISc.Bangalore	
2.	Dr.A.Sukumaran Nair	Project Engineer, Canada	
3.	Prof. G.Srinikethan	Prof. of Chemical Engg. & Dean (academic) National Institute Technology Karnataka Surathkal	Delivered the National Safety Day Lecture on 4th March 2008.

11. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Biological sulphate reduction for treatment of sulphate containing wastewater	Renu Pawels	Dr.Babu T Jose



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2	Utilization of coir Geotextiles for unpaved roads and embankments	K K Babu	Dr.K S Beena
3.	Hydrodynamic study of swirling fluidized bed	Dr.M.M. Paulose	Dr.Narayanan Namboothiri
4	Effect of improving energy efficiency on system reliability	Dr.P.V.Shouri	Dr.P.S.Sreejith

12. Publications

a. Papers

Sl.No	Name of Paper
1	Deepa.G.Nair – A structural investigation relating to the pozzolanic activity of rice husk ashes Cement and concrete research, vol 36,issue 6,june 2008,pg 861-868
2	1. Subha Vishnudas, Hubert H.G. Savenije, Pieter van der Zaag, Kunnathu R. Anil, Krishnan Balan, (2008) Participatory research using coir geotextiles in watershed management – A case study in south India, Physics and Chemistry of the Earth, Volume (33), Issues 1-2,Pages 41-47(2). Subha Vishnudas. Hubert H.G, Savenije, Pieter Van der Zaag, C.E. Ajith Kumar K.R. Anil, (2008) Sustainability analysis of two participatory watershed projects in Kerala, Physics and Chemistry of the Earth Volume 33,Issues 1-2 pages 1-12.(3). Subha Vishnudas, Hubert, H.G. Savenije, Pieter Van Der Zaag, (2007). A conceptual framework for the analysis of sustainable watershed management projects, Reducing the Vulnerability of Societies to Water Related Risks at the Basin Scale (Proceedings of the third International Symposium on Integrated Water Resources Management, Bochum Germany,September 2006) IAHS Publ.317.(4). Subha Vishnudas (2007) Watershed Management for Sustainable Development in Kerala, Seminar on Appropriate technology for Sustainable Rural Development, CUSAT, 27 September, Kerala, India.
3	K.S. Beena – 1. Testing Coir geotextile drains for soft ground improvement 2. Rut behaviour of Coir Geotextiles Reinforced unpaved roads
4	1. Glory Joseph and K.Ramamurthy, Workability and strength behaviour of concrete with cold-bonded fly ash aggregates, Materials and structures, RILEM, 2008 (article in press) 2. Glory Joseph and K.Ramamurthy, Mixture composition on permeation characteristics of cold-bonded fly ash aggregate concrete journal of ASTM International (under review) 3. Glory Joseph and K.Ramamurthy, Effect of cold-bonded fly ash aggregate on workability and mechanical properties of concrete, journal of institution of Engineers (India), under review) 4. Glory Joseph and K.Ramamurthy, Strength and permeation characteristics of cold-bonded fly ash aggregate concrete, Proceedings of International Conference on Sustainable Concrete Construction, India, 8-10 Feb 2008, 125-131



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- 5 Job Thomas 1. Thomas .J. and Ramaswamy A Mechanical properties of steel Fiber Reinforced Concrete journal of Materials in Civil Engineering ASCE, 19(5) May 385-392 Year – 2007
Job Thomas – 2 Thomas J. and Ramaswamy.A Shear of prestressed concrete beams with steel fibres Structures & Buildings, ICE, 165,SB%,pp 287-293 year 2007
- 6 Renu Pawels, Ajit Haridas, Babu.T.Jose (2007) Activity test for biologic sulphate reduction, publication in journal Environmental Science and Technology, Vol,49.No.1, 17-21
- 7 a) Shear strength studies on soil quarry dust mixtures (2006) Journal of Geotechnical and Geological Engineering, 24, PP1163-1179.
- 7 b) Serviceability performance inflexuse of beams with GFRPEebass (2007) construction and Building materials 21, PP 1709-1719.
- 8 David Peter S, Suman Mary Idicula, K.Poulose Jacob, “A study on the Complexities Involved in a Multiparty IT outsourcing Environment”, Proceedings of the International Conference on Information Systems Technology and Management, Chandigargh, India, July 2006.
- 9 David Peter S, K.Poulose Jacob, Sreela Sasi, “Analyzing and Modeling a Multiparty Outsourcing Environment”, Proceedings of the International Conference on e-Learning, e-Business, Enterprise Information Systems, e-Government and Outsourcing, Nevada, USA, June 2006.
- 10 Sheena Mathew, K.Poulose Jacob “Message Integrity in the World Wide Web: Use of nested hash function and a fast stream cipher” presented at ADCOM 2006
- 11 Analysis of the Cold Flow Properties of Additive added and Chemically Modified Coconut Oil Using Differential Scanning Calorimetry (DSC), IISc Centenary –International Conference on advances in Mechanical Engineering (IC-ICAME 2008), Ajithkumar.G.Jayadas NH
- 12 Turning of brasses using minimum quantity of lubricant (MQL)and flooded lubricant conditions, J.Paulo Davim.P.S. Sreejith and J.Silva, Materials and manufacturing Processes, 22, pp.45-50,2007
13. Effect of specific cutting pressure and temperature during machining of carbon/phenolic ablative composites using PCBN tools, P.S. Sreejith.R.Krishnamurthy and S.K. Malhotra, journal of Materials Processing Technology Vol.183(1),pp 88-05,2007.
14. Experimental studies on drilling of aluminium (AA1050) under dry, minimum quantity of lubricant (MQL). And lubricated conditions, J Paulo Davim, PS Sreejith, Ruth Games, Carlos Peixoto, Journal of Engineering Manufacture-Proceedings of the Institution of Mechanical Engineers, Part B (2006) Vol 220(10)pp.1605-1611.
15. Tool wear of binderless PCBN tools during machining of particulate reinforced MMC, P.S. Sreejith, Tribology Letters, 2006.
16. Studies on turning of carbon/phenolic abrasive composite using PCBN tools, P.S.Sreejith, R.Krishnamurthy, Advanced Composite Letters, Vol.14,No.5, 2005.



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17. Application of Taguchi method in the optimization of cutting conditions in turning process
T.G.Ansalam Raj.,Dr.Narayanan Namboothiri, M.Sivapragash, International Conference
on Modelling and simulation CITICOMS -2007,27-29, August 2007.
18. Speckle metrology based study on the effect of chattering on machined surfaces,
V.N.N. Namboothiri, Praveen Cheriyan Ashok, Usha Nair, Varun Das and V.P.Namboori.
SPIE International Society for Optical Engineering.
19. Rajesh.V.G. and Narayanan Namboothiri V.N. 2007 Jan. "Tool condition monitoring in
a lathe using time series analysis of vibration signals". IISA Joint Statistical Meeting
and International Conference, CUSAT, Cochin, India.
20. Rajesh.V.G. and Narayanan Namboothiri V.N.2007 Aug. "Recurrence plot-based
approach for the detection of wear in lathe tool inserts" International conference on
advanced design and manufacturing, SIT, Virudhnagar India.
21. Rajesh.V.G. and Narayanan Namboothiri V.N. 2007 Aug. "Tool wear detection using
recurrence quantification analysis of vibration sensor signals"International Conference
on Modeling and Simulation, CIT, Coimbatore, India.
22. Rajesh.V.G. and Narayanan Namboothiri V.N. 2007 Nov. "Drive motor current sensor
based tool flank wear monitoring using chaos theory" 37th International conference
Defektoskopie, 2007 Praha, Czech Republic.
23. "Systems Approach for Testing concurrent programs", Philip Samuel, Won Best Paper
Award for technical session, In Proceedings of NCSD 2008, BHU,Pages 95-102
24. "Design of Hardware locks to prevent Piracy in software systems", PhilipSamuel, In
proceedings of National Conference on Systems Thinking 2008, pages 135-140
25. "Message Dependancy Analysis on UML Sequence Diagram" Philip Samuel, In
proceedings of International Conference on Emerging Technologies 2008, Rajkot, pages
1950-1956
26. "Call Site probing for Detecting Errors in Object Oriented Programs" Philip Samuel In
Proceedings of ICETAETS 2008, pages 1167-1172
27. "Generation of Control Flow Graph from UML Interation Diagram" Philip Samuel, In
proceeding of National Conference on Software Engg & Applications, Salem pages
297-304
28. "Issues in Testing Object Oriented Softwares" Philip Samuel, In Proceeding of
Codeclave, 2008 pages 322-327
29. "Investigations on SAR distribution of planar monopole antenna confifurations at 1.8
GHZ", Proc. National Seminar on Information, Communication & Intelligent Systems,
IETE, Kochi, pp.181-186.feb 8-9-2008.
30. "A Compact Ultra Wide Band Patch Antenna for Mobile Aplications"Accepted for
National Conference on Broadband Technologies '08,organized by MBCET, IEEE
Kerala Section,CSI Trivandrum chapter, March 27-28,2008.
31. "Conformal FDTD of an Octagonal Microstrip Patch Antenna",Proc.,IEEE-APS
Internatioonal Symposium on Antennas and Propagation, Hawai,USA,June 10-15,2007.



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32. "FDTD analysis of rectangular dielectric resonator antenna", Journal of the European Ceramic Society, 27(2007)2753-2757.
33. "Design of Genetic Microstrip Antenna with improved performance", Proc. International Conference on Radio Science, Jodhpur, pp.25th to 29th feb.2008.
34. "Design of Compact Microstrip Antennas using Genetic Algorithms", Proc. National Seminar on Information, Communication & Intelligent Systems, IETE, Kochi, pp.187-192. Feb 8-9-2008.
35. "A New Look at Reversible Logic Implementation of Decimal Adder", International Symposium on System-on-Chip Tampere, (SOC 2007), Finland November 20-21, 2007.
36. "Improved Reversible Logic Implementation of Decimal Adder" 11th IEEE VLSI Design and Test Symposium 2007, Kolkata, India, August 8-11, 2007.
37. "Performance Analysis of Reversible Fast Decimal Adders" WCECS International Conference on Computer Science and Applications 2007, San Francisco, USA, Oct. 24-26, 2007.
38. "Fault Tolerant Error Coding and Detection using Reversible Gates", IEEE TENCON 2007, Taipei, Taiwan, Oct 30-Nov 2, 2007.
39. "VLSI Implementation of Quick Addition of Decimals using Reversible Logic" accepted for 15th International Conference on Advanced Computing & Communication (ADCOM 2007), 18-21 December 2007.
40. "Performance Analysis of FIR Digital Filter Design : RNS Versus Traditional" 7th IEEE International Symposium on Communications and Information Technologies (ISCIT 2007), Sydney, Australia, October 16-19, 2007
41. "GUI Based Decimation Filter Design Tool for Multi-standard Wireless Transceivers", IET International Conference on Information and Communication Technology in Electrical Sciences (ICTES 2007), Chennai, India 20-22 December 2007.
42. "Polyphase Implementation of Non-recursive Comb Decimators for Sigma-Delta A/D Converters", IEEE International Conference on Electron Devices and Solid State Circuits, Taiwan, December 20-22-2007.
43. "RNS based Programmable Multi-mode Decimation Filter for WCDMA and WIMAX", Accepted for 2008 IEEE 67th Vehicular Technology Conference: VTC 2008-spring 11-14 May 2008, Marina Bay, Singapore.
44. "Dual-Mode RNS based Programmable Decimation Filter for WCDMA and WLANa", Accepted for IEEE International Symposium on Circuits and Systems (ISCAS 2008), Washington, USA, 18-21 May 2008.
45. "Performance Evaluation of RNS based Decimation filter for Wideband Wireless Transceivers", Accepted for National Conference on Broadband Technologies '08, March 27-28, 2008, organized by MBCET, IEEE Kerala Section, CSI Trivandrum chapter, March 27-28, 2008.



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- 46 "Wideband Low-Distortion Sigma-Delta ADC for WLAN with RNS based Decimation Filter", IET International Conference on Information and Communication Technology in Electrical Sciences (ICTES 2007), Chennai, India, 20-22 December 2007.
- 47 "Wideband Low-Distortion Sigma-Delta ADC for WLAN Sixth International Conference on Information, Communications & Signal Processing (ICICS) 2007, Dec. 10-13, Singapore, pp 1-5, <http://ieeexplore.ieee.org/Xplore/login>.
- 48 "A triple-mode feed forward Sigma-delta modulator Design for GSM/WCDMA/WLAN application" 20th IEEE International System-on-chip conference (SOCC 2007), Sept. 26-29, Hsinchu, Taiwan.
- 49 "A Low Power Programmable Sigma-delta Modulator for Dual-Band Multi-Mode Receivers", World Congress in computer science, Computer Engineering & Applied Computing (ESA 2007), Las Vegas, 2007
- 50 "A triple-mode Sigma-delta modulator Design for Wireless Standards" proceedings of the 10th International Conference on Information Technology (ICIT 2007) Rourkela, India pp. 127-132. <http://doi.ieeecomputersociety.org/10.1109/CIT.2007.19>
- 51 "Fractal Modeling of Mammograms Based on Mean and Variance for the Detection of Microcalcifications" Proceedings of the IEEE International Conference on Computational Intelligence and Multimedia Applications (ICCIMA '07) vol-2 pp-334-348 Dec 13-15, 2007.
- 52 "Nonlinear Modeling of loudspeaker using adaptive second order volterra filters" Proceedings of the IET International conference on Information and Communication Technology in Electrical Sciences (ICTES 2007), vol-1, pp-87-92, Dec-20-22, 2007
- 53 "Fast Fractal Coding Method for the Detection of Microcalcification in Mammograms", Proceedings of IEEE International Conference on signal processing Communication and Networking (ICSCN) 2008, pp-368-373, Jan 4-6, 2008
- 54 "Locating Microcalcifications in Mammograms using Modified Fractal Coding Method for the Detection of Breast Cancer" Proceedings of the IETE National Seminar on Information, Communication & Intelligent systems, pp-59-64, Feb 8-9, 2008
- 55 "Matrix Array Symmetric Key Encryption, CSI journal Vol 37 No.1 pp 41-45, 2007
- 56 "fMRI Segmentation using Echo State Neural Network" International Journal of soft computing (in press)
- 57 "Synthesis of digital circuits using Genetic Algorithms" Proceedings of the National Conference on Advanced Communication techniques ACCET 07, 2007.
- 58 "A novel approach for low power analog circuit synthesis using Genetic Algorithms", 13th NASA VLSI symposium proceedings, IDAHO, USA, 2007
- 59 "A Model Based Tumor Detection in Brain MRI using Genetic Algorithm" International Conference on Soft computing and Intelligent Systems 27-29 December 2007, pp 121-126.
- 60 "A Model Based Tumor Detection in Brain MRI using Genetic Algorithm based Image Warping and Template Matching Techniques", International Conference on Information Systems and Technology 2007 14-15 December 2007, pp. 120-125.



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- 61 “A Fast and Secure Encryption Algorithm for Message Communication” IET International Conference on Information and Communication Technology in Electrical Sciences (ICTES 2007), Chennai, India, 20-22 December 2007, pp.629-634.
- 62 A New Transform coder for gray scale images using 4x4 MRT, Int.J. Electron Commun (AEU)(2007)doi:10.1016/j.aeue.2007.04.009.
- 63 Neural Network Approaches for system Identification, Proceedings of the IETE National Seminar on Information, Communication and Intelligent Systems, pp 134-141, 8-9 Feb2008, Kochi-
- 64 On the lattice of stratified L-topologies, The journal of fuzzy mathematics Vol.16, No.1 2008, Los Angeles.
- 65 Lattice of weakly induced L-topologies vol.16, No.1 2008 Los Angeles.
- 66 Presented Two papers in National Seminars conducted by Kerala Mathematical Associations in 2007.
- 67 H.Vijith and G.Madhu, Application of GIS and frequency ratio model in mapping the potential surface failure sites in the Poonjar sub-watershed of mechanical river in Western ghats of Kerala. Photonivachak: Journal of the Indian Society of remote sensing, vol.3,2007.
- 68 H.Vijith and G.Madhu, Estimating potential landside sites of an upland sub-watershed in Western Ghats of Kerala (India) through frequency ratio and GIS, Environment Geology (Springer) 2008.
- 69 M.N.Vinodkumar and M.Bhasi, Measuring critical factors in safety management – a survey based approach, Vilakshan – Vol IV, Issue No.2, Sept. 2007.
- 70 V.R.Renjith and G.Madhu, Explosion modeling of hazardous materials stored in Udyogamandal industrial area – a case study. Proceedings of Petrosafe 2007 – National Conference on Hydrocarbon Safety, April 2007, Cochin.
- 71 G.Madhu, Ecological Risk Assessment : An Overview. Proceedings of the International Symposium “BIOVISION 2007 – Bioengineering for Environmental Management”, October 2007, Thrissur.
- 72 Lekha Nair, Thomas AP and Madhu G, Lipid peroxidation and membrane injury in two wetland macrophytes exposed to synthetic detergents. Proceedings of the 20th Kerala Science Congress, January 2008, Thiruvananthapuram.

b) Books : Nil

15. Participation in Seminar/Conference/Refresher Courses etc.by Faculty/ Students.

Name of Participant	Name of Seminar/Conference/Workshop	Role
Dr.G. Madhu	International Symposium “BIOVISION 2007– Bioengineering for Environmental Management” Thrissur Oct- 2007.	Invited speaker



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Dr.G.Madhu	All India Seminar on Environmental Management in Chemical Industries and Infrastructure Projects, Cochin, February 2008	Organising Secretary
Dr.G. Madhu	Seminar on Industrial Safety held in connection with the silver jubilee celebrations of the Institution of Engineers(India), Palakkad Local Centre, April 21, 2007	Speaker
Dr.G. Madhu	Workshop on Grass root level Environmental Communication and awareness organized by the Centre for Science Communication, CUSAT, May 31, 2007	Resource person
Dr. G. Madhu	Specialised Safety Training Programme for Safety Officers/Senior Engineers organized by VSSC, Trivandrum, 15 May 2007	Resource person
Dr.G. Madhu	Training Programme on Fire Safety organized by ONGC's Institute for Petroleum Safety, Health and Environment Management, Goa, 18 October 2007	Resource Person
A. Nirmal Job	Specialised Safety Training Programme for Safety Officers/Senior Engineers organized by VSSC, Trivandrum, 14 May 2007	Resource Person
A. Nirmal Job	Short term Course on Safety of Ships and Offshore Structures, Dec.10-21, 2007 IIT Madras	Participant
V.R. Renjith	Short term Course on Recent Advances in Concrete Technology, April 16-27, 2007. School of Engineering CUSAT.	Participant
V.R. Renjith	Short term course on Network Technology and Linux Administration, Dec.10-21, Model Engineering College, Thrikkakara	Participant
Sheena K M	Bio-Informatics	Participant
P G Latha	Power Quality	Participant
Bindu.CS	AICTE Sponsored Staff Development programme on "RECENT ADVANCES IN CONCRETE TECHNOLOGY" during 16 to 27 April 2007	Participant
	Training and Education Programme for Engineers and Architects on Earthquake Engineering during 08-10 October 2007	Participant
Dr.Deepa.G. Nair	AICTE Sponsored Staff Development Programme on "RECENT ADVANCES IN	Participant



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	CONCRETE TECHNOLOGY” during 16 to 27 April, 2007 Training and Education Programme for Engineers and Architects on Earthquake Engineering during 08-10 October 2007	Participant
Glory Joseph	International Conference on Sustainable Concrete Construction, India, 8-10 Feb.2008	Paper presentation
Dr.Job Thomas	Pillai,A. Abraham B.M. and Thomas.J Finite Element Analysis of Reinforced Concrete Pile caps Proceedings of the International Conference on Materials for the Future, Coimbatore year – 2008 Thomas J Behaviour of Concrete Deep Beams Reinforced with GFRP Bars Proceedings of 8 th International Symposium on Fiber Reinforced Polymer Reinforcement for Concrete Structures, University of Patras, Greece Year – 2007	Participant Participant
	Prediction of strength of high strength steel fibre reinforced concrete proceedings of second national conference on Focusing on Advances in Civil Engineering, Quilon Year -2008	Participant
Dr.Varghese Paul	Network Technology	Participant
Dr.Philip Samuel	Network Technology, Real Time systems	Participant
Mr.Shelbi Joseph	Emerging trends in .Bio-informatic & Biologically inspired computing	
Mrs.Daleesh M V	Emerging trends in .Bio-informatic & Biologically inspired computing	Participant
Mrs.Binsu C Koor	Emerging trends in .Bio-informatic & Biologically inspired computing	Participant
Mrs.Sariga Raj	Network Technology	Participant
Dr. R. Gopikakumari	UGC sponsored refresher course on E- Content Development Organized by adult continuing education and extension, CUSAT 5-26 March 2007	Participant
Dr. R. Gopikakumari	National conference NC(SE) organized by Department of ElectronicsSt: Gits College of Engineering, Kottayam March 2007	Session Chair
Dr. R. Gopikakumari	One day Workshop on open sensitisation cum awareness programme for Technology	Participant



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	Information Facilitation Programme Held at Hotel Travencore Court, Kochi on 10 Dec, 2007, jointly organized by CUSAT and DSIR, Gol.	
Dr. R. Gopikakumari	The National seminar on Information, Communication & Intelligent Systems, 8-9 Feb 2008, Kochi, jointly organized by IETE, Kochi center & MEC Thrikkakara	Participant
Dr. R. Gopikakumari	The National Conference on VLSI & Communication Engineering (NC-VCom 2007) held during 16-17 March 2007 organized by Saintgits College of Engineering, Kottayam	Session Chair
	The National Conference on Emerging Trends in Engineering & Technology (NC(ET)2-07) held during 5 May 2007organised by ISTE & Saintgits College of Engineeirng, Kottayam.	Session Chair
Dr.P.Mythili	National Seminar on Information, Communication & Intelligent Systems, IETE, Kochi, Feb8-9 2008.	Paper Presentation
Dr.P.Mythili	UGC sponsored refresher course on E-Content Development Organized by adult continuing education and extension, CUSAT 5-6 March 2007	Participant
	Foundation course on Algorithms & Complexity at the Mathematics Department, CUSAT on March2nd and 3rd	Participant
Dr.S.Mridula	ISTE STTP on advances in PC based equipments testing and calibration-hardware and software solutions, M.A. College of Engineering, Kothamangalam, 16.7.2007 to 28.7.2007	Participant
	National Seminar on Information, Communication & Intelligent Systems, IETE, Kochi, Feb 8-9 2008	"
Dr.Binu Paul	IEEE-APS International Symposium on Antennas and Propagation, Hawaii, USA, June 10-15,2007.	Paper presentation
	Workshop Training on Front End and Back end VLSI design tools at CG CoreEL, Bangalore, Jan 2-30, 2007.	Participant
	ISTE-STTP on Emerging Network Technologies and Linux Administration at Model Engineering College, Kochi, from 10-12-2007 to 22-12-2007.	Participant



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Rekha K.James	WCECS International Conference on Computer Science and Applications 2007, San Francisco, USA, Oct 24-26, 2007.	Paper presentation
	Workshop/Training on Frontend and Back end VLSI design tools at CG CoreEL, Bangalore., Jan 28-30,2007.	Participant
Shahana.T.K	ISTE sponsored short term course on Advances in PC based Equipments Testing and Calibration-Hardware and Software Solutions, organized by M.A college of Engineering, Kothamangalam from 16.07.2007 to 28.07.2007.	Paper presentation
	International Conference on Information and Communication Technology in Electrical Sciences, organized by IET-UK and Dr.M.G.R.University, Chennai from 20.12.2007 to 22.12.2007.	Paper presentation
Babitha Roselind Jose	AICTE sponsored Staff Development Programme on "Cryptograph & Embedded Systems" NITC, Calicut, June 11-23, 2007.	Participant
	One day Workshop on "The art of writing research papers and doctoral thesis" organized by Centre for Science communication and STIC, CUSAT on 24 th Nov 2007.	
Unni A.M	AICTE/ISTE Short term course on "Instruction Enhancement program on Embedded Systems and FPGA Based Design" organized by government Engineering College, Bartonhill, Thiruvananthapuram, 02-01-2007 to 12-02-2007.	Participant
	AICTE sponsored Staff Development programme on "Emerging trends in Bioinformatics and Biologically Inspired Computing" organized by college of Engineering, Munnar from 19-11-2007 to 01-12-2007.	Participant
Prem Kumar.C.V	AICTE sponsored Staff Development programme on "Emerging trends in Bioinformatics and Biologically Inspired Computing" organized by College of Engineering, Munnar from 19-11-2007 to 01-12-2007.	Participant
Deepa Sankar	AICTE – ISTE short Term Training Programme on "Teaching –Effectiveness Improvement	Participant



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Techniques”, Organised by the Department of Mechanical engineering, Mar Athanasius College of Engineering, from June 26th to July 9,2007.

One day workshop on “The art of writing research papers and doctoral thesis for research students in Kerala”, Organized by STIC, CUSAT on 24.11.2007. Participant

IETE National Seminar on Information communication and Intelligence systems organized by IETE and Model Engineering Colege on Feb 8-9, 2008. Paper presentation

IEEE International Conference on Com Information Communication and Networking (ICSCN) 2008, Organised by MIT Chennai, on Jan 4-6, 2008. Paper presentation

IEEE International Conference on Computational Intelligence and Multimedia Application (ICCIMA'07), organized by Mepco Schlenk Engineering College, Sivakasi, Tamil Nadu, Dec.13-15,2007 Paper presentation

EC2005 Admission students Vishnu.P.S. Sarath Tampaan and Abheesh T B Zystus 07, Annual technical fest of EEESA, CUSAT, on March 16-17,2007 Working Model presentation

EC2005 Admission student Pankaj Kumar KERBEROS'2007 One day National Level Technical Symposium KERBOROS 07 was organized by IT Department of Nandha Engg. College, Erode on 18.08.07. Paper presentation

Dr.Sasi Gopalan Participated Refreshnal course in June, 2007 conducted by Academic Staff, College, Trivandrum.

16. Awards/Honours/Fellowship etc. received :

Name of Participant	Name of Fellowship/Honour/Award	Awarding Agency
Dr.G. Madhu	Member of the Committee constituted to conduct a health survey among the inhabitants of Eloor Industrial Belt	Government of Kerala
Dr.P.S.Sreejith	Chartered Engineer	Institution of Engineers
EC 2004 Admission students Athul P.S.	1st Prize Certificate +Cash award	INCENDIO-07 (National level technical festival)Organized by



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and Arish Shareef K.P.		college of Engineering Thalassery. 2-4 March 2007
EC 2005 Admission students Pankaj Kumar, Sreelesh G Edatuneri, Raj Kumar, Santhosh Kumar	1st Prize in Autonomous Bots event (product Design event)	TECHTATVA '07, Annual Techno management fest of MIT, MANIPAL, 10 th to 13 th October, 2007
EC2005 Admission student Pankaj Kumar	2 nd prize in "GSM 1.0" event (product Design event)	TATVA '07, Annual Technical fest of NIT, CALICUT, 27 th -30 th September 2007
EC 2005 Admission students Pankaj Kumar	1st prize in POPYRUS event (paper presentation)	INSPIRE '07, Annual technical fest of ACSE, CUSAT, 29 th -31 st October 2007
EC 2005 Admission students Pankaj Kumar, Raj Kumar and Santhosh Kumar	1st prize in XYSTUS event (product Design event)	INSPIRE '07 Annual technical fest of ACSE, CUSAT. 29 th -31 st October 2007
EC 2005 Admission student Shanker Anand	2 nd prize in IGNOBEL event (paper presentation based on a funny statement to be proved scientifically)	TATVA '07 Annual technical fest of NIT, CALICUT 27 th -30 th September 2007
Maths Dr.T.P.Jhonson	Acting as Reviewer in the American Mathematical reviews.	

17. Sponsored Research Projects

Sl.No.	Project Title	Sponsoring Agency	Amount	Investigator(s)
1	Potentialities of coir on the consolidation of soil	Smt.Sobha Cyrus & Dr.Babu.T, Jose	9.26 lakhs	Smt.Sobha Cyrus
2	Study on use of coir bhoovastra in pavements	Coir Board of India	7.6 lakhs	K S Beena
3	Improvement of teaching and networking facility in civil engineering department	DSI New Delhi	13 lakhs	Dr.Benny Mathews Abraham
4	Grouting: An economical method for Effective Utilization of Water Resources and for improvement of foundation soils	AICTE	7.05 lakhs	Dr.Benny Mathews Abraham
5	Modernisation of Industrial	AICTE	Rs.13.5 lakhs	Dr.G. Madhu



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Hygiene Laboratory under MODROBS scheme.

6	Design of Compact Microstrip Antenna Configurations using Genetic Algorithm	KSCSTE	Rs.9.9 Lakhs	PI – Dr.P.Mythili Co-Inv-Dr.Binu Paul and Dr.S.Mridula
7	Completed the DST-SERC Fast track Project Design, Development and analysis of a compact Microstrip antenna with reduced radiation hazards towards the human head (2004-2007)	DST-SERC Fast track	Rs.10 Lakhs	Dr.S.Mridula
8	Fractal image compression using Neural networks	ISRO (3 rd year grant pending	Rs.9.63 Lakhs	Dr.R.Gopikakumari
9	Bioactive coatings	AICTE	10.50 Lakhs	Dr.P.S. Sreejith, Saju K.K.

18. Research Programmes and activities :

Sl.No.	Problems/Topics	Investigator(s)
1	Solar Energy	Dr.James Varghese
2	Intelligent Image Processing	Dr.R.Gopikakumari
3	Digital Signal Processing	Dr.R.Gopikakumari
4	Microwave Antennas, Signal processing, Genetic Algorithm	Dr.P.Mythili
5	Audiology	Dr.R.Gopikakumari
6	VLSI implementation of Digital Filters for Wireless communication transceiver	Shahana.T.K.
7	Sigma –delta ADCs for Wideband Receivers	Dr. P. Mythili, Babitha Roslind Jose

19. Seminar/Conference/Workshop/Refresher course conducted by the Department

Sl.No.	Title	Duration	Co-ordinator	Funding Agency
1	Centrifuge Modelling	3 days	Prof.B V S Viswanatham, IIT Bombay	DST
2	National Safety Day Lecture	4 th March	-Sri.V.R. Renjith	University & Indian Oil Corporation
3	Recent Advances in concrete Technology	2 weeks April 2007	Dr.Job Thomas	ISTE

20. Consultancy Work : Nil

* * *



SCHOOL OF ENVIRONMENTAL STUDIES

Estd: 1980

School of Environmental Studies was established in the year 1980 with an objective to serve as a center imparting high quality environmental education. M.Sc. Degree course in Environmental Studies was started in 1986. This course was discontinued in 1999. Starting from 1999, the School offers M.Sc. Degree Course in Environmental Technology with two distinct streams: Stream 1: Environmental Engineering (in collaboration with School of Engineering) & Stream 2: Environmental Biotechnology. National Centre for Aquatic Animal Health, a constituent organization of the School has been sanctioned with an M.Tech. programme in Marine Biotechnology by Department of Biotechnology, Government of India. This programme will be initiated during 2008 – 09 financial year. The programme is funded by DBT and in support of which University Grants Commission has provided with two positions of Lecturers.

The School offers Ph.D. program in related areas. The School has all essential infrastructure facilities to run the academic programs and consultancy in related areas. The School's sectional Library has an exclusive collection of reference books consisting of 1920 titles and subscribe 14 journals.

Putting a milestone in the march of progress a Centre dedicated for health of aquatic animal named as National Centre for Aquatic Animal Health (formerly Centre for Fish Disease Diagnosis and Management) was inceptioned in January 2000. Motto of the Centre is 'Relentless effort for the Protection of Health of Aquatic Animals and their Environment and it continually endeavors to transfer the outputs of research directly to the end users, the aquarists. The research and development activities of the Centre use cutting edge technology to bring in novel innovations for the development of sustainable aquaculture in India. A unique feature of the Centre is its in-house production facility, the Aquaculture Health Products Division to meet the needs of the Indian industry. It is well equipped to conduct field trials of the research outputs, and ensures a consistent and continuous supply. The Aquaculture Extension Cell (AEC) is the link of the farmer to technology. Apart from this, we provide a platform for the interaction between farmers, scientists and industry. (For more details please see Annexure – 1)

Another event during the year 2006 was the establishment of Rajiv Gandhi Chair. The Ministry of Human Resources Development (MHRD), Government of India established 10 Rajiv Gandhi Chairs in Central and State Universities all over the country to implement the dream projects of Sri. Rajiv Gandhi, the former Prime Minister of India. The themes of the Chairs include Panchayat Raj Systems & Local Governance., Women's Empowerment, and Impact of Technology on Society, Eco-systems & Sustainable Development, Livelihood & Food Security., Nuclear Disarmament & Peace Studies., Tribal Development., Protection of Child Rights., Social Justice., Secularism and Nation Building. Cochin University of Science and Technology, Cochin was identified as one among the prestigious ten Universities in the Country to hold the Chair and the thrust area identified for the Chair at CUSAT is on Ecosystems and Sustainable Development.



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1. Programme of study/Research

1. M.Sc. Environmental Technology: Stream 1: Environmental Engineering
Stream 2: Environmental Biotechnology
 2. M.Tech in Marine Biotechnology (Sponsored by DBT - 4 semesters)
 3. Ph.D. Programme
-

2. Faculty Members:

Sl.No.	Name	Designation	Qualification	Specialization
1.	Dr. I.S. Bright Singh	Professor & Director	M.Sc., Ph.D.	Environmental Microbiology
2	Dr. E.P. Yesodharan	Professor	M.Sc., Ph.D.	Environmental Engineering
3.	Dr. Ammini Joseph	Professor (On leave)	M.Sc., Ph.D.	Algology/ Environmental Biology
4	Dr. Suguna Yesodharan	Senior Lecturer	M.Sc., Ph.D.	Environmental Chemistry
5	Dr.M.V.Harindranathan Nair	Senior Lecturer	M.Sc., Ph.D	Meteorology, Air Pollution Environmental Management
6	Dr. Rajathy Sivalingam	Reader	M.Sc., Ph.D	Environmental Toxicology
7	Dr. V. Sivanandan Achari	Lecturer	M.Sc., Ph.D	Environmental Chemistry
8	Sri.M.Anand	Lecturer	M.Sc, M.Phil	Environmental Biotechnology

**On deputation to the Kerala State Council for Science Technology and Environment as Executive Vice President*

3. Visiting Faculty: Nil

4. Research Staff:

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. B. Sathyanathan	Technical Officer Gr.	B.Sc., AIC, Ph.D.	Toxicology
2	Dr. Rajalekshmi Subramanian	Technical Officer	M.Sc., Ph.D.	Toxicology



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5. Research Scholars:

Sl. No.	Name	Supporting Agency	Guide	Area of Research
1	Shaganas Banu	CUSAT	Dr. S. Rajathy	Ecotoxicology
2	Krishna Pillai N.(PT)	-	Dr. Suguna Yesodharan	Environmental Chemistry
3	Subitha Prabhakaran O.P.	Govt. of Kerala	Dr. A. Mohandas	Water Quality
4	Manju, N.J.	ICAR	Dr. I.S. Bright Singh	Microbiology
5	Renjith, K.	Welcome Trust	Dr. I.S. Bright Singh	Microbiology
6	Preetha, R.	DBT	Dr. I.S. Bright Singh	Microbiology
7	Seena Jose	DBT	Dr. A.Mohandas & Dr.I.S.Bright Singh	Microbiology
8	Jaison C.A.	-	Dr. V.Sivanandan Achari	Environmental Chemistry
9	Deepesh V.	ICAR	Dr. I.S. Bright Singh	Microbiology
10	Dipson P.T.	UGC	Dr. M.V. Harindranathan Nair	Environmental Management
11	Anil Loveson	-	Dr. S. Rajathy	Environmental Toxicology
12	Thapanjith T.	-	Dr. S. Rajathy	Environmental Toxicology
13	Surekha mol I.S.	CUSAT	Dr. I.S. Bright Singh	Environmental Biotechnology
14	B. Sreelakshmi	CUSAT	Dr. I.S. Bright Singh	Environmental Biotechnology
15	Charles Thomas K.	CUSAT	Dr. I.S. Bright Singh & Dr. K.G.George	Environmental Biotechnology
16	Divya Jose	CUSAT	Dr. A. Mohandas	Environmental Biotechnology
17	Pradeep Kumar A.V	-	Dr. M.V.Harindranathan Nair	Environmental Management & Law
18	Jose Melin P.L.	-	Dr. V.Sivanandan Achari	Environmental Chemistry
19	Sasi T.K.	-	Dr. V.Sivanandan Achari	Environmental Chemistry
20	Sherly Thomas	-	Dr. Harindranathan Nair M.V.	Waste Management
21	Haseeb M.	DBT	Dr. I.S. Bright Singh	Microbiology
22	Rose Mary Jose	NCAAH	Dr. I.S. Bright Singh	Microbiology
23	Sunitha Paulose	DBT	Dr. I.S. Bright Singh	Microbiology



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24	Shyam Kumar R.	CUSAT	Dr. S. Rajathy & Dr A. Mohandas	Toxicology
25	Anand M.	-	Dr. Ammini Joseph & Dr. I.S.Bright Singh	Environmental Biotechnology
26	Anumol V.G.	-	Dr. S. Rajathy & Dr. M.V. Harindranathan Nair	Toxicology
27	Prem Gopinath	CUSAT	Dr. P. Natarajan & Dr. I.S. Bright Singh	Microbiology
28	Divya Shivaji	Full-Time	Dr. Ammini Joseph	Environmental Biology
29	Jayesh P.	-	Dr. I.S. Bright Singh	Microbiology
30	Riya George	-	Dr. Rob H. Reed & Dr. I.S. Bright Singh	Microbiology
31.	Ammu Thomas	-	Dr. Rob H. Reed & Dr. I.S.Bright Singh	Microbiology
32.	Deepa G.D.	-	Dr. Sivanandan Achari & Dr. I.S.Bright Singh	
33.	Haneesh K.R.	-	Dr. Harindranathan Nair M.V.	Environmental Management
34.	Sareen Sarah John	-	Dr. I.S. Bright Singh	Microbiology

6. Administrative Personnel

Sl.No.	Designation	No. of posts
1	Section Officer	1
2	Assistant	2
3	Typist/Steno	1
4	Peon	1
5	Sweeper-cum-Cleaner	1

7. Technical Personnel

Laboratory Assistant - 1

8. Students enrollment

Sl.No.	Programme of study	Men	Women	Total
1	M.Sc.	4	20	24
2	Ph.D.	17	17	34



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9. Research facilities

a) Laboratory:

- (1) Environmental Chemistry Laboratory - 1
- (2) Environmental Chemistry Laboratory - 2
- (3) Environmental Engineering Laboratory
- (4) Environmental Management Laboratory - Centre for Remote Sensing - Environmental Resource and Disaster Management
- (5) Environmental Microbiology Laboratory
- (6) Algal Biotechnology Laboratory
- (7) Environmental Toxicology Laboratory
- (8) Environmental Virology Laboratory
- (9) Environmental Biotechnology Laboratory
- (10) Environmental Biology Laboratory

b) Centre

National Centre for Aquatic Animal Health

c) Practical Halls

Environmental Chemistry

Environmental Biology & Toxicology

d) Library: No. of books/journals on 31st March 2008 : 2011

Additions during the year : 91

Journal : 14

10. Distinguished Visitors:

Sl. No.	Name	Affiliation	Remarks
1.	Dr. John Tharakan,	Fulbright Fellow, Howard University	Delivered a lecture on Integrated Solid waste management
2.	Dr. Subba Rao V. Durvasula	12 The Horseshoe, Dartmouth, Nova Scotia, Canada B2Y 4E5	Delivered a talk on Microalgal iotechnology
3.	Dr. Lionel Veysseries	Chief Editor, International Journal of Nanotechnology, Scientist, International Centre for Young Scientists, National Institute for Material Science, Nanomaterials and Biomaterials, Tsukuba, Ibaraki, Japan.	Gave a lecture on Metal Oxide Nanomaterials on 24 th February, 2008



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11. Ph.D. Awarded:

Sl.No.	Title of thesis	Research Scholar	Supervising Guide
1	Bioremediation of Petroleum sludge through Phydroremediation land farming and Microbial enhanced oil separation	Joseph P.J.	Dr. Ammini Joseph
2	Biocontrol of vibrio Harveyi in Penaeus monodon Larval Rearing systems employing probiotics and Vibriophages	Srinivas Somnath Pai	Dr. I.S. Bright Singh
3	Bioprocess technology for antagonistic Pseudomonas MCCB 102, 103, Micrococcus MCCB 104 and Evaluation of Synchocystis MCCB 114, 115 as Probiotics for the Management of Vibrio in Shrimp Culture Systems	Preetha R.	Dr. I.S. Bright Singh

12. Publications:

(a) Papers

In Peer Reviewed Journals

1. Anas A, Philip R, Singh ISB Chitosan as a wall material for a microencapsulated delivery system for *Macrobrachium rosenbergii* (de Man) larvae. Aquaculture Research doi:10.1111/j.1365-2109.(2008).01944.x
2. Preetha R, Jayaprakash NS, Philip R, Singh ISB Optimization of medium for the production of a novel aquaculture probiotic, *Micrococcus* MCCB 104 using central composite design. Bioprocess and Bioengineering 12:(2007)548-555
3. Preetha R, Jayaprakash NS, Philip R, Singh ISB Optimization of carbon and nitrogen sources and growth factors for the production of an aquaculture probiotic (*Pseudomonas* MCCB 103) using response surface methodology. Journal of Applied Microbiology 102(4):(2007)1043-1051.
4. Preetha R, Jayaprakash NS, Singh ISB *Synechocystis* MCCB 114 and 115 as putative probionts for *Penaeus monodon* post-larvae. Diseases of Aquatic Organisms 74:(2007)243-247.

Chapters in Books

1. Singh ISB, Kumar VJR, Achuthan C, Manju NJ, Philip R Recirculation zero water exchange system for hatchery rearing of economically important marine organisms. In: Vijayan KK, Jayasankar P, Vijayagopal P (Eds) Indian Fisheries- A Progressive Outlook. Central Marine Fisheries Institute, Kochi, India.(2007) p139-155.



National / International Conferences

1. P. M. Alex, V. Sivanandan Achari, R. Manuraj, M. V. Hareendranathan Nair and V. N. Sivasankara Pillai - Tidal Canals of Cochin as an Alternate Source of Freshwater: A case study – Edappally Canal, International Workshop on Integrated Water Resource Management- (IWRM- 2007), Karnataka Environment Research Foundation, Bangalore, India, pp. (2007)135- 139,
2. V. Sivanandan Achari, John- Sivanandan Achari Plots for Liquid Phase Adsorption: Evaluation of Structural Parameters for Type I Isotherm, International Conference for Advanced Materials, February 18- 21, 2008, School of Chemical Sciences, Mahatma Gandhi University, Kottayam, India,(2008) 62-63.
3. Preetha R, Jayaprakash NS, Philip R, Singh ISB Optimization of carbon and nitrogen sources and growth factors for the production of an aquaculture probiotic (*Pseudomonas* MCCB 103) using response surface methodology. Journal of Applied Microbiology (2007)102(4): 1043-1051.
4. Preetha R, Jayaprakash NS, Singh ISB *Synechocystis* MCCB 114 and 115 as putative probionts for *Penaeus monodon* post-larvae. Diseases of Aquatic Organisms 74:(2007)243-247.
5. V. Sivanandan Achari, Biomedical Waste Management: Quantification and Treatment Options, Proceedings of the seminar on Appropriate Technology for Sustainable Rural Development 29th September 2007, CRDAT, Cochin University of Science and Technology, Cochin- 6820 22, pp. 1-9...
6. P.M. Alex, V.Sivanandan Achari, R. Manuraj, M.V. Hareendranathan Nair and V.N. Sivasankara Pillai, Tidal Canals of Cochin as an Alternate Source of Freshwater: A case study – Edappally canal, International Workshop on Integrated Water Resource Management – IWRM – 2007), Karanataka Environment Research Foundation, February 5-7, Bangalore, India, 2007pp. 135-139,.
7. Ajithkumar, P. and Sathyanathan B. (2008), Pre exposure to Contaminants – Some unanswered questions. International Conference on Biodiversity Conservation and Management (Biocam 2008) conducted by Rajiv Gandhi Chair in Contemporary Studies, CUSAT, CMFRI, Cochin, p.83
8. Sathyanathan B. (2008) Restricted Assimilation of Pollutants in Marine Invertebrates. International Conference on Biodiversity Conservation and Management (Biocam 2008) Conducted by Rajiv Gandhi Chair in Contemporary Studies, CUSAT,CMFRI, Cochin, p.207
9. Aparna M. and Ajith Kumar P. and Sathyanathan B. 'Wetland our real heritage – which needs top priority for Protection, MSM College, Kayamkulam, Kerala
10. Ancy A., Resma V.J., Ajith Kumar P. and Sathyanathan B. (2008). Strategic detoxifying action of conjugated double bonded organic compounds in marine organisms. Proceedings of the National Conference on Bioactive Compounds in Marine Organisms, School of Marine Sciences, CUSAT, Kochi.
11. Rajalakshmi, K.P. Rakhi Gopalan, S. Deepa Nair, Raji Pillai and P. Natarajan 2008. Application of vermitechnology in the degradation of refinery sludge amended with water



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hyacinth. Presented at the International Conference on Biodiversity Conservation and Management (BIOCAM 2008) held at Kochi from 3rd – 6th Feb. 2008.

- 12. Subramanian Rajalakshmi and Ambat Mohandas 2008. Impact of mercury on the activity pattern of a marker enzyme in a freshwater bivalve. The Environmentalist (in press)

(c)	Books	:	NIL
(d)	Any other	:	NIL

13. Participation in Seminar/Conference/Refresher Courses etc. by the Faculty of Members/ Students/Staff

Participant(s)	Programme	Role
Dr. Suguna Yesodharan	Seminar on 'Environment and Human Health' organized by Rajiv Gandhi Centre for Contemporary Studies	Participant
Dr. B. Sathyanathan	19 th Kerala Science Congress conducted by KSCSTE (29-31 Jan. 2007)	Participated and presented paper
Dr. B. Sathyanathan	Workshop and action plan for Muvattupuzha River Protection, Sponsored by 'Greens' Muvattupuzha at Urban Bank Auditorium.	Participated and presented paper
Dr. B. Sathyanathan	National Seminar on Possible Impacts of Sethusamudram Project along Kerala, Organized by Rajiv Gandhi Chair for Contemporary Studies at School of Ocean Science, CUSAT.	Participated
Dr. B. Sathyanathan	Down modulation of Pain via Religious belief. Role of Anterior, Lateral Prefrontal Cortex. Dept. of Biotech , by MI GUEL FARIS	Participated
Dr. B. Sathyanathan	Conference on Sustainable Environment: ToCH College of Science & Technology, Arakkunnam.	Participated
Dr. B. Sathyanathan		
Dr. Sivanadan Achari V.	Water Quality Assessment in the TSUNAMI Affected Coastal Areas of Kerala, National meet on Indian Ocean tsunami Its impact assessment and lessons for the future	Participated and presented paper
Dr. Sivanandan Achari V.	John Isotherm for Liquid Phase absorption: Comparison with Langmuir and Freundlich models. International Carbon Conference	Participated and presented paper
Dr. Sivanandan Achari V.	Conference and Souvenir	Participated and presented paper



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Dr. V. Sivanandan Achari & Dr. Harindranathan Nair M.V.	International Workshop on Integrated Water Resource Management (IWRM-2007)	Participated and presented paper
Dr. V. Sivanandan Achari	Carbon Conference. The International Carbon Conference, 16 th -21 st July 2006. Venue: Robert Gordon University, Scotland, UK (oral presentation)	Participated and oral presentation
Dr. V. Sivanandan Achari	John Isotherm for Liquid Phase Adsorption: Comparison with Langmuir and Freundlich Models. International Carbon Conference, Carbon 2006, Robert Gordon University, Aberdeen, Scotland, UK. July 16-21, 2006 Abstract No. SA 860, Extended Abstract, ISBN 0-9553365-1-1, 3P 107.	Participated and oral presentation

14. Awards/Honours/Fellowships etc. received:

Name of Awardee	Particulars
Dr. I.S. Bright Singh	1. Regional Expert of NACA in Shrimp Diseases 2. Visiting Professor in Microbiology for the period 2001 to 2008 at University of Northumbria, New Castle upon Tyne, United Kingdom 3. Eminent Zoologist Gold Medal from Zoological Society of India

15. Sponsored Research Projects:

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
Implemented at School of Environmental Studies				
1	Semiconductor Oxides Mediated Photocatalytic Purification of Water Containing Chemical Pesticides and Bacterial Pollutants (June 2006 – May 2009)	OPCW	Rs.1,67,000/-	Dr. Suguna Yesodharan
2.	EIA of Petroleum hydrocarbons in the Vembanad Estuary	KSCSTE, Govt. of Kerala	11,70,000/-	Dr. Ammini Joseph
3	Water quality assessment in the Tsunami affected coastal areas Kerala	KSCSTE, Govt. of Kerala	1,67,000.0	Dr. V. Sivanandan Achari



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- | | | | | |
|----|---|-----------------------------------|-------------|-------------------------|
| 4. | Development of Bioreactor Technology for Bioconversion of Coir Pith: Isolation and Screening and Identification of Appropriate Microorganisms | Dept. of Biotechnology, New Delhi | 16,81,000/- | Prof. I.S. Bright Singh |
|----|---|-----------------------------------|-------------|-------------------------|

Implemented at National Centre for Aquatic Animal Health

- | | | | | |
|---|---|---|---------------|-----------------------|
| 1 | Development of appropriate bioremediation technology for zero exchange creek fed shrimp culture system. In collaboration with M/S. Pancham Aquaculture Farms Limited, Mumbai., Period Sept. 2004 – Sept. 2007 | Dept. of Biotechnology, Govt. of India and M/S. Pancham Aquaculture Farms Limited | 19,38,000/ | Dr. I.S. Bright Singh |
| 2 | Development of anti-WSSV drugs from mangrove plants endemic to Indian coastal zone | Dept. of Biotechnology, New Delhi | 37,45,000/- | Dr. I.S. Bright Singh |
| 3 | Nitrifying bioreactors integrated into prawn hatchery systems: Biofilm structure, population dynamics, and kinetic modeling programme support in marine biotechnology | Dept. of Science and Technology, Government of India | 20,32,420/- | Dr. I.S. Bright Singh |
| 4 | Development and application of CMG family recombinant hormones, their antagonists and RNA technique for induced maturation and spawning of <i>Penaeus monodon</i> . In collaboration with Central Institute of Brackishwater Aquaculture, Chennai and Dept. of Zoology, Calicut University, Calicut | Dept. of Biotechnology, Govt. of India. | 1,38,31,000/- | Dr. I.S. Bright Singh |
| 5 | Development of appropriate bioremediation technology for zero-exchange creek-fed shrimp culture system. In collaboration with M/S. Pancham Aquaculture Limited, Mumbai. | Dept. of Biotechnology, Govt. of India. | 19,38,000/- | Dr. I.S. Bright Singh |



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6	Design modification and commercialization of nitrifying bioreactor technology for the establishment of organic recirculation prawn seed production system	Dept. of Biotechnology, Govt. of India.	10.37	Prof. I.S. Bright Singh
7	Expression of virulence of <i>Vibrio harveyi</i> in organic recirculation prawn seed production system (ORPSPS)	University Grants Commission	9.27	Prof. I.S. Bright Singh
8.	Programme support in Marine Biotechnology	Department of Biotechnology, Government of India	128.0	Prof. I.S. Bright Singh

16. Research programmes and activities (2006-07)

Sl.No	Research Scholars Name	Guide	Area of Research
1	Jitha G.	Dr. Ammini Joseph	Evaluation of Cyanobacteria for biomass production and effluent treatment
2	A. Anas	Dr. I.S. Bright Singh	Extraction of glucan from <i>Acremonium diospyri</i> and its application in <i>Macrobrachium rosenbergii</i> larval rearing system along with bacterins as microspheres.
3	N.S. Jayaprakash	Dr. I.S. Bright Singh	Development of microbial technology for exclusion of vibrios from prawn larval rearing systems.
4	Alex P.M.	Dr. V.N. Sivasankara Pillai	Salinity Intrusion and Seasonal Water Quality Variations in the Tidal Canals of Cochin
5	Shaganas Banu	Dr. S. Rajathy	Studies on effect of toxic heavy metal mercury on the physiology and biochemistry of an estuarine crab <i>Scylla serrata</i> (Forsk.)
6	Somnath Pai	Dr. I.S. Bright Singh	Biocontrol of <i>Vibrio harveyi</i> in <i>Penaeus monodon</i> larvae rearing system employing probiotics and vibriophages



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7	Subitha Prabhakaran, O.P.	Dr. A. Mohandas	Characterization and control of algal growth in aquaria and recreational ponds
8	Manju, N.J.	Dr. I.S. Bright Singh	Bioremediation in Prawn grown out system with reference to Ammonia and Hydrogen sulphide Toxicity
9	Renjith, K.	Dr. I.S. Bright Singh & Dr. Rob H. Reed	Development and evaluation of small scale solar treatment system for contaminated drinking water
10	Preetha, R.	Dr. I.S. Bright Singh	Bioprocess technology for antagonistic <i>Pseudomonas</i> MCCB 102, 103, <i>Micrococcus</i> MCCB 104, and Evaluation of <i>Synechocystis</i> MCCB 114, 115 as probiotics for the management of <i>Vibrio</i> in Shrimp Culture systems
11	Seena Jose	Dr. A. Mohandas & Dr.I.S.Bright Singh	Shrimp Cell and Tissue Culture
12	Jaison C.A.	Dr. V.Sivanandan Achari	Adsorption characterization of some activated carbon solids and process optimization studies in purification techniques
13	Deepesh V.	Dr. I.S. Bright Singh	Detritus Management in Shrimp Culture Systems
14	Dipson P.T.	Dr. M.V.Harindranathan Nair	An approach to develop a comprehensive urban waste management plan for Kochi City
15	Anil Loveson	Dr. S. Rajathy	Removal of heavy metals using water hyacinth
16	Thapanjith T.	Dr. S. Rajathy	Study on the geomorphology of sub watersheds of Periyar river
17	Surekha mol I.S.	Dr. I.S. Bright Singh	<i>Vibrio harveyi</i> phages in marine systems phylogenetic diversity and applications
18	B. Sreelakshmi	Dr. I.S. Bright Singh	Serological characterization and differentiation of <i>Vibrio alginolyticus</i> and <i>Vibrio harveyi</i> of Penaeid and Non-penaeid culture Systems
19	Charles Thomas K.	Dr. I.S. Bright Singh & Dr. K.G. George	Novel Bioplastics: Development of appropriate bioprocess technology, characterisation and applications



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20	Divya Jose	Dr. A. Mohandas & Dr. I.S. Bright Singh	Thermoalkalophilic proteases and liapses for detergents
21	Pradeep Kumar A.V.	Dr.MV.Harindranathan Nair	Relevance of formulating specific rules and regulations in the context of trade liberalization and globalization
22	Jose Merlin P.L.	Dr. V. Sivanandan Achari	Isolation of poisonous chemicals from Human visceral specimens and removal of fat ingredients in forensic investigations
23	Sasi T.K.	Dr. V. Sivanandan Achari	Removal of dissolved substances from ground water sources by BAC filtration
24	Sherly Thomas	Dr.M.V. Harindranathan Nair	A study on the waste management approaches in sea food processing industry and its socio-economic implications
25	Haseeb M.	Dr. I.S. Bright Singh	Bioremediation technology for zero water exchange shrimp culture system
26	Rose Mary Jose	Dr. I.S. Bright Singh	Unraveling the probiotic effect in shrimp larval rearing systems and its augmentation for enhanced larval survival and productivity
27	Sunitha Paulose	Dr. I.S. Bright Singh	Bioprocess Technology for large scale production of <i>Candida sake</i> as a single cell protein
28	Shyam Kumar R.	Dr. S. Rajathy & Dr. A. Mohandas	Toxicity of industrial effluents in biological systems to develop revised quality standards for discharge
29	Anand M.	Dr. Ammini Joseph & Dr. I.S. Bright Singh	Construction of metagenomic library from Kuttanad soil - a perturbed ecosystem and screening for pesticide degrading genes with special reference to 2,4,D herbicide and their expression in a suitable expression system
30	Anumol V.G.	Dr. S. Rajathy & Dr. Harindranathan Nair	Habitat suitability study of <i>Crossochilus periyarensis</i> (Periyar latia) in river Periyar using GIS
31	Prem Gopinath	Dr. P. Natarajan & Dr. I.S. Bright Singh	Water born Enteric viruses in and around Cochin



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32 Leju S. Valson Dr. I.S.Bright Singh Aerobic composting of municipal Solid waste process upgradation and pollution abatement

17. Seminar / Conference / Workshop / Refresher Course Conducted by the Department : Nil

18. Consultancy work

Sl.No.	Nature of consultancy	Name of Consultant	Sponsoring agency
1	Routine Analysis of environmental samples	Dr. V. Sivanandan Achari	Individuals and Institutions
2	Impact Assessment of Metro rail, Kochi	All Faculty Members lead by Dr. Sivanandan Achari	Metro rail Corporation
3	Ground water and Drinking water analysis	Dr. V. Sivanandan Achari & Dr.I.S. Bright Singh	FACT/ Primus Gloves (P) Limited, SEZ, Cochin/ Lulu International
4	Quantification of Solid Waste Generated in Cochin City, a company looking to generate electricity from synthetic natural gas produced from solid waste from Cochin Port, Navy and star hotels in and around Cochin City	Dr. V. Sivanandan Achari & Dr.I.S. Bright Singh	W2E Programme by Team Sustain, Cochin City

19. Extension Service : Please See Annexure 1

20. Departmental Publications, if any : NIL

21. Any other Achievements :

During the period 2007 – 08 a workshop was conducted on curriculum restructuring of the M.Sc. programme in Environmental Technology and revamped the programme to suit to the changing environmental scenario. Besides, the restructured curriculum has been value added with the content of the syllabi prescribed for the UGC NET examination during the first and second semester so that during the second year of the programme itself the students will be capable to clear the examination.

The National Centre for Aquatic Animal Health could get the final approval of the M. Tech programme in Marine Biotechnology to be launched during the 2008 academic year from Department of Biotechnology, Government of India. The curriculum could be finalized and the programme has been notified along with the 2008 CAT for the admission. The programme is under the National Network programme of Department of Biotechnology in human resource development in Biotechnology. The entire expenditure toward the programme is borne by DBT. The programme was sanctioned by the joint task force of DBT and UGC in Human



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Resource development in Biotechnology. In support to this programme UGC has sanctioned two posts of Lecturers also to the Centre. The course will be offered by the School of Environmental Studies at the National Centre for Aquatic Animal Health.

Annexure -1

National Centre for Aquatic Animal Health
(Regional Resource Centre of Network in Aquaculture Centres Asia - Pacific)
Progress Report - 2007 -08

Centre for Fish Disease Diagnosis and Management was re-designated as National Centre for Aquatic Animal Health on 18th January 2000 and subsequently we could improve our performance and increase the out put under three spheres of activity such as Research and Development, Extension and Education.

Research Personnels

1. Prof. I.S.Bright Singh, Coordinator
2. Prof. A. Mohandas, Emeritus Professor
3. Dr. Rosamma Philip, Lecturer, School of Ocean Science and Technology – Guest Faculty
4. Dr. Valsamma Joseph, Principal Investigator, Women Scientist Schemes, DST
5. Mr. S. Somnath Pai, Research Associate, DBT
6. Ms. N. J. Manju, Senior Research Fellow, ICAR
7. Mr.V.J. Rejish Kumar, Senior Research Fellow, DST
8. Mr. K. Ranjit, Senior Research Associate, UJRF
9. Mr. K. Sreedharan, Senior Research Fellow, MPEDA
10. Ms. Seena Jose, Senior Research Fellow, DBT
11. Mr. N.S. Sudheer, Senior Research Fellow, DBT
12. Mr. V. Deepesh, Senior Research Fellow, ICAR
13. Mr. K.S. Sunish, Teacher Fellow
14. Ms. Gigi Poullose, Senior Research Fellow, CSIR
15. Mr. M. Haseeb, Senior Research Fellow, DBT
16. Ms. P. Priyaja, Senior Research Fellow, DBT
17. Ms. Vrinda S., Senior Research Fellow, DBT
18. Ms. I.S. Surekhamol, Junior Research Fellow, NCAAH
19. Ms. Sreelakshmi B., Junior Research Fellow
20. Ms. Sunitha Paulose, Junior Research Fellow
21. Ms. Divya Jose, Junior Research Fellow, UJRF
22. Ms. Rose Mary Jose, Senior Research Fellow, DBT
23. Mr. Charles Thomas, Junior Research Fellow, DBT
24. Ms. Riya George, Junior Research Fellow, DBT
25. Mr. Jayesh, P. Junior Research Fellow, DBT
26. Ms. Achana, C, Junior Research Fellow, DBT
27. Ms. Ammu Thomas, Junior Research Fellow, NCAAH



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Implemented at National Centre for Aquatic Animal Health

1	Development of appropriate bioremediation technology for zero exchange creek fed shrimp culture system. In collaboration with M/S. Pancham Aquaculture Farms Limited, Mumbai, Period	Dept. of Biotechnology, Govt. of India and M/S. Pancham Aquaculture Farms Limited	19,38,000/-	Prof. I.S. Bright Singh
2	Development of anti-WSSV drugs from mangrove plants endemic to Indian coastal zone	Dept. of Biotechnology, New Delhi	37,45,000/-	Prof.. I.S. Bright Singh
3	Nitrifying bioreactors integrated into prawn hatchery systems: Biofilm structure, population dynamics, and kinetic modeling programme support in marine biotechnology	Dept. of Science and Technology, Government of India	20,32,420/-	Prof. I.S. Bright Singh
4	Development and application of CMG family recombinant hormones, their antagonists and RNA technique for induced maturation and spawning of Penaeus monodon. In collaboration with Central Institute of Brackishwater Aquaculture, Chennai and Dept. of Zoology, Calicut University, Calicut	Dept. of Biotechnology, Govt. of India.	1,38,31,000/-	Prof. I.S. Bright Singh
5	Development of appropriate bioremediation technology for zero-exchange creek-fed shrimp culture system. In collaboration with M/S. Pancham Aquaculture Limited, Mumbai.	Dept. of Biotechnology, Govt. of India.	19,38,000/-	Prof. I.S. Bright Singh
6	Design modification and commercialization of nitrifying bioreactor technology for the establishment of organic recirculation prawn seed production system	Dept. of Biotechnology, Govt. of India.	10.37	Prof. I.S. Bright Singh
7	Expression of virulence of Vibrio harveyi in organic recirculation prawn seed production system (ORPSPS)	University Grants Commission	9.27	Prof. I.S. Bright Singh



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8. Programme support in Marine Biotechnology	Department of Biotechnology, Government of India	128.0	Prof. I.S. Bright Singh
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Research Scholars/ Project Fellows who left the Centre on getting positions elsewhere

1. Dr. R.Preetha, Joined IIT, Chennai as Research Associate

Extension

The Aquaculture Extension Cell of the Centre worked towards helping farmers in completing successful crops of *P. monodon*. Within the State the Services of the Centre could be extended to 257 farms covering an area of 1,102 acres. The service has been extended to Maharashtra, Andhra Pradesh, and Gujarat.

The extension activities of the Centre are supported by the following:

1. Mr. Anishmon, P.K Project Associate (Farm)
2. Ms. Blessy Jose Project Assistant (Microbiologist)
3. Mr. Biju N.J Project Assistant (Farm)
4. Mr. Jaison Antony Project Assistant (Farm)
5. Mr. Soman, A.L Project Assistant (Office)
6. Ms. Surya Sugunan Project Assistant (Chemistry/Microbiology)
7. Mr. Savin K.V Project Assistant (Chemistry/ Field)

Besides, Research Scholars are also assigned with mini extension programmes with in the purview of their research programmes

Continuing education programme: The Centre organized orientation programmes on zero water exchange sustainable shrimp culture at three locations such as

1. Honnavar, Pappinissery, Noth Karnataka on 18-12-2007
2. Kodunagalore, Kerala on 11-8-2007

Education

M.Tech in Marine Biotechnology

The National Centre for Aquatic Animal Health could get the final approval of the M. Tech programme in Marine Biotechnology to be launched during the 2008 academic year from Department of Biotechnology, Government of India. The curriculum could be finalized and the programme has been notified along with the 2008 CAT for the admission. The programme is under the National Network programme of Department of Biotechnology in human resource development in Biotechnology. The entire expenditure toward the programme is borne by DBT. The programme was sanctioned by the joint task force of DBT and UGC in Human Resource Development in Biotechnology. In support to this programme UGC has sanctioned two posts of Lecturers also to the Centre. The course will be offered by the School of Environmental Studies at the National Centre for Aquatic Animal Health.

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SCHOOL OF INDUSTRIAL FISHERIES

The School of Industrial Fisheries was established in 1976 as the Department of Industrial Fisheries under the erstwhile University of Cochin for post-graduate teaching and research on all aspects of fishery science and technology. The Department started offering the M.Sc. course in Industrial Fisheries in 1976 and Ph.D. programme in 1979.

The Department was elevated to the status of the School since 1995 by recognizing the progress and achievements in teaching, research and outreach activities in various fields of Fisheries.

The various activities of the School are now carried out under five well defined division of (1) Aquaculture and Capture Fisheries(2) Fishing Craft and Gear Technology (3) Fish Processing Technology (4) Fisheries Economics and (5) Fisheries Management.

The M.Sc. course in Industrial Fisheries is a multi-disciplinary programme spread over four semesters designed to offer the students the needed scientific, technical and managerial skills to take up responsible positions in industry, administration and management in the fisheries sector of the country and abroad. Restructuring of the present M.Sc. programme into three specialized divisions viz, Aquaculture, Fish Processing Technology and Fisheries Management has been undertaken and the official approval of the programme is underway.

A new course- M.Phil Programme in Fisheries Science is approved by the University and the admission for the course will commence from the year 2008 onwards.

The Ph.D. programme of the School extends to frontier areas of fisheries science and technology, including aquaculture, seafood quality assurance, economics and management. The faculty of the School serves as experts/consultants in many national /international fisheries bodies and has organized/participated in many national/international symposia/workshops.

The School has, apart from bringing out several research reports and conference proceedings, produced a crop of outstanding research articles and books. The School is now recognized as a premier national institution for fishery science/technology education in the country attracting international student enrolment

1. Programmes of Study/Research

1. M.Sc. Industrial Fisheries
2. Ph.D. programme in
 - (a) Fishery Biology and Aquaculture
 - (b) Fishing Craft and Gear Technology
 - (c) Fish Processing Technology
 - (d) Fisheries Economics
 - (e) Fisheries Management



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2 Faculty Members

Sl.No.	Name	Designation	Qualification	Specialisation
1	Dr.Ramakrishnan Korakandy	Professor	M.Sc.,M.Phil, Ph.D.	Fisheries Economics and Management
2	Dr.Saleena Mathew	Professor& Director	M.Sc., Ph.D.	Biochemistry & Fish Processing Technology
3	Dr.B.Madhusoodana Kurup	Professor	M.Sc.,Ph.D.	Fishery Biology & Aquaculture
4	Dr.K.T.Thomson	Reader	M.A, Ph.D.	Fisheries Economics
5	Dr.M.Harikrishnan	Reader	M.Sc, Ph.D.	Industrial Fisheries and Fishery Biology
6	Mr.John Mohan	Senior Lecturer	M.Sc.	Fish Processing Technology
7	Dr. Mini Sekharan	Lecturer	M.Sc, Ph.D.	Fishery Management

3. Visiting Faculty :

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr.P.K.Surendran	Principal Scientist & Head, Fishery Microbiology and Biotechnology Division ,CIFT (Retd)	M.Sc. Ph.D	Microbiology and Fish Processing Technology

4. Research Scholars

Sl.No.	Name	Funding Agency	Guide	Area of Work
1	Rajesh .K	Part-time	Dr.Ramakrishnan Korakandy	Tourism in Development in Kerala
2	Jaisingh Joseph	Self	Dr.Ramakrishnan Korakandy	Impact of globalization on production and marketing of fish.



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Sl.No.	Name	Funding Agency	Guide	Area of Work
3	Beena Sulochanan	Part-time	Dr.Saleena Mathew	Role of antioxidants in preservation of fatty fishes.
4	Prasanth K.M	Harijan Welfare	Dr.Saleena Mathew	Biochemical characterization & Storage of selected species of farmed and marine prawns
5	Manjusha K.P.		Dr.Saleena Mathew	Isolation and characterization of GAG from various fish species for their bioactivity
6	Pearly Tony		Dr.Saleena Mathew	Species variability of phospholipids and their role in lipid oxidation
7	John Chembian	Part – time	Dr.Saleena Mathew	Biological and Biochemical aspects of important oceanic squids in the Indian EEZ
8	Dhanya, P.R	Applied for UJRF	Dr.Saleena Mathew	Potential use of natural antimicrobials for the preservation of commercially important seafoods
9	Abhilash.S	DST (Young Scientist Scheme)	Dr.Saleena Mathew	Current status and future prospects of fish waste management in Cochin Corporation and Aroor Industrial Area.
10	Saritha Thomas	University	B.Madhusoodana Kurup	Evaluation of live food organisms in the larviculture of <i>M.rosenbergii</i>
11	Subhasree Sankar	University	B.Madhusoodana Kurup	Laviculture of <i>M.rosenbergii</i> with reference to extrinsic factors
12	Smt.Anitha	Part-time	B.Madhusoodana Kurup	Impact of ban on monsoon trawling in the pre processing and processing fisheries sector of Kerala



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Sl.No.	Name	Funding Agency	Guide	Area of Work
13.	Joyni M.Jacob	AquAgris	B.Madhusoodana Kurup	Environmental management reform for sustainable farming, fisheries and aquaculture
14	Deepu, A.V.	MoES	B.Madhusoodana Kurup	Assessment of fishery resources along the continental slope and central Indian Ocean
15	Sahadevan,P.	Part-time	B.Madhusoodana Kurup	An assessment of fisheries situation in Kannur and Kasargod districts of Kerala for management planning for sustainable development.
16	Venu.S	Part-time	B.Madhusoodana Kurup	
17	Smitha Nair	Part-time	Dr.A.Ramachandran	Seafood Quality Management
18	Ancy Sebastian	Part time	Dr.A.Ramachandran	Seafood Quality Management
19	Anvar Ali	Part time	Dr.A.Ramachandran	
20	George M.A	CUSAT	Dr.K.T.Thomson	Esturine management
21	Baiju K.K.	Rajiv Gandhi Fellowship.	Dr.K.T.Thomson	Legal pluralism
22	Shyma J	Part time	Dr.K.T.Thomson	Aquaculture economics
23	Rose Wine Joy	Part time	Dr.K.T.Thomson	Economics of Fisheries management
24	Hanumanthappa	Part-time	Prof.(Dr).C. Hridayanathan (Retd)	Studies on the selectivity in trawl fishing gear for conservation of fishing
25	Gracy Mathew	Part time	Prof.(Dr)Kuruville Mathew (Retd)	Studies on the reproductive physiology and breeding biology of the cultivable species of grouper <i>Spinephelus tauvians</i> (Foraskal)
26	Jacob Thomas	Part-time	Prof.(Dr)Kuruville Mathew (Retd)	Population dynamics, stock assessment and biology of <i>Teropon Jarbua</i> (Forsk, 1775) in South West Coast of India



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5. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2	Selection Grade Assistant	1
3	Assistant	1 vacant
4	Senior Grade Typist	1
5	Typist	1 vacant
6	Peon	1
7	Sweeper-cum-Cleaner	1
8	Assistant on Daily Wages	1

6. Technical Personnel

Sl.No.	Designation	No. of Posts
1	Technical Assistant Grade III	1
2	Laboratory Assistant	1
3	Net Maker	1
4	Hatchery Asst.-cum Syrang and Driver	1
5	Hatchery Assistant	1

7. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	M.sc.	12	7	19
2	Ph.D	5	1	6

8. Research Facilities

(a) Laboratories (List out Major equipments available) Separate laboratories for Fishery biology & Aquaculture, Fish processing, Quality Control and Fishing technology. Major equipments include UV visible spectro photometers, High speed Centrifuge, Research microscope, Deep Freezers, Refrigerated Centrifuges, Camera attached microscopes, Electrophoretic units, Refractometers, Laminar flow, Micro pipette, Genie- Mini Sub system analytical model, Water still 6 ltr, Digital power pack PS 500, Refractometer & soil pH meter, TA plus food texture analyzer, Variable accupipette, microscope –students type, HPLC gas chromatograph, Biophotometer, Ultra pure Water Purification System-Milli Q etc.

(b) Library: No separate library. Books bought by the School are kept in the library of Marine Sciences



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No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
Books-1914, Journals-1812	Books-22, Journals-30

(c) Others: Fishing Vessel (King Fisher)

9. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1	Mr.Kuruvila Thomas, IFS,	Director (Marketing)MPEDA	Delivered the first lecture in the Popular Lecture series organized by the School & the Alumni Association. Topic –Prospects of Seafood Export Marketing.
2	George L.S.Skoutarides	Master Fisherman/ Fisheries Advisor, NSW, Australia	Delivered the second lecture in the Popular Lecture series organized by the School & the Alumni Association Topic -Tuna long line fishing and onboard handling of Sashimi grade tuna
3	Dr. Fiksel Berker Dr. Svein Gentoft	University of Manitoba	SHARP project of Dr. K.T. Thomson
4	Dr.Umesh C.Goswami	Dept.of Zoology Guahati University	Discussion with Dr.B.Madhusoodana Kurup
5	Dr. P. Keshavanath	Dean, College of Fisheries, Mangalore	
6	Dr.V.Vivekandan	SIFFS, Thiruananthapuram	
7	Dr.Vincenzo ZONNO Dr.Raffaele	Aquagris Project Co-ordinator, Marine Center for Tropical Marine Aquaculture and fisheries Research Center, Department of Biological and Environmental Science and Technology, Università del Salento Lecce- Italy	Aquagris Project Co-ordinator Discussion with Dr.B.Madhusoodana Kurup



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- 8 Dr. Andreas Kunzmann Center for Tropical Marine Ecology (ZMT) Bremen, Germany
- 9 Mr. Tim Jennerjahn
- 10 R.A. Sreepada Aquaculture Laboratory National Institute of Oceanography (NIO) Dona Paula, Goa

10. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Studies on the microbial bio-process underlying the control of Carbon/ Nitrogen ratio in shrimp culture systems.	Johny T.Varghese	Dr.B.Madhusoodana Kurup
2	Habitat and species inventory of freshwater fishes of Kerala and inventory of lifehistory traits of selected fishes having aquaculture potential	Manojkumar, T.G	Dr.B.Madhusoodana Kurup
3	Systematics, germplasm evaluation and pattern of distribution and abundance of freshwater fishes of Kerala (India)	Radhakrishnan, K.V	Dr.B.Madhusoodana Kurup
4	Economic value of wetlands	Susan Abraham	Dr.K.T.Thomson

11. Publications

a. Papers

Sl.No.	Name of Paper
1.	Kurup, B.M., Radhakrishnan, K.V., M.Harikrishnan (2008) Population characteristics and stock assessment of <i>Puntius denisonii</i> (Day) in Kanjirapuzha River , Kerala (South India) In pp 89-98.
2.	Kurup, B.M., Boopendranth, M.R., Ravindran, K., Sairabanu, Nair, A.G (Eds.) Ornamental Fish, Breeding, farming and Trade. Dept. of Fisheries, Govt.of Kerala. 280p
3.	Harikrishnan, M and B.Madhusoodana Kurup (2008) Potential of snapping shrimps as ornamentals. Pp 107-113. Kurup, B.M., Boopendranth, M.R., Ravindran, K., Sairabanu, Nair, A.G (Eds.) Ornamental Fish, Breeding, farming and Trade. Dept. of Fisheries, Govt.of Kerala. 280p



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4. B.M.Kurup, Jinson Joseph and M.Harikrishnan (2008) Indigenous ornamental fish germplasm inventory of India with reference to need for a paradigm shift of the industry from wild caught to farmed stock. International Seminar on Ornamental Fish Breeding, Farming and Trade Ornamentals Kerala 2008 2-3 February, 2008 Cochin (Abstract Ws.IV01)
5. Kurup, B.M. (2008) Inland fisheries development in Kerala:Prospects and challenges. Fishing Chimes Vol.27 p43.
6. B.M.Kurup and Varghese, J.T. (2007) Effect of various carbohydrate addition in the extensive culture of *Penaeus monodon* in the control of C/N ratio. In Aquaculture 2007 Science for Sustainable Aquaculture Feb26-Mar-2,2007 San Antonio, Texas.
7. B.M.Kurup and Varghese, J.T. (2007) Yield characteristics and economic analysis of farming of *Macrobrachium rosenbergii* under the farming systems in Pokkali fields of Kerala. In Aquaculture 2007 Science for Sustainable Aquaculture Feb26-Mar-2,2007 San Antonio, Texas
8. Deepu, A.V. and B.M.Kurup (2007) Distribution, length-weight relationship and biology of *Coryphaenoides macrolephus* (Alcock, 1889) from the continental slope of Indian EEZ. In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India Book of Abstracts (no.CFO 022)
9. Kurup, B.M. , Vipin, P.M. and M.Harikrishnan (2007) Exploited fishery of Azheekode Estuary, Kerala (South India) In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India Book of Abstracts (no.CMP 11)
10. Thomas, S. and B.M.Kurup (2007) The use of microalga *Isochrysis galbana* in the seed production of *Macrobrachium rosenbergii* (de Man) using the modified static green water system In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India Book of Abstracts (no. AQP044)
11. Kurup, B.M. and Vipin, P.M (2007) Nutritional evaluation of various plant and animal protein sources in the diets of Asian sea bass *Lates calcarifer*. In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India Book of Abstracts (AQP 052)
12. Kurup, B.M, Vipin, P.M. and Jacob, M.J. (2007) Impact assessment of cage culture of Asian seabass *Lates calcarifer* (Bloch, 1970) in Azheekode estuary, India. In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India Book of Abstracts (EPO 025)
13. Kurup, B.M., Mercy, T.V.A. and Sulekha, B.T. (2007) Pesticide induced histopathological changes in different organs of the freshwater fishes of Kuttanad – a tool to assess water quality and the health status of fishes. In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India Book of Abstracts (EPO 036)
14. Kurup, B.M. and Shankar , S. (2007) Biochemical stress responses in tissues of juveniles of *Macrobrachium rosenbergii* (de Man) on acute exposure to monocrotophs. In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India Book of Abstracts (EPP 023)



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15. Kurup, B.M. and Varghese, J.T.(2007) Effects of various modes of application of carbohydrate and diet having various protein levels in the production and sustainability of *Penaeus monodon* (Fabricius) In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India Book of Abstracts (NTO 030)
16. Kurup, B.M and K.V. Radhakrishnan (2007) *Tor remadevii*, A new species of Mahseer from Kerala (South India) and distribution and abundance of *Tor* spp in the rivers systems of Kerala. In Mahseer 2006- Pp 53-60. In: Christianas, A. et al (Eds.) Mahseer , Malaysian Fisheries Society.
17. Kurup, B.M, Manojkumar, T.G. and M.Harikrishnan (2007) Life history traits and population dynamics of *Tor khudree* (Sykes, 1839) of Periyar Lake, India: In Mahseer 2006 –pp: 129-143 In: Christianas, A. et al (Eds.) Mahseer , Malaysian Fisheries Society.
18. Kurup, B.M. and Radhika Rajasree (2007) Status of bottom trawl fishery in Kerala (South India) Fishery Technology, Vol.44(1) pp 99-108
19. Kurup, B.M and K.V.Radhakrishnan (2007) Fish fauna from Western and Eastern Ghats of India and prevailing threats from natural and anthropogenic issues. Pp47-69 In: Umesh, C.Goswami (Ed.) Natural and Anthropogenic Hazards on Fish and Fisheries. Narendra Publishing House, Delhi.
20. Kurup, B.M. (2007) Marine fishery resources of Kerala with reference to conservation and management. Proc.Reg.Sem.Blue Revolution, L.F.C.Gvr.2007/p-67.
21. Sekharan, M.S. and A.Ramachandran (2007) A probe into the constraints encountered in exporting ornamental fishes from India - . In 8th Asian Fisheries Forum, November 20-23, 2007 Kochi India
22. Sekharan, M.S. and A.Ramachandran (2008) Strategies for enhancing ornamental fish exports from Kerala, India. International Seminar on Ornamental Fish Breeding, Farming and Trade Ornamentals Kerala 2008 2-3 February, 2008 Cochin
23. Manjusha, K.P. and Saleena Mathew (2007) Extraction and purification of Proteoglycans from the dermal tissue and gladius of *Loligo duvaucelli*, 8th Asian Fisheries Forum, organized by Asian Fisheries Science, Cochin
24. Thomson, K.T. and K.K.Baiju (2008) Policies, legal pluralism and conflict management: Evolving negotiations of Marine fisheries governance in Kerala. Paper presented at 4th MARE Conference on People and Sea IV July 5- 7, 2007 held at Amsterdam, The Netherlands
25. Jentoft, S.,, Bavinck, M., Johnson, D. and K.T.Thomson (2008) Co-management and legal pluralism: How a problem become an institutional one. Human Organizations (in press)
26. Thomson, K.T. (2007) Marine fisheries, knowledge production and distribution. In: SenGupta, N (Ed) Economic studies of indigenous and traditional knowledge. Academic Press, New Delhi.

B. Books:

Sl.No.	Name of Book
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- 1 Fisheries Development in India: The political economy of unsustainable development (in Two volumes) Kalpaz Publication, Delhi by Prof (Dr) Ramakrishnan Korakandy
- 2 Ornamental fish breeding, farming and trade – jointly edited by Dr.B.Madhusoodana Kurup

12. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr.Ramakrishnan Korakandy	One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris)	Participant
Dr.Saleena Mathew	8 th Asian Fisheries Forum, November, 20-23, 2007, Cochin	Organizing committee member
	One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris)	Participant
	DST Workshop on “Cluster project on instrumentation and sensors for food processing” on 19 th to 21 st July 2007 at CFTRI, Mysore	Presentation of Research Project
	International Seminar on “Moving towards gender sensitization of trade policy” organized by UNCTAD, India from 25.02.08 to 27.02.08 at New Delhi	Tier II partner of UNCTAD
	Seminar /Awareness Workshop on Technology development and utilization for women organized by KSIDC and DSIR Govt. of India on 22.02.08 at Thiruvananthapuram	Participant
Dr.B.Madhusoodana Kurup	Aquaculture 2007 Science for Sustainable Aquaculture February 26 March 02, 2007 San Antonio, Texas	Presented three papers



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	Bremen conference of AquAgris, Germany	Participant
	International Symposium “Ornamentals Kerala 2008” Feb2-4, 2008 Cochin	Chairman, Organizing Committee
	One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris)	Organizing Secretary
	8 th Asian Fisheries Forum, November, 20-23, 2007, Cochin	Organizing committee member Presented eight papers
	One Day National Workshop “IndAquaria” organized by MPEDA	Participant
Dr.K.T.Thomson	4 th MARE Conference on People and Sea IV held from July 5-7, 2007, Amsterdam, The Netherlands	Presented a paper
	Futures Conference organized by National University of Ireland, Galway, November, 24-25, 2007	Presented a paper
Sri.John Mohan	One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris)	Participant
	International Seafood Trade Fair 2008	Participant
Dr.M.Harikrishnan	International Symposium “Ornamentals Kerala 2008” Feb2-4, 2008 Cochin	Presented three papers Organizing committee member
	One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris)	Convenor
	8 th Asian Fisheries Forum, November, 20-23, 2007, Cochin	Presented one paper
	One Day National Workshop	Participant



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	“IndAquria” organized by MPEDA India International Aquarium Show, 2008 from 01-05 February, 2008 held at Cochin	Student co-ordinator
	VHSE Expo- Exhibition organized by Vocational Higher Secondary Education held at Marine Drive January 15-18	Student co-ordinator
Dr.Mini Sekharan	International Symposium “Ornamentals Kerala 2008” Feb2-4, 2008 Cochin	Participant
	8 th Asian Fisheries Forum, November, 20-23, 2007, Cochin	Presented paper
	India International Aquarium Show, 2008 from 01-05 February, 2008 held at Cochin	Student co-ordinator
	VHSE Expo- Exhibition organized by Vocational Higher Secondary Education held at Marine Drive January 15-18	Student co-ordinator
Post Graduate students (M.Sc.Industrial Fisheries)	India International Aquarium Show, 2008 from 01-05 February, 2008 held at Cochin	Participated by setting a stall
	VHSE Expo- Exhibition organized by Vocational Higher Secondary Education held at Marine Drive January 15-18	Participated by setting a stall
Shubhasree Shankar (Research Scholar)	8 th Asian fisheries Forum November, 20-23, 2007, Cochin.	Presented a paper
	International Symposium “Ornamentals Kerala 2008” Feb2-4, 2008 Cochin.	Organization & Participation
	One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris).	Organization & Participation
	India International Aquarium Show, 2008 from 01-05 February, 2008 held at Cochin.	Participant
Manjusha, K.P	8 th Asian fisheries Forum	Presented a paper



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(Research Scholar) Deepu A.V (Research Scholar)	November, 20-23, 2007, Cochin. 8th Asian fisheries Forum November, 20-23, 2007, Cochin. International Symposium “Ornamentals Kerala 2008” Feb2-4, 2008 Cochin. One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris). India International Aquarium Show, 2008 from 01-05 February, 2008 held at Cochin.	Presented a paper Organization & Participation Organization & Participation Participant
Joyni Jacob (Research Scholar)	8th Asian fisheries Forum November, 20-23, 2007, Cochin. International Symposium “Ornamentals Kerala 2008” Feb2-4, 2008 Cochin. One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris). India International Aquarium Show, 2008 from 01-05 February, 2008 held at Cochin. International Conference on Biodiversity Conservation and Management (BIOCAM 2008) Rajiv Gandhi Chair in Contemporary studies, CUSAT, Cochin. National seminar on ‘Bioactive compounds from marine organisms organized by Dept. of Marine Biology Microbiology and Biochemistry, Cochin University of Science and Technology (CUSAT). Group Monitoring Workshop, DST at Birla Institute of	Presented a paper Organization & Participation Organization & Participation Participant Participant Participant
Abhilash.S		Presentation of Project Review



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Saritha Thomas (Research Scholar)	Scientific Research, Jaipur from 15 th to 16 th January,2008	
	International Symposium “Ornamentals Kerala 2008” Feb2-4, 2008 Cochin.	Organization & Participation
	One Day National Level Consultation workshop on Environmental management reform for sustainable farming, fisheries and aquaculture (AquAgris).	Organization & Participation
	India International Aquarium Show, 2008 from 01-05 February, 2008 held at Cochin.	Participant
	National seminar on ‘Bioactive compounds from marine organisms organized by Dept. of Marine Biology Microbiology and Biochemistry, Cochin University of Science and Technology (CUSAT).	Participant
	8 th Asian fisheries Forum November, 20-23, 2007, Cochin.	Presented a paper

13. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	Assessment of fishery resources along the continental slope and central Indian Ocean	MoES Funded project	45 Lakhs	Dr. B.Madhusoodana Kurup
2	Developments of fish gerplasm capture fisheries and biodiversity threats of the reviews of Kerala.	KCSTE funded project		Dr. B Madhusoodana Kurup
3	Environment management reform for sustainable farming, fisheries and aquaculture (AquAgris)	Commission of the European communities under the 6 th frame work program for research and technological development.	29752 Euro	Dr. B Madhusoodana Kurup



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4	Fish waste management and its socio-environmental impact assessment in Cochin Corporation and Aroor industrial Area	DST	Rs.7.85 Lakhs	Abhilash, S (YSS) & Saleenam Mathew (Mentor)
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14. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1.	Studies on natural antimicrobial agents	Dr.Saleena Mathew
2.	Fish waste management.Extraction and characterization of bioactive compounds from fish and discards	
3	Low cost aquaculture production systems	Dr.B.Madhusoodana Kurup
4	Molecular taxonomy of deep sea fishes.	
5	Feeding trials of fingerlings of seabass	
6	Diagnosis of freshwater fish marketing	
7	Carbon Nitrogen ratio optimization in farming of scampi	
8	Larval rearing of <i>Macrobrachium rosenbergii</i>	
9	Fisheries Governance	Dr.K.T.Thomson
10	Multifunctional agriculture and brackishwater ecosystem governance	
11	Study on commercially important cephalopods.	John Mohan
12	Taxonomy on snapping shrimps	Dr.M.Harikrishnan
13	Captive rearing of ornamental crustaceans	
14	Marketing of ornamental fishes	Dr.Mini Sekharan

15. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1	One Day National Level Consultation Workshop on Environmental Management Reform for Sustainable Farming, Fisheries and Aquaculture (AquAgris) held at International Hotel, Cochin	One Day 16 th November, 2008	Dr.B.Madhusoodana Kurup	European Commission
2	International Symposium on Ornamentals Kerala 2008 held at Renaissance, Cochin	3 days February 2-4, 2008	Dr.B.Madhusoodana Kurup	Govt. of India, Govt. of Kerala, FIRMA

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SCHOOL OF LEGAL STUDIES

Established as the P.G. Department of Law of the Kerala University in 1962 under the leadership of the late Prof.(Dr.) A.T. Markose, an Internationally reputed jurist who was the founder Director of the Indian Law Institute, New Delhi and the Deputy judge of International Administrative Tribunals the School of Legal Studies remains as a prestigious institution in the Campus. It's pioneering efforts in encouraging P.G. studies and research in the vital field of administrative law earned it name and fame.

Its commitment to social development has made it to develop teaching and research in socially relevant and nationally important emerging areas of law such as Constitutional Law, Criminal Law, Consumer Protection Law, Environmental Law, Human Rights, Commercial Law, Labour Law, Maritime Law and Intellectual Property Law. Its consistent dedication to social change has attracted the attention of the UGC and Govt of India. Its programmes in Human Rights and Intellectual Property Rights Law are now substantially supported by these agencies. The Library of the Shool has rich collections of study materials and books. This priced holding and exceptional services have helped it gain global recognition as a Nodal Centre for IPR studies. Its faculty helped it gain global recognition as a Nodal Centre for IPR studies. Its faculty is being consulted by various agencies including the Govt. of India for law reforms. The institution takes pride in having its alumni at different levels of such as High Court Judges, District Judges, Senior Professors of leading Law Schools, Law Officers in various financial institutions and leading members of the Bar in almost all parts of India. The School has been organizing Seminars, Symposia both at national and local levels and Re-fresher programmes for law teachers to help the participants to update their knowledge in emerging areas of law. The Public Law Lecture series established by the School has already Produced commendable works in law. The LL.B. programmes, started in 1994 as an evening programme has now been made as Semesterised, full time day 5 year (Hons.) programme. The School has been fortunate to attract scholars having experience and education at different parts of the world to be in its vibrant teaching faculty.

Thrust Areas of Research:

Criminal Law	Jurisprudence	Constitutional Law
Environmental Law	Consumer Law	Human Rights Law
Intellectual Property Rights		

1. Programmes of Study/Research: LL.B., LL.M. and Ph.D.

2. Faculty Members

Sl.No	Name	Designation	Qualification	Specialisation
1.	Dr. K.N.Chandrasekharan Pillai	Dean	B.Sc.(Kerala) , LL.M.(Delhi), L.L.M.S.J.D. (Michigan)	Criminal Law Criminal Procedure Human Rights



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Sl.No	Name	Designation	Qualification	Specialisation
2.	Dr.G. Sadasivan Nair	Professor Emeritus	B.Sc.(Kerala), LL.B. (Delhi) LL.M., Ph.D. (Cochin)	Jurisprudence Criminal Law
3.	Dr. D. Rajeev	Reader	M.A., LL.B. (Kerala) LL.M. Ph.D.(Cochin)	Administrative Law Constitutional Law
4.	Dr. A.M. Varkey	Reader	M.A., LL.M.(Kerala) Ph.D. (Cochin)	Maritime Law Commercial Law
5.	Dr. N.S. Gopala-krishnan	Reader	LL.M., Ph.D.(Cochin)	Commercial Law Criminal Law Intellectual Property Law
6.	V.S. Sebastian	Senior Lecturer	B.A.,(Kerala), LL.B.(Raipur) LL.M. (Cochin)	Labour Law Commercial Law
7.	Dr. Valsamma Paul	Lecturer	M.A. (Kerala) LL.M., Ph.D. (Cochin)	Administrative Law Labour Law Environmental Law
8.	Dr. N.S. Soman	Lecturer	LL.M., Ph.D. (Cochin)	Human Rights
9.	P.S. Seema	Lecturer	LL.M.(CUSAT)	Human Rights
10.	Smt. Sindhu Soman	Lecturer on contract basis	LL.M., NET	Commercial Law Constitutional Law
11.	Prof Sathyaseelan A.	Lecturer on contract basis	LL.M., NET	Commercial Law & Administrative Law
12.	Smt. Joby Bhasker	Lecturer on contract basis	LL.M., NET	Commercial Law & Constitutional Law
13.	Smt. Dayana M.K.	Lecturer on contract basis	LL.M., NET	Intellectual Property Law Land Laws
14.	Smt. Lekshmi G.R.	Lecturer on contract basis	LL.M., NET.	Juvenile Justice
15.	Smt. Lina Acca	Lecturer on contract basis	LL.M.	Judicial Process
16.	Smt. Asha Sundaran	Lecturer on contract basis	LL.M., Net	Criminology and Penology



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3. Visiting Faculty (if any)

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Sri. Vidyuth K.S.	Lecturer on contract basis	LL.M., NET	Law of Contract, International Law, Land Laws, Insurance Law, Administrative Law, Contract II, International Law
2.	Dinesh. P.T	Lecturer on contract basis	LL.M.	Law of Contract, Civil Procedure Code and Limitation Act, Environmental Law, Interpretation of Statutes, Professional Ethics Accountancy for Lawyers and Bar Bench Relation Contract II, Legal Language & Legal Writing, (Transfer of Property) Property Law, Banking Law, Environmental Law, Professional Ethics
3.	Dr.K. Balakrishnan	Lecturer on contract basis	LL.M., Ph.D.	Law of Crimes, Drafting, Pleading and Conveyancing, Professional Ethics Accountancy for Lawyers & Bar Bench Relation, Moot Court etc., Criminal Procedure Code, Public Interest Lawyering, Legal Aid and Para Legal Services, Professional Ethics
4.	Prof. Marcus	Lecturer on contract basis	LL.M.	Law of Crimes, Law of Evidence
5.	Ambily. C.S	Lecturer on contract basis	LL.M.	Family Law I
6.	Abraham. P Meachinkara	Lecturer on contract basis	LL.M.	Law of Evidence Environmental Law,



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Sl.No.	Name	Designation	Qualification	Specialisation
7.	Sri. S.Bhaskar Iyer	Lecturer on contract basis	MA, M.Phil	Interpretation of Statutes, International Law Labour Law, Jurisprudence, International Law, Land Laws, Human Rights Law, Legal Language & Legal Writing, Company Law, Banking Law
8.	S.M. Prasanth	Lecturer on contract basis	LL.M.	Civil Procedure Code and Limitation Act, Drafting, Pleading & Conveyancing, Professional Ethics Accountancy for Lawyers and Bar Bench Relation, Public Interest Lawyering, Legal Aid and Para Legal Services, Professional Ethics
9.	Dr.N.S. Chandrasekharan	Lecturer on contract basis	LL.M.	Jurisprudence, Interpretation of Statutes, Interpretation of Statutes
10.	Mahesh.T. Pai	Lecturer on contract basis	LL.M.	Drafting, Pleading and Conveyancing, Professional Ethics Accountancy for Lawyers and Bar Bench Relation, Moot Court etc. Public Interest Lawyering, Legal Aid and Para Legal Services, Professional Ethics
11.	Dr. V.D. Sebastian	Guest Faculty	LL.M. Ph.D.	Interpretation of Statutes, Administrative Law, Interpretation of Statutes

4. Research Staff:

Sl.No.	Name	Designation	Qualification	Specialisation
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Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr. Ajitha. T.G	Research Officer	LL.M, Ph.D	Intellectual Property Rights Criminal Law & Commercial Law
2.	Smt.Prabha. S. Nair	Research Associate	LL.M	Intellectual Property Rights & Environmental Law
3.	Smt. Clara Vandrek	Stenographer cum Documentation Assistant	B.A. Degree with Type-writing (H) & Shorthand (L)	---

5. Research Scholars:

Sl.No.	Name	Funding Agency	Guide	Area of work
1.	Pauly Mathew (P.T)		Dr. D.Rajeev	Environmental Protection under Public Health Laws
2.	Harikumar. C (P.T)		Dr. N.S. Soman	Judicial Response to socio-economic offences
3.	S. Gopakumaran Nair (P.T)		Dr.K.N.Chandrasekharan Pillai	Judicial Review of Academic Matters
4.	P.S. Seema (P.T)		Dr. N.S. Soman	Farmers: The Victims of modernization: Challenges for Law in the third world
5.	Anil. R. Nair (P.T)		Dr.G. Sadasivan Nair	Constitution for Empowerment-Constitutional policy of Education
6.	Mini. S (TVM) (P.T)		Dr. D. Rajeev	Social Security of Labour in the New Indian Economy
7.	Mini. S (Palakkad) (P.T)		Dr. D. Rajeev	Legitimate Expectation in Commercial Transaction
8.	Pradeep. K.P (P.T)		Dr.G. Sadasivan Nair	Ambit of sale after the 46 th Amendment to the Constitution of India
9.	Binumole. K (P.T)		Dr. A.M. Varkey	Law as Transboundary movement of Hazardous Substances



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Sl.No.	Name	Designation	Qualification	Specialisation
10.	Anitha. O.S (F.T)	Uty. JRF	Dr. D. Rajeev	Tortions Liability for Violation of Human Rights
11.	Susmitha. P. Mallaya (F.T)	Uty. JRF	Dr. A.M. Varkey	Law on Letter of Credit and Bank Guarantees – An Indian Perspective (Thesis submitted)
12.	Jasmi. P.M (P.T)		Dr. Valsamma Paul	Recovery of Advances by Financial Institutions with special reference to Banks
13.	Jacob Joseph (P.T)		Dr. N.S. Soman	A critical study of the Legal Regime on G.M.O's with special emphasis on Transgenic Plants –
14.	Vani Kesari. A (P.T)		Dr. N.S. Soman	Sanctity of Life in the context of Human Genetic Research
15.	Ravidasan. N.S (P.T)		Dr. G. Sadasivan Nair	Arbitration agreement and Judicial Remedies in Arbitration with reference to Interim measures and Review of Arbitral Awards
16.	Asha. R.K (F.T)		Dr. G. Sadasivan Nair	Victimisation of women: Causes of Denied Justice (Victimology)
17.	Aravinda Kumar Babu. T.K (F.T)		Dr. N.S. Gopala-krishnan	Protection of Geographical Indications in India
18.	Preetha.S.(F.T.)	UGCJRF	Dr.A.M. Varkey	Company Law
19.	Sindhu soman (P.T.)		Dr.N.S. Gopala-krishnan	Intellectual Property protection of Ayurvedic preparatory: A study with special reference to Ayurvedic Industry.
20.	Shanmugham D. Jayan (P.T.)		Dr.N.S. Gopala-krishnan	Legal Concept of Information in Digital Technology
21.	Prabha S. Nair(F T)		Dr.N.S. Gopala-krishnan	International initiatives for regulating access to



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Sl.No.	Name	Funding Agency	Guide	Area of work
22.	Veena Krishnan(F T)		Dr.D. Rajeev	genetic resources. The Rights of Aboriginal: a comparative study.
23.	Saleena. K.B. (F T)		Dr.N.S. Gopala- krishnan	Exceptions and limitations to Intellectual Property Rights
24.	Vidyuth K.S. (F.T)	UGC – JRF applied	Dr.Valsamma Paul	Environmental Jurisprudence in India with special reference to construction Industry.
25.	Sreeja. R.L. (P.T)		Dr.G. Sadasivan Nair	Consumer Protection in online transaction.
26.	Dinesh. P.T. (P.T)		Dr.Valsamma Paul	Money laundering Laws – A study with special relevance to prevention of Money laundering in India.
27.	Sony Vijayan (F. T)		Dr.A.M. Varkey	Law on control of maritime port pollution – Indian perspective
28.	Somanadhan Anila (F.T)		Dr.Valsamma Paul	Misleading advertisement and Consumer Protection
29.	Anuja.S. (F.T)		Dr.Valsamma Paul	Rights of Women in domestic Relations – Law and emerging challenges
30.	Bineeshkumar.B.S.(F.T)		Dr.N.S. Soman	Legal control over experimentation on Human beings
31.	Suchitra.S. (F, T)		Dr.D. Rajeev	Immunity of Legislation from Judicial Review.
32.	Binu Poornamodan Cholayil (PT)		Dr. V.S.Sebastian	Intellectual Property Law
33.	Ambily T. (FT)		Dr. V.S.Sebastian	Labour Law - A legal and functional analysis of collective bargaining in Udyogamandal Industrial



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Sl.No.	Name	Funding Agency	Guide	Area of work
34.	Premsy P.N. (PT)		Dr. V.S.Sebastian	Area State Responsibility and Corporate Accountability under the Human Rights Treaties
35.	Gifty Oommen (PT)		Dr. V.S.Sebastian	Right to Privacy - Human Rights
36.	Regi Joseph (PT)		Dr. V.S.Sebastian	Service and Working Conditions of Employees of unaided Schools in Kerala - A Study (Labour Law)
37.	Lekshmi G.R. (PT)		Dr. V.S.Sebastian	Rights of minority under Indian Constitution

6. Administrative Personnel:

Sl.No.	Designation	No. of Posts
OFFICE		
1	Section Officer (Hr. Grade)	1
2	Selection Grade Assistants	2
3	Selection Grade Typist	1
4	Assistant Grade II	2
5	Peons	3
6	Sweeper Cum Cleaner	1
LIBRARY		
1	Assistant Librarian (Sr. Grade)	1
2	Junior Librarian	1
3	Professional Asst. Gr. I	1
4	Library Assistants Gr. II	2

7. Technical Personal : Nil

8. Student Enrolment :

Sl.No.	Course	Men	Women	Total
1	LL.M.	15	22	37
2	LL.B.	6	17	23



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3	Ph.D.	12	25	37
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9. Research Facilities

a. Laboratories (List out Major Equipments available) : Nil

b. Library

No. of books and Journals as on 31 st March of the Previous Year	Additions during the current year
26290	576

c. Others : NIL

10. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1	Mr. David M.Malone	High Commissioner of Canada to India	—
2	Hon'ble Mr. Justice K.Thankappan	Formerly Judge, High Court of Kerala	—
3.	Hon'ble Mr. Justice Thottathil B.Radhakrishnan	Judge, High Court of Kerala	—

11. Ph.D. Awarded : NIL

12. Publications :

(a) Papers:

Sl. No.	Name of faculty	Name of Paper
1.	Dr. N.S. Gopalakrishnan	1. Explosing the relationship between GI and TK : An analysis of the legal tool for GI Protection in Aisa, ICTSD, Geneva 2. Intellectual Property Laws, Annual Survey of India Laws 2007
2.	Dr.A.M.Varkey	1. Law of Banking and Negotiable Instruments by Avtar Singh (2006) CULR 476. 2. M.S.Nilas Law of suspension by R.Prakash (2006) CULR 473. 3. Principles of Mercantile Law by Avtar Singh (2006) CULR 319.
3.	Dr.V.S. Sebastian	1. Consumer Interest in Trade Mark Protection CULR 2007



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|----|------------------|--|
| | | 2. Medical Profession and the Consumer (Seminar paper) Nov. 2007 |
| 4. | Dr.Valsamma Paul | 1. Compensatory benefits under the ESI Act |
| 5. | Dr. N.S. Soman | 1. Legal Control of under Ground water (to be published in CULR)
2. Doctors Liability for negligence |
| 6. | Smt. P.S. Seema | 1. Relationship between International Humanitarian Law, International Human Rights Law & Public International Law (Accepted for publication in a book as a chapter)
2. Human Reproductive cloning-Human Rights overtones (Accepted for publication) |

b) Books:

Sl. No.	Name of faculty	Name of Book
1.	Dr. N.S. Gopalakrishnan	Cases and Materials in Intellectual Property Law, Eastern Book Co. (in press)

13. Participation in Seminar/Conference/Refresher Courses etc. by Faculty/Students:

Name of Participant	Name of Seminar/Conference/Workshop	Role
1.Dr.N.S.Gopalakrishnan	1.Indian Delegation to the 2nd Special Session of Standing Committee on Copyrights and Related Rights (SCCR), WIPO, Geneva, June 2007	Member
	2.International symposium on "Origin Based Crops and Products: Enhancing Values of Local Heritage and Land Tenure Recomposition in Southern Countries", Addis Ababa, Ethiopia, April 2007.	Speaker
	3.Panacea-2007, IIT Madras, December 2007.	Invited Speaker
	4.High Court Judges Conference on IPR, National Judicial Academy, Bhopal, August 2007.	Speaker
	5.Round Table on Judges in Karnataka on IPR Adjudication, Bangalore, August 2007	Resource person
	Copyrights and Related Rights (SCCR), WIPO, Geneva, May 2006.	Indian Delegate.



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2. Dr.A.M. Varkey	1.National Seminar “Self financing Professional educational institutions	Presented paper
	2.Ethics morality and Religion National Seminar on discourse Human Rights Values.	Presented paper
	3.National Seminar on Human Rights and Criminal Justice Administration	Participant
	4.Workshop on Human Rights and the Police	Participant
3. Dr. V.S. Sebastian	1.U.G.C. National Seminar on Ethics Morality & Religion (4-6 Oct. 2007)	Participant & Session Chairman
	2.National Seminar on Medical Negligence Recent Trends in India (17-18 Nov. 07)	Resource Person
	3.UGC National seminar on Human Rights and Criminal Justice Administration	Participant & Session Chairman
	4.National Conference on self-financing Educational Institutions 14.3.2008	Participant & Session Chairman
	5.Workshop on Human Rights and the Police	Participant
4. Dr.Valsamma Paul	1.Seminar on ‘Nithin Schedule’	Paper presented
	2.UGC sponsored seminar on “Ethics Morality and Religion : A Discourse on Human Rights”	Paper presented
	3.UGC sponsored seminar on Human Rights and Criminal Justice Administration	Paper Presented
	4.National Conference on self-financing Educational Institutions	Paper Presented
	5.Workshop on Human Rights and the Police	Participant
	6.Workshop on Kerala Laws Reforms	Paper Presented
5. Dr.N.S. Soman	1.National Seminar on Human Rights	Co-ordinator
6. P.S. Seema	1.Human Rights & the Religion (Seminar)	Participant
	2.Seminar on Human Rights & the Police (At MES College, Perumbavoor)	Resource person
	3.Seminar on Domestic violence & sexual harassment (Training for Judicial officers) at High Court	Resource person
	4.Seminar on Protection of women from Domestic Viloence Act (conducted by	Resource person



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7. Dr. D. Rajeev
- All India Lawyers Association at Trichur
1. Organized a UGC National seminar on "Human Rights and Criminal Justice Administration" on 29.2.08 & 1.3.08
 2. Organized a National Conference on self-financing Professional Educational Institutions : Role of State on 14th and 15th March 2008
 2. Organized a UGC workshop on Human Rights and Police on 29th March 2008.
- Organiser

14. Awards/Honours/Fellowships etc. received : Nil

15. Sponsored Research Projects:

Sl.No.	Title	Sponsoring Agency	Amount (in Rs.)	Investigators
1.	Setting up of IPR chair in the University under the scheme of Intellectual Property Education Research and Public outreach	MHRD Govt. of India	Rs.10,00,000/- (Full Amount not yet received)	Dr. N.S.Gopalakrishnan Professor & Coordinator School of Legal Studies
2.	Project on Issues on the Relationship between the TRIPS Agreement and the CBD	Department of Commerce, Trade Policy Division, Govt. of India & IIFT, New Delhi	Rs.2,55,000/-	Dr. N.S.Gopalakrishnan Professor & Coordinator School of Legal Studies

16. Research Programmes and Activities : Nil

17. Seminar/Conference/Workshop/Refresher Courses conducted by the Department:

Sl. No.	Title	Duration	Co-ordinator	Funding Agency
1.	National Seminar on Human Rights Ethics and Values	2 days	Dr. N.S.Soman	UGC sponsored
2.	Seminar on Human Rights and Criminal Justice Administration	2 days	Dr. N.S.Soman	UGC sponsored



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|----|---|--------|---------------|---------------|
| 3. | Workshop on Human Rights and the Police | 2 days | Dr. N.S.Soman | UGC sponsored |
| 4. | National Seminar on Self financing professional educational institutions- Role of the State | 2 days | Dr. N.S.Soman | UGC sponsored |
-

18. Consultancy Work:

Sl.No.	Name of consultancy	Name of consultant	Sponsoring Agency
1	Exploring the Relationship of GI & TK	Dr. N.S. Gopalakrishnan	ICTSD, Geneva

* * *



SCHOOL OF MANAGEMENT STUDIES

Estd: 1964

The School of Management Studies was established in 1964 as part of an all India scheme of promoting management studies throughout the country. It is the major institution of its kind in Kerala offering post-graduate studies and research programmes in Business Administration, Commerce and related areas.

The School is located twelve kilometers north east of the city of Kochi. It is in the main campus of the University at Thrikkakkara, right in the heart of the industrial belt of the State. The campus is about two kilometers east of South Kalamassery on NH 47 between Ernakulam and Alwaye.

The School started functioning in October 1964 as part of the University of Kerala. With the formation of the University of Cochin in July, 1971 the School became a Department of the University.

1. Programmes of Study/Research

At present the School offers Master of Business Administration (MBA - Full-Time and Part-Time) Master of International Business (MIB), MBA (Travel & Tourism), M.Phil (Commerce) and Ph.D. programme.

Management Development programmes

Besides academic programmes, the School conducts Management Development Programmes and undertakes Management Consultancy. The management development programmes in general are aimed at inducting personnel into more recent developments in their own specialized or allied areas, so that they would be able to develop a wider perspective.

- | | | | |
|----|-------------------|---|----------------|
| 1) | MBA (FT) 2 years | – | Four semesters |
| 2) | MBA (PT) 3 years | – | Six semesters |
| 3) | MIB (FT) 2 years | – | Four semesters |
| 4) | MBA (TT) 2 years | - | Four semesters |
| 5) | M.Phil (Commerce) | – | Two semesters |
| 6) | Ph.D. | | |

Master of Business Administration (Full Time – 2 Years – Four semesters)

This is a two-year full time post-graduate programme leading to the Degree of Master of Business Administration. Its aim is to provide the young aspirants with the opportunity to pursue a career in business, to acquire adequate knowledge, skills and attitudes which would constitute a foundation for their growth into competent and responsible business executives. The course has been so designed, as to enable the students to develop a thorough grasp of the basic concepts and techniques of management as well as the ability to practice them under Indian conditions. Further, it aims at developing their analytical decision making and communication skills.



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Master of Business Administration (Part Time – 3 Years – Six semesters)

The part-time programme leading to the degree of Master of Business Administration is a three-year evening programme. Its objective is to give an opportunity to executives working in Government and business organizations to improve their managerial ability and performance.

Master of International Business (Full Time – 2 Years – Four semester)

The post graduate programme in International Business is a 4 semester full time course. It gives emphasis to export policies, procedures & Techniques.

MBA (Travel & Tourism) Full Time 2 years - four semesters

MBA Travel & Tourism is the first academic program in India which offers a post graduate management degree in Travel & Tourism. Set apart from normal management programmes, the course is designed with a view to create tailor made professionals suiting the high end hospitality industry.

The academic program imparts learning from class room sessions as well as industry outings. Each semester comprises of one month in house training programme to be undergone in renowned travel & tourism companies. The students also undertake market research challenges as a part of the curriculum, seeking solutions to real time industry crisis.

The strenuous academic sessions are coupled with tours and visits to various tourists' destinations in India, completely designed and scheduled by the students themselves.

MBA Travel & Tourism lays equal importance to both the sectors. That's why the specialization offered to the students in the second year comes with the diverse choices to excel in both travel and tourism arena. The faculties chosen to guide represent talents from the industries. Senior managers and professionals are sought to guide the students with insights from their own experiences.

M.Phil (Commerce)

One year (2-semester) Full time course in Master of Philosophy in Commerce for College Teachers and general category students.

Methods of instruction

The School employs different methods of instruction viz, lectures, case studies, seminars, role-plays, syndicates, field work etc. At the end of the third semester the students (F.T) are required to attach themselves to an organization for a period of eight weeks and prepare a project report on a problem related to the working of the organisation.

The unique programmes offered by the School aim at developing the personality of students and sharpening their oral and written communication skills.

Consultancy programmes

The School undertakes consultancy assignments to provide managerial and technical-services to various organizations. The School has been recognised by the Government of Kerala



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as an authorised centre to provide consultancy services to small scale industries in the State.

2. Faculty Members

Sl.No	Name	Designation	Qualification	Specialization
1	Dr. P.Sudarsanan Pillai	Professor	M.Com., M.A., LL.B., Ph.D.	Business Law, Business & Government, Management of Public Sector
2.	Dr. P.R. Wilson	Professor	M.Com., Ph.D.	Financial Management
3	Dr. Mary Joseph	Professor Director	M.A., Ph.D.	Quantitative Techniques, Economics
4	Dr. K.B. Pavithran	Professor	M.Com, Ph.D	Finance/Accounting/ Strategic Management
5	Dr. C.A. Francis (on LWA)	Professor	M.A., M.B.A., D.D.P., Ph..D.	Marketing Management
6	Dr. Jayamani C.V.	Professor	M.Com, Ph.D	General Management, Finance
7	Dr. M.Bhasi	Professor	M.Tech, Ph.D.	Operations Management, EDP, Materials Management
8.	Dr. G. Antony	Reader	M.A., M.B.A., Ph.D.	Marketing / Sales / Advertising
9.	Dr.K.Krishnan Nampoothiri	Reader	M.Com., Ph.D.	Accounting, Banking, Co-operation, Business Communication, Finance
10.	Dr. James Manalel	Professor	M.B.M., Ph.D.	Finance Management, Banking, Management of Small Business
11	Dr. Sebastian Rupert Mampilly	Reader	M.S.W., M.B.A., Ph.D.	HRM, Industrial Relations& Organisational Behaviour
12	Dr. Sarada S.	Reader	M.A., M.B.A., M.S.	Organisational Behaviour, HRM
13	Dr. Jagathy Raj V.P.	Reader	M.Tech, M.B.A. Ph..D, DSADP	Systems and Operations Management Logistics, Supply Chain Management, IT Application in Business



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Sl.No	Name	Designation	Qualification	Specialization
				and Management, ERP, Technology Management
14	Dr. Moli P. Koshy	Reader	M.Sc., M.B.A., Ph.D.	Marketing Management, General Management, Marketing Research, Overseas Marketing Research
15	Dr. Rajitha Kumar S.	Reader	M.Com., M.Phil., Ph.D.	Financial Service/ Security Analysis Funds Management in Bank
16	Dr. D. Mavoothu	Sr. Lecturer	M.B.A., D.L.L.	HRM, Industrial Relations and Management of MNEs
17.	Shri Mohammed Aslam M.K.	Lecturer	M.Com., M.Phil.	Finance Management and Accounting
18.	Shri. Sam Thomas (On LWA)	Lecturer	B.Tech., M.B.A.	Systems and Finance
19..	Shri. Zakkariya K.A.	Lecturer	M.A., M.B.A., P.GD.I.B.	Organisational Behaviour, Marketing, International Business
20.	Dr. Manoj Edward	Lecturer	M.B.A.	Operations and Service Management

3. Research Scholars

Sl.No	Name	Funding Agency	Guide	Area of work
1	Shalini K.		Dr. G.Antony	A study on the Role of Micro Finance in Promoting Micro Enterprises and in income generation among the Rural poor
2.	Nandakumar Menon		Dr. S.R.Mampilly	Recruiter's performance for management graduates at Junior Management level for their marketing function. A comparative study in the Financial manufacturing sector in the State of Kerala



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3.	Sindhu George	Dr. G.Antony	An analysis of emerging perception of Indian citizen on financial products as an opportunity for investment in the global SED economy with special emphasis on mutual funds
4.	Jomy M.Thomas	Dr. Mary Joseph T	Economics of Pineapple Cultivation in Kerala
5.	Sindhu K.P.	Dr. S.Rajitha Kumar	Investment in Mutual Funds - A study of Kerala
6.	Varghese K.J.	Dr. V.P.Jagathy Raj	Engineering Management
7.	Manoj Mathew	Dr. James Manalel	Employee Performance- Assessment of Job attitudes, work life balance and psychological contract
8.	Sankaran U.M.	Dr. S.Rajitha Kumar	Financial Services of India post A study of Kerala State
9.	Shiny C.M.	Dr. G.Antony	A study on the factors influencing retail store choice behaviour of consumers with special reference to kerala market
10.	Jayasree N.	Dr. G. Antony	Measures adopted by small and medium manufacturing enterprises in Kerala to ensure product quality - A study limited to consumer products

4. Administrative Personnel

Sl.No	Designation	No. of posts
1	Professor & Director	1
2	Section Officer	1
3	Sel.Gr. Assistants	2
4	Sr. Gr. Assistant	1
5	Section Officer (Typist)	1
6	Office Supdt.	1
7	Typists 1	
8	Duplicator Operator	1
9	Computer Operator	1



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10	Assistant Librarian	1
11	Professional Assistants	2
12	Library Assistant	1
13	Peons	4
14	Sweeper/Cleaner	2
15	Gardener	1

5. Technical Personnel : Nil

6. Students enrollment

Sl.No	Programme of study	Men	Women	Total
1	MBA	22	30	52
2	MIB	19	13	32
3	MBA (Part Time)	24	5	29
4	MBA (Travel & Tourism)	21	11	32
5	M.Phil (Commerce)	3	3	6
6	Ph.D.	5	5	10

7. Research Facilities:

a) Laboratory:

Computers	-	24
Printers	-	6
UPS	-	18

b) Library:

No. of books/journals on 31 st March 2007	Additions during the year 2007-08
Books 38237	569
Journals 44	10

8. Ph.D. Awarded

Sl.No	Title of the thesis	Research Scholar	Supervising Guide
1	Total Quality Management and its impact on Human Resource in selected organizations in the state of Kerala	K.S.Divakaran Nair	Dr. M.Bhasi



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2. Feed back analysis of Varsity MBAs-A study of the performance and professional advancement of MBA Graduates from South Indian Universities
 D.Mavoothu P.R.Poduval

9. Publications

Sl.No	Author	Title	Journals	Vol. Page, year
1	Dr. S.Rajitha kumar	Inter relationship between Festival Tourism and Back water Tourism in Kerala	The Journal of Business Studies	Vol. 5 Page 15-18 2007
2	Mavoothu D., Poduval, P.R. and P.Arunachalam	HR Initiatives For Differently Abled by Indian Corporates	Indian Journal of Human Rights and Justice	Vol.3 (1-2), pp. 235-273
3	P.Arunachalam & Mavoothu D.	Economic Rights of Differently Abled People	Indian Journal of Human Rights and Justice	Vol.3 (1-2)
4	Mavoothu D. and Arunachalam P.	Minority Entrepreneurship: Problems and Prospects,	South Asian Journal of Human Rights	Vol3 (1-2)
5	Dr. Sebastian Rupert Mampilly	Power Precept for Managers	Vilakshan	No.1, Vol 4, pp. 99-119, March 2007
6	Dr. Manoj Edward & Dr. Moly P.Koshy	Tourism Development initiative and Challenges of Kerala	Southern Economist	Vol. 46, No. 15, Decl, 2007 p.13
7	Dr. Manoj Edward & Dr. Moly P.Koshy	Buying Behaviour and Promotion in Textile Retailing in Kerala	Indian Journal of Marketing	Vol.XXXVII No.7, July 2007
8	Dr. P.Sudarsanan Pillai	“Service Led: Growth: Myths and Realities - A study specific to Life Insurance in India”	“Witness” The Analytical Journal of India, TVM	Vol.8, No.1 Jan. 2008
9	Dr. P.Sudarsanan Pillai	“Service Led: Growth: Myths and Realities - A study specific to Life Insurance in India” Part II	“Witness” The Analytical Journal of India, TVM	Feb. 2008
10	Dr. P.Sudarsanan Pillai	“Service Led: Growth: Myths and Realities - A study specific to Life Insurance in India” Part II	“Witness” The Analytical Journal of India, TVM	March 2008



b. Seminar / Conference Presentations:

Dr. Mary Joseph T.

1. Mathews K.Varghese, James Manalel and Siby Zacharias, (2007), "Network Marketing: Exploitation of Relationships - Myth of Reality?" Paper presented in the International Marketing Conference on Marketing and Society, April 8-10, 2007 organised by the Indian Institute of Management, Kozhikode.
2. Manalel James, Jose M.C. and Siby Zacharias (2007), "Sales Promotions-Good or Bad?" Paper presented in the International Marketing Conference on Marketing and Society, April 8-10, 2007 organised by Indian Institute of Management, Kozhikode.
3. Cherukara, Joseph and James Manalel, (2007), "Agglomeration Effect on the Offset Printing Industry in Sivakasi", Paper presented at the Second Annual Max Planck-IISC International Conference on Entrepreneurship, Innovation and Economic Growth, held during 25th-27th October at Indian Institute of Science, Bangalore.
4. Vincent, P.D. and James Manalel, (2008), "Financial Reporting Under Corporate Governance", Paper presented in the National Conference on Quality Management and Competitive Benchmarking Issues, held at KRL Auditorium, Rajagiri School of Management, Kochi and Kerala on January 3 & 4, 2008.
5. Vinodan A. and James Manalel (2008), "Eco Tourism: Conservation and Livelihood", Paper presented in the International Conference on Biodiversity Conservation and Management, BIOCAM 2008 held during 3-6 February, 2008 at Cochin.
6. Manalel, James (2008), "Financial Inclusion for Inclusive Growth", Paper presented in the National Seminar on Banking in the era of Diverse Development Paradigms: From Financial Inclusion to Special Economic Zones, organised by the Department of Applied Economics, Cusat, Kochi, on 3rd March, 2008.

Dr. S. Rajithakumar

1. Presented a paper titled "Impact of Environmental Pollution on Commercial Activities" at the National Seminar on Industrial Development and Environmental Pollution organized by Department of Commerce, Govt. College, Nedumangad, during 6-7, March 2008.

D. Mavoothu

1. Mavoothu D. and Arunachalam P. (2008), "Global Warming and Sustainable Business Opportunities: A Critical Evaluation", National Seminar on "Environmental Challenges of 21st Century" Organised by Dept. of Economics, Periyar University, Salem, on 27-28 March 2008.
2. Mavoothu D and Arunachalam P. (2008), 'Importance of Employing Differently Abled Persons in Indian Corporates as a Corporate Social Responsibility for a Sustainable Society', RBI & ICSSR Sponsored National Seminar on Ethical Empowerment of Poor Under Sustainable Environment, Organised by Dept. of Economics, Sri Venkateswara University, Tirupati, on March 14-15, 2008.
3. Mavoothu D and Arunachalam P. (2008), 'HRM Practices in SEZs in China: The Implications for India', A 2 day International Seminar on "Globalisation and its Impact on



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Society” organised by School of Social Sciences and International Studies, Pondicherry University, on March 30-31, 2008.

4. Arunachalam P and Mavoothu D (2008), ‘Special Economic Zones and Displacement of People in India’, A 2 day International Seminar on “Globalisation and its Impact on Society” organized by School of Social Sciences and International Studies, Pondicherry University, on March 30-31, 2008.
5. Mavoothu D., Poduval P.R. and Arunachalam P. (2008), ‘Management Education in India: History, Problems and Prospects’, A 3 day ICSSR sponsored international conference on Reforms in Higher Education in Asia (RHEA - 2008), organized by Cardamom Planters’ Association College, Bodinayakanur, Tamil Nadu, on March 3, 4 and 5, 2008.

Dr. Sebastian Rupert Mampilly

1. “EFFECT OF PSYCHOLOGICAL EMPOWERMENT ON INDIVIDUAL AND ORGANIZATIONAL PERFORMANCE” at the 12th International and 43rd National Conference of Indian Academy of Applied Psychology (IAAP), Kolkatta, India. Feb. 7-9, 2008.

Dr. Moli P. Koshy

1. International Conference on Marketing and Society April 8-10, 2007 Presented paper “Marketing Welfare for an AIDS free Society”

Dr. P. Sudarsanan Pillai

1. 60th All India Commerce Conference organized at Osmania University, Hyderabad, 27-29 December, 2007. Presented a paper entitled “Service Led Growth: Myths and Realities- A study specific to Life Insurance in India”
[Adjudged as the Best Paper of Technical Session-I]
2. Seminar on “New Trends in International Business” organized by Department of International Business and Commerce, Alagappa University, Karaikudi, 11th January 2008. Delivered Key Note Address.
3. A Brain storing session for development of Post Graduate Diploma in Plantation Management, organized by Indira Gandhi National Open University, New Delhi, at Regional Centre of IGNOU, Cochin, 3rd March 2008. Resource personal & Expert Member.
4. Work shop on Development of Post-Graduate Course in Plantation Management held at Indian Institute of Plantation Management, Bangalore, 19th March 2008. Resource Personal & Expert Member.

1.C. Books

Dr. Rajithkumar S. (Co-Editor)

“Traditional Industries of India in the Globalised World” (Edited volume), New Century Publications, New Delhi, June 2007



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Dr. Mary Joseph T. & Padmaja K.

“Morbidity Trends in Kerala”: A note of concern in Kerala Economy Slumber to Performance (ed) Dr. M.Meera Bai, February 2008.

10. Participation in Seminar/Conference/Refresher courses etc. by the Faculty Members/Students.

Name of Participant	Name of Seminar/Conference/ Workshop	Role
Dr. James Manalel	Faculty Development Programme on Corporate Governance organized by the Centre for Corporate Governance and Citizenship, Indian Institute of Management, Bangalore, from May 21-26, 2007	Participant
Dr. Mavoothu M	A 2 day International Seminar on “Globalisation and its Impact on Society” organized by School of Social Sciences and International Studies, Pondicherry University, on March 30-31, 2008.	Participation & Presentation of Paper
Dr. Mavoothu M	A 2 day Seminar on “Action Plan for the RAMSAR Sites of Kerala” organized by Rajiv Gandhi Chair for Contemporary Studies, Cochin University of Science and Technology, on March 24-25, 2008.	Participant
Dr. Mavoothu M	RBI & ICSSR Sponsored National Seminar on Ethical Empowerment of Poor Under Sustainable Environment, Organised by Dept. of Economics, Sri Venkateswara University, Tirupati, on March 14-15, 2008.	Participation & Presentation of Paper
Dr. Mavoothu M	A 3 day ICSSR sponsored international conference on Reforms in Higher Education in Asia (RHEA - 2008), organized by Cardamom Planters’ Association College, Bodinayakanur, Tamil Nadu, on March 3, 4, and 5, 2008.	Participation & Presentation of Paper
Dr. Mavoothu M	Attended one day workshop on “Course Writers’ workshop for Post Graduate Diploma in Teaching and Research in Management (PGDTRM)”, organized by IGNOU Regional Centre, Kochi, on 24 February 2008.	Participant
Dr. Moly P.Koshy & Dr. Mary Joseph T.	International Conference on Marketing and Society by IIMK	Participant



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11. Awards/Honours/Fellowship etc. received : NIL

12. Sponsored Research Projects : NIL

13. Research Programmes and Activities : NIL

14. Seminar /Conference/Workshop/Refresher Course conducted by the Department

Sl. No	Title and Duration	Duration	Co-ordinator	Funding Agency
1	National Seminar on Logistics Management	28-29 March 2008	Dr. M.Bhasi	Nil

15. Consultancy Work

Sl.No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	A study on "Failure of SC/ST Students in B.Tech Course of the Cochin University of Science & Technology" (January 2008)	Dr. Mavoothu D.	CUSAT

* * *



SCHOOL OF MARINE SCIENCES

The School of Marine Sciences is one of the oldest institutions in India imparting postgraduate teaching, training and research in all branches of Ocean Science & Technology. The School comprises five departments and is involved in several coordinated teaching and research programmes. It has an excellent library and a research vessel for coastal water studies and has earned the special recognition of the University Grants Commission under its DRS, COSIST and SAP Programmes. Currently, the School is in Phase-III of the DSA programme.

The Centre for Integrated Management of Coastal Zones (C-IMCOZ) was recently set up in the School to offer a P.G. Diploma Programme in Coastal Zone Management and to conduct research in the frontier areas of Coastal Zone Management.

Besides IMCOZ, the School has recently started a 'Tsunami Cell' with an aim to take up tsunami research. The Cell will identify areas of inundation and thus demarcate 'hot spots' or vulnerable areas along the Southwest coast of India. The Cell as well plans to set up tide gauge and seismic stations for real time monitoring of sea level and seismological data sets.

Recently, the Ministry of Earth Sciences, Government of India, restructured the discipline specific Ocean Science & Technology Cells (OSTCs) all over the Country to location specific Ocean and Atmospheric Science and Technology Cells (OASTCs). Accordingly, the OSTC in Marine Benthos at CUSAT has been renamed as OASTC – CUSAT with a view to encourage research activities in frontier areas of Marine Science & Technology.

Thrust Areas of Research

The research areas are described under the section on the individual Departments.

The School has academic interaction with the Universities in the Netherlands under the MHO programme of collaboration between CUSAT and the Dutch Government. Also, the School has signed MoU with the Bremen University, Germany and the Kochi University, Japan for academic interactions in the field of Marine Science Teaching and Research.

1. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1	K.T. Damodaran	Professor & Director	Ph.D.	Mineral Resources
2	Vacant	Lecturer	-	Computer Applications



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2. Research Scholars : 5 under the UGC-RFMS

Sl.No.	Name	Funding Agency	Guide	Area of work
1	Shaiju.P.	UGC	Dr.N.Chandramohan Kumar	Chemical Oceanography
2.	Remya Varadarajan	UGC	Dr.Babu Philip	Marine Biology
3	Sini.P.J.	UGC	Dr.A.V.Saramma	Marine Biology
4	Sabin.T.P.	UGC	Dr.C.A.Babu	Atmospheric Science
5	Manjusha.K.	UGC	Dr.A.V.Saramma	Marine Biology

3. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2	Office Suptdt.	1
3	Assistant	2
4	Typist/Steno	1
5	Peon	2
6	Sweeper-cum-Cleaner	4
7	Security Guard	5
(b)	Library Staff	
8	Asst. Librarian	1
9	Junior Librarian	2
10	Library Asst.	1

4. Technical Personnel

Sl.No.	Designation	No. of Posts
1	Mechanic	1
2	L.D.Driver	1
3	Engine Driver (Boat)	1
4	Boatman	1
5	Lascar	1

5. Research Facilities

a Laboratories (List out Major equipments available) :

- i) Research Vessel R.V.Anveshika



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b Library

No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
14796+37	355+15

6. Publications :

Books

Sl. No.	Name of Books
	OASTC Bulletin : Editor K.T.Damodaran

7. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students:

Nme of Participant	Name of Seminar/Conference/Workshop	Role
Prof. K.T.Damodaran	Conducted two OASTC Management Board Meeting	Research Co-ordinator
	Conducted a workshop on Remote Sensing and GIS	
	Conducted a National Seminar on Sethusamudram Project in association with the Rajiv Gandhi Chair, CUSAT	
	Attended the Kerala Science Congress-2008	Expert Member

8. Sponsered Research Projects : Nil

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	DSA Phase III	UGC	64.5 Lakhs	Director Faculty
2	Additional assistance to the SAP School	UGC	30 lakhs	member of constituent Debts in the school

9. Research Programmes and Activities :

Sl. No.	Problem / Topic	Investigator (s)
1.	'An integrated study in the Ecology and	Director Faculty Members of



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Environment of Kochi'

constituent Debts in the school

10. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department : Nil

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	Conducted two OASTC Management Board Meetings		Dr. K.T.Damodaran	

* * *



INTERNATIONAL SCHOOL OF PHOTONICS

The International School of Photonics (ISP) at Cochin University of Science & Technology, was inaugurated on the National Science Day, February 28th 1995. The nucleus of the ISP was formed by delinking the laser laboratories along with faculty members of the laser group from the Department of Physics of CUSAT. ISP has been carrying out pioneering work by way of Research and Development in lasers and their applications as well as in Fiber Optical Technology. ISP now offers a Four Semester M.Tech degree course in Optoelectronics and Laser Technology, a two Semester M.Phil degree in Photonics and Ph.D programme in all branches of Photonics/Optoelectronics. Research and Development work in frontline areas are being pursued and these include topics like laser induced plasmas, photo thermal and photo acoustic phenomena, nonlinear optics, nonlinear dynamics, photonic materials, laser material processing and fiber optic sensors as well as some defense related applications of lasers. Most of the research projects are being funded by the national funding agencies like Department of Science and Technology (Govt. of India as well as Govt. of Kerala) UGC, AICTE, DRDO, etc. ISP had an International collaboration with the Technical University of Eindhoven (TU/e) under the MHO programme funded by the Netherlands Organization for International co-operation in higher education during 1999-2004. A subpico second laser facility is now available in the laboratory under the CELOS programme which is being used as a national facility.

1. Programmes of Study/Research

1. Ph.D (Photonics and related areas)
2. M.Tech (Opto-electronics and Laser Technology)
3. M.Phil (Photonics)

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialisation
1	Dr. V.P.N. Nampoori	Professor	M.Sc,Ph.D	Nonlinear dynamics & laser spectroscopy
2	Dr.V.M. Nandakumaran	Professor	M.Sc,Ph.D	Non-linear dynamics and Chaos
3	Dr. P.Radhakrishnan	Professor	M.Sc,Ph.D	Laser Technology and Fiber Optics
4	Mr.M.Kailasnath	Lecturer	M.Sc., M.Phil M.Tech.	Polymer Optical fibers and Laser Technology
5	Dr. C.P.Girijavallabhan	Emeritus Professor	M.Sc,Ph.D	Lasers&Optoelectronics
6	Mrs. Swapna S.Nair	Lecturer (Adhoc)	M.Sc, Ph.D.	Quantum Electronics



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3. Visiting Faculty (If any)

Sl.No.	Name	Designation	Qualification	Specilisation
1	Prof. R.Pratap	Visiting Faculty	M.Sc,Ph.D	Nonlinear dynamics and statistical mechnaics
2	Prof. V.Unnikrishnan Nayar	Visiting Faculty	M.Sc, Ph.D.	Raman Spectroscopy and Laser Physics

4. Research Scholars

(a) Full time

Sl.No.	Name	Funding Agency	Guide	Area of Work
1.	Litty Mathew Irimpan	UGC	P.Radhakrishnan & V.P.N.Nampoori	Laser Matter Interaction
2	Lyjo K Joseph	UGC	P.Radhakrishnan & V.P.N.Nampoori	Laser Matter Interaction
3	Manu Punnan John	CSIR	V.M.Nadakumaran	Study of chaos in nonlinear dynamical systems
4	Sheeba M.	UGC	P.Radhakrishnan	Fiber Optic Sensors
5	Thomas K.J.	CSIR	P.Radhakrishnan	Fiber Optics
6	Jayasree V.K.	QIP	P.Radhakrishnan	Optical Sensors
7	Parvathi M.R.		V.M.Nadakumaran	Laser in Chaos Systems
8	Vasuja R.V.	SC/ST Dept.	V.P.N.Nampoori	Fibre Optic Communications
9	Linesh J.	UGC	V.P.N.Nampoori	Fibre Optic sensors
10	Jinesh Mathew	UGC	P.Radhakrishnan	Fibre Optic sensors
11	Sony George	UGC	V.P.N.Nampoori	Bio Photonics
12	Nithyaja B.	UGC	V.P.N.Nampoori	Optical Signal & Image Processing

(b) Part time

Sl.No.	Name	Guide	Area of work
1.	M.Kailasnath	P.Radhakrishnan &V.P.N.Nampoori	Optical Fibers
2	Dann.V.J.	V.P.N.Nampoori	Laser Matters Interaction
3	Samuel Varghese	V.P.N.Nampoori &C.P Girijavallabhan	Fiber Optics



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4.	Jijo P.U.	V.M.Nandakumaran	Non linear Dyanmical Systems
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5. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Section Officer	1
2.	Typist	1
3.	Assistants	2
4.	Store Keeper	1
5.	Peon	1
6.	Sweeper cum Cleaner	1

6. Technical Personnel

Sl.No.	Designation	No. of Posts
1	Instrument Technician	1 (not filled)

7. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1.	M.Tech (OE & LT) I Semester	7	2	9
2.	M.Tech (OE & LT)III Semester	3	5	8
3.	M.Phil (Photonics) I Semester	Not in force		
4	M.Phil (Photonics) II Semester			

8. Research Facilities

A. Laboratories (List out Major equipments available)

Major facilities available are:

- 12W Argon ion laser (Spectra Physics 171)
- Argon ion laser (Liconix 5000)
- Pulsed Nd:YAG laser (Quanta Ray DCR - 11 and Quanta Ray GCR - 170)
- Optical Parametric Oscillator (Spectra Physics MOPO-700)
- Ring Dye Laser (Spectra Physics 380)
- Pulsed Dye Laser (Quanta Ray PDL 2)
- Diode pumped solid-state lasers
- Low temperature solution growth unit
- UV-VIS-NIR Spectrophotometer (Jasco V570)



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- Optical time domain reflectometer (Anritsu MW 920 A)
- Photon Counting system (Stanford Research Systems SR 400)
- High Resolution CCD camera and accessories (Panasonic KR222).
- Boxcar Averager System
- Fiber Drawing System
- High Vacuum System and accessories
- Optical Spectrum Analyser
- Optical Multi-channel Analyser
- Quadrant Detector
- Lock-in Amplifiers, Digital storage oscilloscopes
- Femtosecond Laser system (80 fs - 100fs, 80 MHz, Spectra Physics, TSUNAMI)
- Splitfire Pro Ultrafast Ti:Sapphire Amplifier (2 mJ, 1 KHz)
- 100 ns, 1KHz, 30 W, 527 nm Q-switched DPSS (EMPOWER, Spectra Physics)
- 5 W, 532 nm DPSS (MILLENIUM, Spectra Physics)
- Fluorescence Spectrophotometer (CARY Eclipse, VARIAN)
- Fiber Optical Fusion Splicer (FUJIGAWA, JAPAN)
- High Resolution Fiber Optic Spectrometer (HR 4000 Ocean Optics)
- Optical Spectrum Analyzer (AQ 6319 YOKOGA WA)
- Broad band white light source (AQ 4305 YOKOGA WA)
- 1J, 8 ns, 10 Hz, Nd: YAG laser (quanta Ray, Spectra Physics)
- Tunable Semi Conductor laser (Sacher Lasertechnik Marburg)
- 1 GHz Digital Phosphor Oscilloscope (Techtronix)
- 15 W CO₂ laser

B) Library

No of books and Journals as on 31 st March of the Previous Year	Additions during the current year
Books – 2640	172

Journals

1. Optical Engineering	88 volumes	nil
2. Optics Letters	119 volumes	nil
3. Applied Optics	131 volumes	nil
4. Applied Spectroscopy	1 volume	nil



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5. Fiber and Integrated Optics	9 volumes	nil
6. Optics Education	2 volumes	nil
7. Int. Journ. of Optoelectronics	6 volumes	nil
8. Resonance	vol. 11— 11 issues	vol. 12 — 111 issues
9. Sadhana	vol. 31 — 5 issues	vol. 32 — 4 issues
10. Journal of Chemical Sciences	vol. 118 — 5 issues	vol. 119 — 5 Nos.
11. Bulletin of Material Science	vol. 29 — 6 issues	vol. 30 — 5 issues
12. Current Science	vol. 90 — 9 issues	vol. 92— 12 issues
	vol. 91 — 11 issues	vol. 93 — 10 issues
13. Proceedings of Mathematical Sciences	vol. 116 – 4 issue	vol. 117 — 4 issues
14. Pranama	vol. 66 — 6 issues	vol.67 — 1 issues
	vol. 67— 6 issues	vol. 68 — 6 issues
		vol. 69— 6 issues
15. Optics Letters	vol. 31 — 26 issues	vol.32 — 3 issues

Thesis & Dissertation:

(i) M.Tech./M.Phil. Dissertation	207 volumes	M.Tech./M.Phil – 9
(ii) Ph.D. Thesis	51 volumes	Ph.D. - 2

9. Distinguished Visitors

Sl.No.	Name	Affiliation	Remarks
1	Prof. A.K.Ghatak	IIT, Delhi	Visiting Professor
2	Prof. T.Padmanabhan	IUCCA, Pune	Visiting Professor
3	Prof. Sajeev John	University of Toronto	Visiting Professor
4	Prof. G.P.Agarwal	Institute of Optics, Rochester Uty, USA	Visiting Professor
5	Prof. Raveendra Kumar	TIFR, Mumbai	Visiting Professor
6	Prof. Laxmanan	Bharati Dasan University	Visiting Professor
7	Dr. Reji Philip	RRI Bangalore	Visiting Professor
8	Prof. Subarao	Marine Institute, Uty of Ontario, Canada	Visiting Professor



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10. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	“Studies on Optical & X Ray Emission Processes in Laser produced plasma”	Pramod Gopinath	Dr. V.P.N.Nampoori
2.	“Investigation of Optical interaction processes in certain photonic materials using Z-Scan and thermal lens techniques”	Santhi A.	Dr. V.P.N.Nampoori
3.	“Studies on ASE, Lasing and NLO characteristics in certain laser dyes”	Sr. Ritty J.Nedumpara	Dr. P.Radhakrishnan

11. Publications

- 1) Achamma Kurian, Sajan D George, C.V.Bindhu, V.P.N.Nampoori and C.P.G. Vallabhan, “Thermal lens technique to study the effect of pH on electronic energy transfer in organic dye mixtures”; *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 67(2007)678-682.
- 2) Annieta Philip K, Lyjo K. Joseph, Litty M. Irimpan, Bindu Krishnan, P. Radhakrishnan, V. P. N. Nampoori and Raghu Natarajan; “Thermal Characterization of Ceramic Tapes using Photoacoustic Effect” *Physica Status Solidi (a)*, 204 (3)(2007)737.
- 3) Jayasree V.K., Shaiju P.J., Manu P.John, P.Radhakrishnan; “An Optoelectronic Sensor Pulse”; *Sensors & Transducers*, 87, (2008), 39-45.
- 4) Jayasree V.K., Shaija P.J., V.P.N.Nampoori, C.P.Girijavallabhan, P.Radhakrishnan; “A simple and novel integrated opto-electronic system for blood volume pulse sensing and heart rate monitoring”; *International Journal of Optomechatronics*, 1(2007)359-368, .
- 5) Jinesh Mathew, K.J.Thomas, V.P.N.Nampoori and P.Radhakrishnan, “A Comparative study of Fiber Optic Humidity Sensors Based on Chitosan and Agarose”; *Sensore & Transducers Journal*, 84, (2007) 1633-1640
- 6) Litty Irimpan, Bindu Krishnan, A.Deepthy, V.P.N.Nampoori and P.Radhakrishnan; “Size dependent enhancement of nonlinear optical properties in nano colloids of ZnO”; *Journal of applied physics*, 103 (2008) 033105.
- 7) Litty Irimpan, Bindu Krishnan, A. Deepthy, V.P.N.Nampoori and P.Radhakrishnan; “Excitation wavelength dependent fluorescence behaviour of nano colloids of ZnO”; *J.Phys. D: Appl. Phys.* 40(2007)5670.



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- 8) Litty Irimpan, A.Deepthy, Bindu Krishnan, V.P.N.Nampoori and P.Radhakrishnan; "Size dependent fluorescence spectroscopy of nanocolloids of ZnO"; J.Appl. Phys. 102 (2007) 063524
- 9) M.Kailasnath, P.R.John, P.Radhakrishnan, V.P.N.Nampoori and C.P.G.Vallabhan, "A comparative study of energy transfer in dye mixtures in monomer and polymer matrices under pulsed laser excitation"; Journal of Photochemistry and Photobiology A: Chemistry, (2007).
- 10) Mandanparambil Rajesh, Mavila Sheeba, Karinjamanna Geetha, Chakkalakkal P. G. Vallabhan, Padmanabhan Radhakrishnan, and Vadakkedathu P. N. Nampoori; "Fabrication and characterization of dye-doped polymer optical fiber as a light amplifier, Applied Optics, 46 (2007)106-112.
- 11) M.Sheeba, K.J.Thomas, M.Rajesh, V.P.N.Nampoori, C.P.G.Vallabhan, P.Radhakrishnan; "Multimode laser emission from dye doped polymer optical fiber."; Applied Optics, 46,(2007) 8089-8094,
- 12) P.M.Sandeep, S.W.B.Rajeev, M.Sheeba, S.g.Bhat and V.P.N.Nampoori; "Laser induced fluorescence based optical fiber probe for analyzing bacteria"; Laser Physics Letters, (2007) 1-5
- 13) Ritty J.Nedumpara, Geetha K., Dann V.J., V.P.N.Nampoori, C.P.G.Vallabhan and P.Radhakrishnan; "Light amplification in dye doped polymer films"; J. of Opt. A: Pure and Appl. Opt. 9 (2007) 7-14
- 14) Ritty J.Nedumpara, Thomas K.J., Jayasree V.K., C.P.Girijavallabhan, V.P.N.Nampoori, P.Radhakrishnan; "Study of solvent effect in laser emission from Coumarin 540 dye solution"; Applied Optics 2007.
- 15) Samuel Varghese, Muhammed Iqbal, Suresh Nair, V.P.N.Nampoori and C.P.G.Vallabhan; "Fabrication and Characterization of Monolithically Fused Wavelength Independent X4 Couplers"; Fiber and Integrated Optics 26 (2007) 245-254
- 16) Sajjan D. George, A.K.George, P.Radhakrishnan, V.P.N.Nampoori and C.P.G.Vallabhan; "Photo acoustic studies on thermal parameters of liquid crystal mixtures"; Smart Materials and Structures 2007.
- 17) V J Dann, Manoj V Mathew, V P N Nampoori, C P G Vallabhan, V M Nandakumaran, P Radhakrishnan; Spectroscopic Characterisation of Laser Induced Plasma from Titanium Dioxide. *Plasma Science and Technology*, 9(4) (2007) 456-459

b. Books: Nil

12. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students. : List attached.

Sl. No.	Name of Participants	Name of Seminar / Conference/ Workshop	Role
1.	Jinesh Mathew	a. Seventh DAE-BRNS National Laser Symposium (NLS-7) Dec. 17-20, 2007	Poster presentation



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- b. International conference on sensors and related networks (SENNET '07), VIT Uty., Vellore, India. Dec. 12-14, '07.
APW 2007, Indo UK Workshop
2. Parvathy M.R. a. National conference on Recent Trends in Optoelectronics & Laser Technology, NCOL 2007, April 9-11, Kerala Uty., TVM. Participation
b. National conference on Nonlinear systems & Oral Dynamics, NCNSD-2008, PRL, Ahamedabad
c. International Conference on Recent Trends in Nonlinear Dynamics, Feb. 13-15, 2008, Trichy. Oral presentation
d. NIS - 2007 Poster
3. Lyjo K. Joseph National conference on new horizons in theoretical and experimental physics (NHTEP-2007), CUSAT, Oct. 8-10, 2007. Oral presentation
4. Muralidharan M.N. One day workshop on "Emerging Trends in Polymer Applications", Dept. of PS & RT, CUSAT, 4.1.08 Participation
5. Jayasree V.K. a. NLS-2007, Dec. 17-20, 2007 Poster
b. International conference on sensors & related networks (SENNET '07), VIT, Vellore Dec. 12-14, 2007 Oral
c. National Seminar by MEC, Kochi Oral
6. Litty Mathew a. International conference on materials for the millennium Mat.Con.-2007, March 1-3, Cusat Poster
b. National seminar on current trends in chemistry C Tric-08, Jan. 18-19, '08 Oral
7. Linesh J. NLS-2007 Dec. 17-20, 2007 Poster
8. Dann V.J. NHTE - 2007, Dept. of Physics, CUSAT Oct. 8-10, 2007 Participation
9. Jijo P.U. National conference in current trends in materials science CTMS-07, Dept. of Physics, Christian College, Chengannur Participation

13. Awards/ Honours/ Fellowships etc. received : Nil



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14. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1.	MODROBS	AICTE	Rs.10- Lakhs	Dr.P.Radhakrishnan

15. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1.	Nanophotonics of Zno, Cds, CdSe	Dr.V.P.N.Nampoori
2.	Laser action in optical fibres and slab wave guides	Dr.V.P.N.Nampoori & Dr.P.Radhakrishnan
3.	Instabilities and chaos in coupled laser plasma	Dr.V.M.Nandakumaran
4.	Biophotonics a) Photoacoustic studies of photosynthesis b) Laser fluorescence from bacteria and viruses	Dr.V.P.N.Nampoori
5.	Fabrication and characterization of polymer optical fibers	Dr. P.Radhakrishnan
6.	Non linear optics of Chalogenide materials	Dr. Sheenu Thomas
7.	Technology enabled teaching and learning programmes in continuing education	Dr. V.P.N.Nampoori & Mr. M.Kailasnath

Extension Activities

- Created e-content for e-learning in some selected topics
- Produced videos of lectures by experts.
- Optics to School Programme
- Screening of educational films.

16. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	APW,2008	3 days Feb. 26-28, 2008	Dr. P.Radhakrishnan	CELOS ISP-SPIE
2.	Raman Day Symposium	1 day Nov.7 2007	Dr.V.P.N.Nampoori	UF

17. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1.	Fabrication and characterization of polymer optical fibres	Dr. P.Radhakrishnan	Sterlite Optical Technologies, Aurangabad

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COCHIN UNIVERSITY COLLEGE OF ENGINEERING, KUTTANAD

Cochin University of Engineering Kuttanad is a self-finance college, which was instituted in 1999. It is the only campus of CUSAT functioning outside Ernakulam District. Five branches of B.Tech 4 year course students and three batches of three year MCA students are continuing their studies.

Now the AICTE approval is for a yearly intake of 240 students.

1. Programmes of Study/Research

1. B.Tech courses in Information Technology, Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering.

2. MCA course

2. Faculty Members

Sl.	Name	Designation	Qualification	Specialization (Branch)	Remarks
1	Anilkumar K.K.	Lecturer			On leave
2.	Augustine J. Kattady	"	M.Tech (Mechanical)		
3.	Harikrishnan D	"	B.Tech		On leave
4.	Jabir KVT	"	B.Tech (Com. Science)		
5.	Jayaprabha P	Reader	B.Tech		
6.	Jesslette Sam	Lecturer	B.Tech (Com. Science)		On leave
7.	Kunhamu. K	"	M.Tech (Control System)		On leave
8.	Manoj Kumar P	"	B.Tech (Comp. Science)		
9.	Mathew Cherian	Reader	M.Tech (M.E)		On leave
10.	Meera A.R.	Lecturer	B.Tech (Comp. Science)		
11.	Minimole A.	"	B.Tech (Civil)		
12.	Dr. A.Mujeeb	Reader	M.Sc (Physics)		
13.	Preetha Mathew K	"	B.Tech (Comp. Science)		
14.	Priya R.Krishnan	"	B.Tech		



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15.	Sajan Joseph	Lecturer	B.Tech (Ele.&Electronics)	On leave 08-09
16.	Salaji S.	Reader	B.Tech (ME)	
17.	Senthil Prakash M.N.	Lecturer	M.Tech (Mech)	On leave 07-08
18.	Shiny Paul	"	B.Tech (Ele.&Electronics)	
19.	Shiyas C.R.	"	M.Tech (Mech)	
20.	Sunilkumar N.	"	B.Tech (Civil)	On leave 07-08
21.	Thomas T	"	M.Tech (Mech)	
22.	Dr. R.Asaetha	"	Ph.D (Chemistry)	
23.	Job P.A.	Reader	M.Tech (Mech)	On leave
24.	Josephkutty Jacob	"	M.Tech (Ele.&Electronics)	
25.	Manoj V.J.	Lecturer	M.Tech (Electronics)	On leave
26.	Bindu P.K.	"	B.Tech (Comp. Science)	

3. Visiting Faculty (If any) : NIL

4. Research Staff : NIL

5. Research Scholar : NIL

6. Administrative Personnel

Sl.No.	Name	Designation
1.	AO/AR	1
2.	Section Officer	1
3.	Asst. Librarian	1
4.	Jr. Librarian	2
5.	Asst. Engineer	1
6.	Assistants	5
7.	Seln. Gr. Typist	1
8.	L.D.Driver	1
9.	Peon	1
10.	Security Guard	1
11.	Sweeper-cum-Cleaner	1

7. Technical Personnel

Sl. No.	Designation	No. of Posts
1.	Technician Gr. II	1
2.	Lab Assistant	1
3.	Lab Attendant	1



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8. Student Enrollment (2006 Admin.)

Sl. No.	Programme of Study	Men	Women	Total
1.	B.Tech - CS	166	75	241
	- EC	139	101	240
	- EE	182	57	239
	- IT	176	64	240
	- ME	229	11	240
2	MCA	86	76	162

9. Research Facilities

a. Laboratories (List out Major equipments available)

b. Library

No. of books and Journals as on 31 st March of the Previous Year	Additions during the current year
Books 10592	200

c. Others

10. Distinguished Visitors : Nil

11. Ph.Ds Awarded : Nil

12. Publications

a. Papers : Nil

b. Books : Nil

**13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/
Students : Nil**

14. Awards/Honours/Fellowships etc. received - Nil

15. Sponsored Research Projects : Nil

16. Research Programmes and Activities : Nil

**17. Seminar / Conference / Workshop / Refresher Courses conducted by the
Department : Nil**

18. Consultancy Work : Nil

* * *



KUNJALI MARAKKAR SCHOOL OF MARINE ENGINEERING

1. Marine Engineering Division was started under the School of Engineering of Cochin University in September 2003.
2. It was upgraded to an independent Department called Kunjali Marakkar School of Marine Engineering in July 2007.
3. Shifted to the new marine Engineering building complex on 7th July, 2007.
4. Got ISO-9001:2000 Certificate in March, 2007.
5. Official inauguration of the building complex by the Hon. Chief Minister of Kerala Sri. V.S.Achuthanandan, done on 28th November 2007.

1. Programmes of Study/Research

Pre-sea Engineering - 4 year B.Tech in Marine Engineering.

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialization
1	Prof. K.A.Simon	Director	B.Sc (Engg.), MBA; MS (Sweden), Extra First Class Marine Engineer	Safe Watch Keeping Marpol
2.	Prof. P.V.Sasikummar	Professor	B.Sc. (Engg), L.L.B, M.L., M.Phil, M.E.O. ClassI (M)	Refrigeration Marine Machinery Design
3.	Prof. N.G.Nair	Course-in- Charge	B.Sc (Engg.), M.E.O.ClassI (M)	Marine Auxiliary Machinery, Gas turbines
4.	Mr. R.Venugopal	Marine Engineer	B.Tech, M.E.O. Class I (M)	Marine Control Engineering & Automation
5.	Mr. Roy V. Paul	Reader	M.Tech	Thermodynamics Machine Drawing
6.	Ms. Nisha Rani G.S.	Lecturer	B.Tech	Marine Electrical Technology, Marine Electronics

3. Visiting Faculty (If any)

Sl.No.	Name	Designation	Qualification	Specialization
1.	Mr. K.Neelambaran	Guest Faculty	BSc(Engg): M.E.O.Class I	Marine IC Engines



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2	Mr. Varghese P.O.	Guest Faculty	B.Tech; M.E.O. Class I	Marine boiler, fire prevention & control
3.	Mr. K.V.V.Unni	Guest Faculty	B.Sc (Engg.) M.E.O. Class I	Marine Electrical Technology, Marine Auxiliary Machinery
4.	Mr. P.R.R.Pillai	Guest Faculty	BSc (Engg.) M.E.O. Class I	Steam Engineering, Boiler Chemistry
5.	Capt. Naveen	Guest Faculty	F.G.Master Mariner	Ship Operation & management
6.	Dr. K.P.Narayanan	Guest Faculty	M.Tech.: Ph.D.	Ship Technology, Naval Architecture
7.	Dr. Dileep Krishnan	Guest Faculty	M.Tech.: Ph.D.	Ship Technology, Naval Architecture
8.	Prof. Rocky V.M.	Guest Faculty	M.Sc. Mathematics	Mathematics
9.	Mr. Gireesh	Guest Faculty	M.Sc. Mathematics	Mathematics
10.	Prof. P.G.Nair	Guest Faculty	M.Sc. Physics	Physics
11.	Prof. Raman Menon	Guest Faculty	M.Sc. Chemistry	Chemistry
12.	Mrs. Betsy Kurien	Guest Faculty	M.A.Economics	Economics & Commercial Geology

4. Research Staff : NIL

5. Research Scholar : NIL

6. Administrative Personnel

Sl.No.	Name	Designation
1.	Section Officer	1
2.	Asst. Librarian	1
3	Assistant	2
4.	Typist	2
5	Peon	2

7. Technical Personnel : Nil

8. Student Enrollment (2006 Admin.)

Sl. No.	Programme of Study	Men	Women	Total
1.	B.Tech Marine Engineering	30	-	30



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9. Research Facilities

Laboratories (List out Major equipments available)

1. Mechanical Lab (Kinematic Lab)
2. Instrumentation & Control Lab
3. Engine Simulator Lab
4. Ship-in-Campus (under construction)
5. Machine overhauling Lab
6. Cut section Models Lab

Major equipments available

1. Morrois single Girder, EOT Crane.
2. Incinerator make Volcano-
3. Steam Turbine
4. Marine Auziliary Water Tube, Boiler Clintone Make-
5. Fresh, Water Generator, Atlas Sasakura AFG04-
6. Stearing Gear
7. Cargo Oil Pump-
8. Refrigerator -
9. Life boat (46 Persons) with complete kit. - 1 set
10. PLC Scada Training kit-
11. Hydraulic Circuit -
12. Gas Turbine Model
13. Diesel Engine Model
14. Petrol Engine Model
15. Full Mission Engine Room Simulator
16. APL UPS for Engine Room Simulator

Library

No. of books and Journals as on 31 st March of the Previous Year	Additions during the current year
780	2187

Others

10. Distinguished Visitors

Sl.No.	Name	Affiliation	Remarks
1	Capt. Ibusuki	"K" Line Ship Management Pvt. Ltd India	



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- | | | |
|----|--------------------------------|---|
| 2 | Capt. Devanandan
Kizhakkoot | MSI Ship Management Singapore |
| 3 | Peter Tytl | Maritime Training Hungary |
| 4. | Dr. Rawiya Saud
A1 Busaidi | Minister of Higher Education
Sultanate of Oman |

11. Ph.Ds Awarded : Nil

12. Publications

a. Papers : Nil

b. Books : Nil

13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students. : List attached.

Sl. No.	Name of Participants	Name of Seminar / Conference/ Workshop	Role
1.	K.A.Simon	21st National Convention of	Author of Paper "Training Needs of a Marine Engineers"
2	K.A.Simon	Institute of Marine Engineering (India) Seminar, Mumbai	Author of Paper "Random thoughts on Quality of a Marine Engineer
3.	Roy V.Paul	Design For X MINIT, Allahabad	As Participant
4.	Prof. P.V.Sasikumar	1. Institute of Marine Engineers (India) Cochin 2. National Law School of India, University of Banalore	Paper presented (Corporate Social Responsibilities) Paper presented * (Ship recycling Industry- Hazardous waste management) * (International Hazard waste management)
		3. Institution of Chartered Ship Brokers	Paper presented (Insurance coverage on general average claim)

14. Awards/Honours/Fellowships etc. received - Nil

15. Sponsored Research Projects : Nil

16. Research Programmes and Activities : Nil

17. Seminar / Conference / Workshop / Refresher Courses conducted by the Department : Nil

18. Consultancy Work : Nil

* * *



CENTRAL OFFICE FOR UNIVERSITY HOSTELS

1. Hostels Functioned During the year

H. No. I	Sanathana	Post Metric Hostel for Boys
H. No. III	Aiswarya	Post Metric Hostel for Girls
H. No. IV	Siberia	
H. No. V	Sarovar	Research Scholars Hostel (top floor Sarovar)
H. No. VI	Athulya	
H. No. VII	Anaswara	
CUMS Hostel, Kochi 16		

2. Number of Applications Received During the Year for Hostel Admission from Male & Female Students Separately.

Male	539
Female	462

3. Total Number of Students who are Given Admission Male & Female Separately During the year.

Male	360
Female	426

4. Total Number of Students Staying in Hostel

H. No. I	:	198	Post Metric Hostel for Boys - 92
H. No. III	:	243	Post Metric Hostel for Girls - 88
H. No. IV	:	162	Research Scholars hostel - 27
H. No. V	:	255	
H. No. VI	:	114	
H. No. VII	:	290	
CUMS Hostel	:		

5. Additional Facilities if any Made for Accommodating the Students

Please see item No. 8

6. Name of Warden, Central Office for University Hostels

Dr. Sunil K.Narayanankutty, Reader, Dept. of Polymer Science and Rubber Technology

7. Name of Assistant Wardens

Sanathana Hostel - Dr. Sivanandan Achari, Reader, School of Env. Studies
All other Mens' Hostel - Dr. Arunachalam, Reader, Dept. of Applied Economics (Sarovar and Siberia) CUMS Hostel: Dr. K.T.Damodaran, Director, School of Marine Sciences



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Vice Chancellor has appointed Sri. Sasi Gopalan, Lecturer, School of Engineering as Asst. Warden of Post-metric Hostel (Boys)

Dr. Asha Gopalakrishnan, Reader is the Assistant Warden for Aiswarya Ladies Hostel and all other Ladies Hostels has no Asst. Warden.

8. Any Other Relevant Information

The allotment for hostel accommodation is made as per University rules based on the recommendation from the concerned Heads of Departments depending on vacancy positions. Duration of various courses is seen to vary from 1 to 5 years. Only students from regular courses are given admission to hostels.

Under the Chief Warden for Central office for University Hostels, only one Asst. Warden for Ladies hostel. For the four hostel there as three resident Asst. Matrons and one Matron. Hostel allotment is done centrally by the Central office for University Hostels and the records are maintained there.

University hostels are now fully occupied by the students admitted to various departments of the University. The present occupancy is 1469+CUMS hostel. More than 225 students (for Mens hostel - 103, for Ladies Hostel - 32) are in the waiting list. In this situation it becomes very difficult to consider applications for hostel accommodation till vacancy arises or additional space is procured or built.

The two Post metric hostels for boys and girls students were built by the SC/ST Welfare Department of the State of Kerala. The infrastructure facility of these hostels is mainly provided by the Welfare Department. Each of these hostels can accommodate 100 students (60% of the seats are to be reserved for SC/ST/OEC students)

The O.B.C. Hostels for boys and girls are yet to start functioning.

It may be noted that we are selecting students on All India basis for various courses. So many students from outside Kerala are seeking admission to various courses besides local students who are eligible for hostel accommodation. The number of courses and seats have also been increased in each Department. It was not possible for us to satisfy the accommodation requirement of large number of male students who come from within and outside the state. The chances of finding out alternate accommodation are also limited to consequent to the high demand for accommodation created by B. Tech students. The capacity of the boys' hostel remains the same as on the period of 1997-98, except for two post metril hostels.

Since we could not provide hostel facilities to many of the students applied for, it becomes necessary to provide the facilities by constructing enough hostels. Therefore it is proposed to have

- a) one more boys' hostel with a capacity of 300 students
- b) To construct one girls' hostel with all modern amenities like gymnasium, computer centre, DTP facility keeping in view of the requirement of gender equality.



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- c) At present these hostels are run without any resident officials from University (no Manager, no office). Local management including the running of mess is completely by the students. Therefore Hostel Managers for each Mens hostel be created for smooth functioning of the Mens hostel.

Understaffing in University Hostel Office

The hostel office currently looking after six nos. of general hostels (3 nos. of boys' hostel and 3 nos. of ladies hostel) and 2 post-metric hostels. All the allotments and hostels' general maintenance are taken care off through this office. One Matron, three Asst. Matrons and 7 Nos. of Sweeper cum cleaners to various hostels are reporting this office. The office is run with one Section officer only with the help of one daily wages staff and a peon. With the increasing number of students being admitted each year and opening of new hostels, it becomes increasingly difficult to run the office with the current manpower. So, at least one number of Assistant and a Typist with computer knowledge are additionally required for smooth running of the office.

* * *



COMPUTER CENTRE

The Center for Information Resource Management (CIRM) was established in 1998 with the help of the MHO-INFOCUS project of the Netherlands Government. In 2006, CIRM has been established as an Independent Centre with full fledged Office.

The main objective of CIRM is to act as the nodal centre for all the information technology resources of the university. It involves design, installation and maintenance of the IT infrastructure including the network, software resources and IT enabled services and facilities. CIRM also provide the staff training, user support and specialized consulting services to user departments and external clients on demand.

CUSAT is one of the few institutions of higher learning India that possess a state of the art, reliable and scaleable campus wide network which support the information needs of the user community. All the departments in the main campus are interlinked with a fiber optic backbone. Also the Lakeside Campus 15 KM away from the main campus is connected to the main network.

The campus network is seamlessly integrated to the internet through broad band connectivity available to the user community on 24x7 basis. The internet connectivity in the Main as well as the Lake side Campus has been upgraded to 8 Mbps during the year 2007-08. With this new connectivity the users in the main campus and lake side campus can experience much higher band width.

The domain name cusat.ac.in is registered with the National Centre for Software Technology (NCST) India. The portal www.cusat.ac.in serves as the single window access point to all the information resources and IT enabled services of CUSAT which is managed by CIRM.

The knowledge advantage

The CIRM staff are trained by the network specialists from the Delft University of Technology, The Netherlands for maintaining the Mail server, Web server, DNS server, Proxy Servers and all other related servers for the internet in the main campus itself. CIRM uses robust technologies and softwares customized to work together to provide an uninterrupted and superlative service experience to the user community.

Continuously being on the bleeding edge of technology, CIRM has developed considerable expertise in many areas, technologies and platforms. CIRM is able to integrate various hardware architectures and also ensure interoperability among various and even conflicting software platforms. Facing the enviable task of being the IT backbone of the premier Science and Technology University in the country, is no easy job, but the enterprising staff of CIRM has proved their mettle.

The Facilities

The CUSAT portal acts as the single point access to all the information resource services offered by CIRM. Some of them are:



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Internet

The web server is hosted in house in house and internet facility is extended to all CUSAT community on 24x7 basis.

Email:

The mail server is hosted in house and email facility is extended to all teachers, staff, research fellows and post graduate students of the campus.

E-Learning

There is support for E-learning to the CUSAT community through both the proprietary system of Blackboard and the open source platform Moodle, both maintained by CIRM.

CIRM is planning to establish an online learning system with full functionality of Video Conferencing, online discussions and online interactive classes.

Voice Communication system

The voice communication system is installed with 600 lines both in the main and lakeside campuses.

Edusat

Edusat transmission is made available by CIRM providing the facility to view the programmes in the Computer center as well as the Library. The same can also be made available for any department on demand.

Projects completed

- Upgradation of Computer Lab and internet browsing Lab have been completed with new systems with the help of UGC funding.
- Connectivity gradation from the existing bandwidth of 1 Mbps to 8 Mbps at the main campus and from 512 Kbps to 8 Mbps at the Lake side campus with dedicated fiber cable connectivity between the campuses

The process of connectivity upgradation is completed during the year 2007-08, using MHRD funding.

- Up-gradation of the intercom facility in the main and lakeside campus with DID has also been accomplished during 2007-08. This includes the increase of lines from 600 to 1000. Plans are also there to integrate the voice network of main campus with that of the lakeside campus.
- The Data network inside the university campus has been strengthened with the installation of new Edge switches and by replacing the damaged ones.
- The old mail serves at CIRM have been replaced by new servers to ensure smooth functioning and to increase data storage capacity.
- Extension works of the data and voice network to the new faculty / staff rooms of various departments/Centers/Sections of the University are undertaken by the Centre.



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Apart from this, rectification of complains of computer systems of various sections and the routine maintenance of the data and Voice network inside the entire Main campus and the Lakeside campus are also done by the Centre.

Projects completed

- Network cabling and Telephone cabling works to the newly constructed Kunjali Marakkar School of Marine Engineering.
- Network cabling work to the University Guest house and Athidi Bhavan.
- Telephone cabling work to the Post metric hostel and O.B.C. Hostel for girls.
- Network cabling and Telephone cabling works at the Department of Atmospheric Sciences, Lakeside Campus, CUSAT.

Proposals for Immediate Implementation

Up gradation of Data & Voice communication facilities to all the Ladies Hostels, CUSAT

Proposals have been submitted for providing networking facility (both wired and wireless), advanced Computer systems and additional intercom facilities to all the Ladies Hostels and the working women's hostel of the University. Also, a proposal has been submitted for upgrading the Common Facility Centre (Ladies hostels) with Network and Intercom facilities, Computer systems, Multimedia Projector and Digital photocopier. The above submitted proposals will be financed by the UGC XI Plan Fund - Merged Schemes under General Development Assistance.

Network security systems

As the complexity of the network and the available services are growing daily, issues of network safety and privacy are to be addressed seriously. Attacks from hackers, software bots and virus are increasing rapidly. To provide resistance against these attacks the centre has plans to install a UTM box in the gateway. A proposal has been submitted for the purchase of a UTM Box.

New Web Server

Proposal has been submitted for the purchase of a New high end web server with massive data storage capability. The server can be utilized for content generation, enhanced mail functionality and other high end applications.

Proposals for the Coming Years

e-Governance

ICT center will provide a platform for the governing and administrative functions of the University. The various facilities of the center would facilitate effective and efficient management of day-to-day administration of the university, besides providing an opportunity to remain connected with national level agencies of higher education like UGC and AICTE and other regulatory, funding agencies. The center's role will assume greater significance against the back drop of



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UGCs plan to go on e-Governance mode during 11th plan period and the university will also become under a continuous connectivity with the state government agencies like KSCSTE, DTE etc.

Video-Conferencing

ICT center will provide all necessary infrastructures to facilitate video conferencing.

Content digitization services

A team at ICT center will act as e-content creators. All the digitization work including course materials and other knowledge generated from the university, orders, circulars, bulletins etc. will be done through the team.

e-Content Repository

ICT center will host a central server for gathering and disseminating e-Content. The repository will include e-books, course materials created by teachers, short learning objects, research papers, thesis generated from universities all over Kerala.

Information Kiosks

Under the common university act, every transactions of the university must be available to the common public. To facilitate this ICT center will design and implement information kiosks in key places with the university

“All under one roof” Counter

ICT center will provide any information required to the student community related to their exams, certificates, course details etc.

Fast Track Facility

ICT center can provide infrastructure to facilitate a fast track mechanism to obtain certificates and related things in very short span of time.

FM Station

ICT center can take initiatives to start an FM station.

Short Courses to the Public Community

As part of commitment to the society ICT center can take initiatives with the help of teaching departments to give out short courses to the school teachers, entrepreneurs etc.

CUSAT Alumni Database

ICT center will take initiatives to correlate all the departments to have their alumna's database.

Software Repository

To encourage used of licensed software; a repository of commonly used software with campus license is required. Any department can install software from this repository on request.



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High Performance Computing Facility

The entire high end computing requirements of various departments could be met from this facility. ICT can take initiatives to set up one.

Advanced Networking Lab

An advanced networking lab is another priority. This is required for conducting advanced research in the area of networking.

Wi-Fi Campus

CIRM is moving towards having a full fledged e-campus ensuring access to the network to the user community irrespective of their location.

Call Centre

CIRM is also planning to establish a call centre facility for providing required information to the public.

1. Administrative Personnel

Sl.No.	Designation	No. of Posts
01	Hon. Director	01
02	Office Superintendent	01 (Vacant)
03	Assistant	01
04	Peon	01
05	Sweeper /Cleaner	01

2. Technical Personnel

Sl.No.	Designation	No. of Posts
01	Technical Officer	01
02	Technical Assistant Grade III	02

3. Research Facilities

Computing Labs (Major equipments available)

i). Computers, Servers, Printers & Network Components.

S/N	Item		Qty
01	Infinity Global Line 2700 HN	Server	2
02	HP Netserver LH4	"	1
03	HP Netserver LC3	"	1
04	HP Kayak PIII	PC	1
05	Acer PIV	"	2
06	IBM PIV	"	3
07	Infinity Pro PIV	"	21
08	IBM Thinkcentre	"	30



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09	Wipro LQ-1050+DX	Printer	1
10	HP Laser Jet 1150	"	1
11	Tally T2245	"	1
12	HP Laser Jet 1020	"	1
13	HP Laser Jet 1022	"	1
14	3Com switch 4060	Core switch	4
15	3Com super stack III switch 4228G	Edge switch	27
16	Edge switches Foundry	Edge switch	11
17	IBM Server	Mail Server	2

ii). UPS Systems

No	Item	Qty
01	40KVA Merlin Gerin UPS	2 Nos
02	40 KVA Tata Liebert UPS	1 Nos

iii) Voice Communication Systems

EPABX System Hipath 4000 (1000 Lines At the Main Campus and 96 Lines at the Lake side Campus)

4. Distinguished visitors : Nil
5. Ph.Ds Awarded : Nil
6. Publications : Nil
7. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students : Nil
8. Awards/ Honours/ Fellowships etc. received : Nil
9. Sponsored Research Projects : Nil
10. Research Programmes and Activities : Nil

11. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration
01	Training programme to school teachers on IT@ School- GNU/Linux	4 days w.e.f. 22nd May to 25th 2007)
02	Departmental LAN Managers training Programme	5 days (9th July-13th July 2007)
03	Training programme on Linux, to Students, V.H.S.E., Thevakkal	3 days
04	Computer Training to University staff in association with Department of Computer Applications	Conducted in batches



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05	Orientation programme on 'Koha' library automation software in association with the University library	1 day on 18.10.2007
06	Training programme on D Space digital repository system conducted in association with University Library	2 days, 15 & 16, Jan. 2008
07	Training programme for professional assistants conducted in association with the University library	1st Batch 5 dys, Feb 2008 IInd batch 5 days, March 2008
08	Training programme for Industrial Extension Officers, conducted in association with Kerala Institute for Entrepreneurship Development, Kalamassery	7 days, January 2008
09	Training programme on Digital Library (D Space) conducted in association with School of Engineering Library	2 dyas, 24th & 25th March 2008

12. Consultancy Work : Nil

* * *



ENGINEERING DEPARTMENT

BUDGET AMOUNT FOR

a. Major Works (Plan)	:	Rs. 3,40,00,000.00
b. Major works (Non Plan)	:	Rs. 5,00,000.00
c. Centre for School of Engineering (Marine Engg.)	:	Rs. 1,57,00,000.00
d. Centre for School of Engineering	:	Rs. 2,65,85,000.00
e. Centre for Engineering Kuttanad	:	Rs. 4,74,00,000.00

MAJOR WORKS STARTED DURING THE YEAR

Sl.No.	Name of Work	Agency through Which work is carried out	Estimated	Expenditure	Remarks
1.	Construction of Main block in Kuttanad	M/s. C.P.W.D.	5,55,49,000/-	1,78,68,250/-	Piling works completed
2.	Providing generator room and panel room, Horticultural development in Marine Engg. Campus	M/s. C.P.W.D.	21,20,400/-	14,13,600/-	works nearing completion
3.	Storm water drain in Ad. Block lecturing stage, storm water drain & lawn around residential block in Marine Engg. Campus	M/s. C.P.W.d.	35,32,600/-	23,55,000/-	-do-
4.	Construction of Electrical Machine lab for School of Engineering	Sri. Augustine	59,72,300/-	37,17,530/-	Works completed in March 2008.



19-2-CUSAT UPGRADATION TO IEST - MHRD

T Works - 1 - Departments

Head	Budget	Expenditure	Remarks
201	-	52,22,760/-	(Diversion)
250	25,00,000/-	49,78,000/-	" "
383	3,50,00,000/-	33,02,524/-	
391	34,00,000/-	65,59,000/-	
	4,09,00,000/-	2,00,62,284/-	
T - Works - 1 - Others			
405	4,00,00,000/-	77,51,000/-	
449	20,00,000/-	13,392/-	
	60,00,000/-	77,64,392/-	
T-Works - 4 - Others			
619	2,84,000/-	-	
621	19,00,000/-	9,48,500/-	
622	65,00,000/-		
923	30,00,000/-		
	1,16,84,000/-	9,48,500/-	
	5,85,84,000/-	2,87,75,176/-	
Grand Total of T - Works			

97 - 0 T - WORKS PLAN (Expenditure)

1	Depts	1	Computer Center Maintenance	15,00,000
34		34	New Building for CELOS	30,00,000
	Total		Total	45,00,000
4	others	600	Major repairs/Construction of roads	1,50,00,000
		601	Compound wall around Thrikkakara campus	25,00,000
				6,16,600
				5,00,186



624	Coinstruction of Women's Common room	-	49,633/-	(Diversion)
625	Construction of Gymnasium building	-	51,769/-	
626	Day care centre	-93,940/-		
627	Basic facilities for women	70,00,000/-	30,35,000/-	
999	Minor works	50,00,000	96,98,755/-	
Total		2,95,00,000/-	1,34,29,283/-	
Grand Total		3,40,00,000/-	1,34,29,283/-	

97 - 0 - T - Works Non Plan

4 others	Minor works	5,00,000	7,69,430/-	(Diversion)
		5,00,000	7,69,430/-	

94-2-Centre for Engineering Studies, Kuttanad

T Works 1	350	Engineering College Main building complex	4,00,000/-	1,78,68,250/-
	351	Construction of Workshop building	14,00,000/-	
	381	Construction of Substation	5,00,000/-	
4 Others	900	Construction of roads	4,19,00,000/-	1,78,68,250/-
	901	Compound wall around the campus	5,00,000/-	
	905	Borewell & Treatment Plant	30,00,000/-	7,82,291/-
				8,40,990/-
		Total	35,00,000/-	16,23,281/-
		Grand Total	4,54,00,000/-	1,94,91,531/-



94-4 - Centre for Engineering Studies - Marine Engineering Campus

T - Works -				Diversion included in MHRD
300	Marine Engineering campus	50,00,000	59,46,421/-	
301	Ship in campus	5,00,000		
	Total	55,00,000	59,46,421	
4-others	Construction of compound wall and gate	28,00,000	75,432	
951	Providing 160 KVA stand by DG set	22,00,000	10,85,000	
952	Sewage treatment plant	47,00,000	13,75,000	
999	Minor works	5,00,000		
	Total	1,02,00,000/-	25,35,432	
	Grand Total	1,57,00,000/-	84,81,853/-	

94-1-Centre for Engineering Studies

T-1-Depts.				Diversion
381	Construction of Lecture hall Complex Block II		3,26,936	
386	Thermal Engineering and Fluid Mechanics Lab	2,85,000	1,00,000	
387	Fire & Safety Engineering Lab	35,00,000	9,23,542	
389	Electrical Engg. Block	52,00,000	48,60,723	
	Total	89,85,000	62,11,201	
2-Hostels	Construction of Men's Hostel	1,40,00,000	1,50,25,928	Diversion
	Total	1,40,00,000	1,50,25,928	
4-Others	Construction of road	10,00,000		
601	Compound wall	1,00,000		
615	Construction of CES canteen	5,00,000		
999	Minor works	20,00,000	13,77,067	
	Total	36,00,000	13,77,067	
	Grand Total	2,65,85,000	2,26,14,196	



DETAILS OF BILLS FORWARDED
1. 19-2 CUSAT UPGRADATION TO IEST

MHRD WORKS

Expenditure spent for the works in this year

1	Construction of Vth floor over the existing multistoreyed building	24,89,000/-
2	Additional floor on top of the lab block SOE	32,80,000/-
3	Construction of Software engg block for SOE	9,76,524/-
4	Construction of ladies hostel for B Tech students	38,76,000/-
5	Laying marble flooring of the concrete area of Sanathana Aiswarya & Siberia hostel	3,97,868/-
6	Augmentation of substation No. 1 in CUSAT	9,48,500/-
7	Purchase of furniture for CUMS hostel	17,550/-
8	Construction of ladies hostel for B Tech students	38,76,000/-
9	Construction of Vth floor over the existing multistoreyed building in School of Marine Sciences	24,89,000/-
10	Construction of an additional floor on the top of existing lab block building for School of Engineering	32,79,000/-
11	Construction of Software Engineering block for SOE	33,02,524/-
12	Construction of hull of Ship-in-campus	52,22,760/-
13	Purchase of wooden furniture sto CUMS hostel	57,642/-

2. 94-4 Centre for Engineering Studies and 94 - 1 Centre for Engineering Studies

1	Construction of compound wall in the south east corner of SOE campus	75,432-
2	Providing boundary posts on other side of the road beyond NH junction upto Arch gate	14,830/-
3	Purchase of furniture for B Tech hostel-advance	31,30,806/-
4	Construction of men's hostel for B Tech students	5,08,721/-
5	Electrification to the room proposed for network operating system lab division of Computer Engg. SOE	1,35,402/-
6	Construction of building for Marine Engineering course	63,543/-
7	Construction of compound wall and gate for Marine Engineering block	13,75,000/-
8	Construction of men's hostel for B. Tech students	14,64,800/-



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9	Construction of compound wall and gate for Marine Engineering block	15,52,400/-
10	Providing horticultural Development to Marine Engg. Campus	7,06,508/-
11	Installation of lecturing stage and storm water drain	11,77,500/-
12	Installation of cooking gas system in B.Tech hostel	51,000/-
13	Providing electric connection to thermal lab, fluid lab & electrical lab from SOE Substation	4,77,949/-
14	Electrification to CES hostel for B.Tech students	2,72,423/-
15	Advance payment to M/s. KSCC for B.Tech hostel	18,00,000/-
16	Construction of electrical machine lab to SOE	8,63,094/-
17	Vertical extension to the existing lecture hall building block No. II	2,93,990/-
18	Maintenance work of toilets block in SOE	44,835/-
19	Construction of men's hostel for B.Tech students	4,19,956/-
20	Finishing of the remaining work of water tank in fluid machine lab and hydraulic machinery lab	1,00,000/-
21	Electrification to the fluid machine lab of Division of Mechanical Engg.	7,12,950/-
22	Providing Water connection to B.Tech Boys hostel	60,000/-
23	Architect fee for mens' hostel	67,950/-
24	Purchase of cement	4,80,000/-
25	160 KVA stand by DG set for Marine Engg campus	10,85,000/-
26	Construction of compound wall stage II installation of lecturing stage & stream water drain in Ad. Block of Marine Engineering campus	27,29,700/-
27	Providing 2nos. of 3 HP mono block pumpset in the newly constructed B. Tech hostel (94-1)	23,000/-
28	Providing horticultural development to Marine Engg.	7,06,800/-
29	Construction of electrical machine lab for SOE	15,16,287/-
30	Electrification to CES hostel for B.Tech students	7,41,626/-
31	B. Tech hostel	10,72,482/-
32	Inauguration of Kunjali Marackar School of Marine Engineering	67,901/-
33	Providing split Type AC Units	4,92,640/-
34	Providing grill and roof covering to the work area of B.Tech men's hostel	14,812/-
35	Tender publishing charges for B.Tech hostel	60,448/-



36	" " " Kitchen equipments	16,008/-
37	Purchase of 2000 bags of cement	4,90,000/-
38	Installation of lecturing stage and storm water drain to residential block of Marine Engg campus	11,77,500/-
39	Construction of electrical machine lab for SOE	28,54,436/-
40	Release of retention amount to KSCC for men's hostel	10,00,000/-]
41	Providing horticultural development in Marine Engg campus	7,06,800/-
	Total	

3. 94-2 Centre for Engineering Studies, Kuttanad (CUCEK)

1	Compound wall for CUCEK campus	2,60,669/-
2	Replacing damaged PVC sheets of the class rooms building in CUCEK	34,340/-
3	Providing retaining wall & compound wall around workshop building	2,69,292/-
4	Providing a partition and counter in room No. XII in Office building for providing an annexture to the CUCEK Office	34,000/-
5	Providing attached toilet and renovation of Principal's room in CUCEK main campus	50,000/-
6	Construction of compound wall in CUCEK mini campus at Pulinkunnu stage III	1,53,553/-
7	Aluminium partition in the computer lab for MCA block II	55,348/-
8	Installation of 82 KVA DG set at CUCEK	43,000/-
9	Construction of main block 2nd advance	1,78,68,250/-
10	Construction of compound wall & gate in front of CUCEK main campus	13,635/-
11	Extension to 11 KVA feeder	8,40,990
	TOTAL	

4. 97-0-T-Works Plan

1	Electrification to the extension of the School of Legal Studies	31,334/-
2	Electrification to the Adm building -vertical extension 2nd floor	73,947/-
3	Construction of compound wall stage V in Thrikkakara	2,97,558/-
4	Electrification to the common block for women's near ladies hostel - purchase of electrical items	11,807/-



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5	Electrification to the Gymnasium building-purchase of electrical fittings	11,143/-
6	Electrification to common room for women students	37,826/-
7	Electrification to Gymnasium for women near ladies hostel	40,626/-
8	Rewiring of Health Centre	93,940/-
9	Construction of compound wall stage V	2,02,628/-
10	Shifting electric line for road widening work-amount deposited in KSEB	6,16,600/-
11	Purchase of furniture to the common room of anaswara hostel	5,00,000/-
12	Construction of 1st floor of Gymnasium	5,00,000/-
13	Modification works in Gymnasium for women	1,12,000/-
14	Providing shuttle court 2nos. Inside the Anaswara ladies hostel and volley ball court in front of Aiswarya ladies hostel	2,59,000/-
15	Renovation of toilets in the GF and FF of Ad. Block and GF in SES	2,90,000/-
16	Modification work in existing women's common room	1,96,000/-
17	Construction of 1st floor of women's common room	5,00,000/-
18	Renovation of common room for Anaswara ladies hostel	2,78,000/-
19	Purchase of Indoor/outdoor gadgets for the development of existing creche	4,00,000/-
	TOTAL	
<hr/>		
5. 2-97-0-T-4-999 MINOR WORKS PLAN		
1	Power factor improvement installation of APSC panel in the 315 KVA Substation at Marine Science campus	2,53,745/-
2	Purchase of kitchen utensils to Aiswarya ladies hostel	32,862/-
3	Purchase of electrical equipments and wiring materials of labour charges	1,56,571/-
4	Purchase of various hard ware items plumbing and water supply materials, sanitary wares, electrical equipments fitting wiring materials etc and labour charges for various works	56,364/-
5	False ceiling work of Auditorium ISP	2,50,000/-
6	Purchase of 3 phase 10 HP mono block pump set	22,000/-
	TOTAL	



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MAJOR WORKS (Plan) Budget Allotment : Rs.1,00,00,000/-

Sl.No.	Name of Works	Name of Contractor	Amount
1	Supplying and installation of Conference system in Senate hall & Administrative Office	M/s. Krishna Radio Company	3,04,668/-
2	Providing Collapsible gate in front of Dept. of PS & RT Building	Sri. Cherian Varghese	34,785/-
3	Urgent petty works on various depts. in Marine Sciene campus	Sri. K.Krishnan Kutty	1,21,606/-
4	Urgent repair works in Mathematics dept. in Thrikkakara campus	K.J.Devasia	1,84,386/-
5	Cutting and removing of thick thorny jungles and overgrowth in Thrikkakara campus	M/s. Kudumba Sree	
6	Rewiring of School of Management Studies	M/s. Electroskill	3,64,316/-
7	Maintenance charges rendered for the passenger lift installed at the multistoreyed building	M/s. Thyssenkrup	14,326/-
8	Urgent maintenance work to the canteen building near Administrative Office	Suresh Kumar S.S.	1,44,737/-
9	Providing new connection for Nd Y Ag laser in Opto Electronics Device Lab in Physics Dept.	M/s. Electro Skill	43,202/-
10	Modification of CAD/CAM centre in CES III	Suresh Kumar S.S.	23,508/-
11	Providing barbed wire fencing around weather station	K.Krishnankurru	12,122/-
12	Setting up a furnished room in the 2nd floor of SMS dept. for accommodating Prof. Dr. M.V.Pylee	Sunny John	36,938/-
13	Providing collapsible gate in various depts. in Thrikkakara campus	Cherian Varghese	1,76,472/-



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14	Setting up a record room as per public records Act 1993 in Ad. Block	P.A. Augustine	42,627/-
15	Installation of 2T 3ϕ split AC in Dept. of Marine Science Lakeside campus	M/s. Dynuricon Power India Ltd.	1,20,997/-
16	Construction of Scooter shed and providing roof of the outside work area on Sarovar Hostel	Jojo Jacob	1,14,256/-
17	Laying vitrified tiles in the auditorium of the Dept. of the P.S. & R.T.	Bijish C.G.	1,40,096/-
18	Rectification and maintenance to Microbiology Lab in Lakeside campus	S.S.Suresh Kumar	87,841/-
19	Leakproofing works to the terrace of Savanna Hostel and SOE Library wing.	Sri. T.V.Babu	3,95,907/-
20	Installation of bio gas plant	M/s. Anert	4,89,022/-
21	Purchase of water supply and sanitary items	M/s. Ayurkuzhiyil Stores	2,84,797/-
	Total		31,36,609/-

Major Works (Plan) Budget allotment Rs.1,00,00,000/-

Departmental Execution

Sl.No.	Name of work	Amount Rs.
22	Providing light roof over the bed room of PVC quarters	23,500/-
23	Renovation of toilet in GF of Department of Electronics	32,231/-
24	Powder coated aluminium partition at door for the installation of smart card system	61,982/-
25	Providing modification works to office space to Savanna hostel to accommodate CSC Dept.	3,33,591/-
26	Providing cabin for A.R. in Admn. II	20,842/-
27	Modification of CAD and programme lab for Mechanical Engineering Division	74,290/-
28	Maintenance of car shed in Marine Science campus	20,000/-
29	Providing cabin in AR Examination Section	22,000/-



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30	Constructing room for LIDAR facility	2,56,000/-
31	Providing roof in carporch in Siberia hostel	42,000/-
32	Providing sunshade with tiled pattern GI sheet in western protion of corrdor in Sanathana Hostel	50,000/-
33	Providing special AC & setting up room for Dr. M.V.Pylee	37,098/-
34	Construction of compound wall in south end of Sanathana hostel	15,000/-
35	Repairing damaged furniture in CES canteen of SOE	20,000/-
36	Providing ideal pattern of sunshade for corridors in Aiswarya hostel	60,000/-
37	Providing glazed door to Anaswara to prevent the entry of stray dogs	42,000/-
38	Preventive campaign against C Chickun Gunia	67,000/-
39	Providing monoblock centrifugal pump set for post Matric hostels for Boys & Girls	25,000/-
40	Installation of collapsible gate in front of south block building at Lakeside Campus	12,000/-
41	Renovation of HOD's room in dept. of Applied Chemistry	65,000/-
42	Providing connection to 2his. of 5 KVA UPS plug points to Molicular Neuro Biology lab in Bio Technology Dept.	28,000/-
43	Concreting the front portion of scooter shed in Sanathana Hostel	18,500/-
44	Partition in Civil Engineering computer lab for installing newly purchased computer	15,000/-
45	Providing infrastructure for MBA class (Travel & Tourism) in SMS Dept.	6,56,000/-
46	Providing collapsible steel shutter in front of Examination store at Ad. Block	19,144/-
47	Electrification of Centre for Science Communication	44,000/-
48	Formation of garden in front of Ad. Block	1,25,000/-
49	Renovation of HOD's room in Physics Dept.	80,000/-
50	Purchase of electrical appliances for foreign students in Adhithi Bhavan	50,465/-
51	Arrangement of south zone Vice Chancellors	92,712/-
52	Renovation of Director's cabin in IRAA Ad. Office	25,964/-
53	Minor modification of Health Centre	11,662/-
54	Providing ceramic tiles to SBT CUSAT	73,550/-
55	Purchase of electrical appliances to Adhithi Bhavan	29,130/-
56	Inauguration function of Post Matric hostels for SC/ST	21,077/-



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57	Purchase of utensils, gas connection/payment of tax, water connection for KWA to Hostel for OBC students	2,00,000/-
58	Purchasing of washing machine, colour television and iron to Adhithi Bhavan	27,000/-
59	Disposal of accumulated waste from the Siberia and Sarovar hostels	90,000/-
60	Providing book shelves in the library of School of Environmental Studies	85,860/-
61	Providing lawn to the Guest Houset	36,635/-
62	Providing partition in the existing cabin room No. F4A in new lab block	44,996/-
63	Providing enquiry cabin in Ad. Block	78,504/-
64	Urgent maintenance to VC's quarters	2,00,000/-
65	Providing various materials to VC's quarters	45,000
66	Construction of additional septic tank to PVC	56,000/-
67	Providing vinyl flooring in School of Industrial Fisheries	59,000/-
68	Providing UPS wiring for computers and connection of 2nos. 2 KVA UPS in SOE Library	14,200/-
69	Purchase of 10 HP 3 phase mono block pump	17,888/-
70	Air conditioning the Hall in GF of new block in School of Legal Studies	1,80,800/-
71	Renovation of cash counters in Ad. Block	1,05,000/-
72	Advertisement charges for various works	1,28,178/-
	Departmental execution Total	29,30,3327/-
	through contractors total	31,36,609/-
	Grand total	60,66,936/-
	Purchase of electrical & water supply materials for petty maintenance works in Departments & quarters both in Thrikkakara and Ernakulam campus including labour charges	36,31,819/-
	Total	96,98,755/-



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Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Sweeper-cum-cleaner	1
2	Peon	2
3	Assistant	5
4	Typist/Steno	2
5	Section Officer	2
6	Plumbers	3
7	Plumbing Supervisor	1
8	Pump Operator	1
9	Driver	1
10	Line Helper	9
11	Electrician	8
12	Overseer	11
13	Asst. Engineers	8
14	Asst. Exe. Engineers	5
15	Technical Officer	1
16	University Engineer	1

* * *



CENTRE FOR SCIENCE IN SOCIETY

The Centre for Science in Society was established in 1991 under the UGC VIIIth plan Development Assistance with financial aid from Cochin Refineries Limited. It is instituted as endowment CRL Chair in the University. The centre conducts various programmes about science with the view to popularize Science and Technology among children. The centre has its own facilities like library, Workshop, Computer lab, Science labs, and toy labs, Science - Park, Herbal Garden, and science Pavilion etc. Some of the programmes offered by C-SiS are as follows: One Day Attachment Programme (ODAP) is for batches of students from a school. Young Scientists Forum (YSF) is a programme for which children directly seek admission to C-SiS. The programme is conducted on Saturday/Sunday every month for one full year. Science Talent Development Programme is an intensive programme meant for children with special attitude for science. This programme starts on first week of April every year and will continue for 7 weeks till the end of May. In addition to these C-SiS undertake various training programmes with financial aid from Government bodies.

1. Programmes of Study/Research - NIL

2. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1.	Dr. K.G. NAIR	Honorary Director		

3. Visiting Faculty (If any) - NIL

Sl.No.	Name	Designation	Qualification	Specilisation
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4. Research Staff - NIL

Sl.No.	Name	Designation	Qualification	Specilisation
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5. Research Scholars - NIL

Sl.No.	Name	Funding Agency	Guide	Area of Work
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6. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Assistant	1
2.	Typist (Now Vacant)	1
3.	Peon	1
4.	Sweeper-cum-Cleaner	1



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7. Technical Personnel - NIL

Sl.No.	Designation	No. of Posts
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8. Student Enrollment - NIL

Sl.No.	Programme of Study	Men	Women	Total
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9. Research Facilities –NIL

a. Laboratories (List out Major equipments available)

b. Library

No of books and Journals as on 31st March of the Previous Year
Additions during the current year

Books – 6143, Journals – 94	Books – 1022, Journals - 1
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c. Others

10. Distinguished visitors - NIL

Sl.No.	Name	Affiliation	Remarks
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11. Ph.Ds Awarded - NIL

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
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12. Publications - NIL

a. Papers

Sl.No.	Name of Paper
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b. Books

Sl.No.	Name of Book
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13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students. - NIL

Name of Participant	Name of Seminar / Conference/ Workshop	Role
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14. Awards/ Honours/ Fellowships etc. received - NIL

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
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15. Sponsored Research Projects - NIL

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
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16. Research Programmes and Activities: - NIL

Sl.No.	Problem / Topic	Investigator (s)
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17. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	Sastraposhini Follow up Training Programme for Secondary School Teachers	4 days	Dr. K.G. NAIR	KSCSTE, Thiruvananthapuram.

18. Consultancy Work - NIL

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
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NATIONAL TECHNICAL MANPOWER INFORMATION SYSTEM (NTMIS) NODEL CENTRE

A. INTRODUCTION

NTMIS has been set up by the Ministry of Human Resource Development, Govt. of India in 1984 to provide upto date and meaningful manpower information on a continuing basis to enable the concerned authorities to anticipate areas of growth in the field of Science and Technology and consequently plan for technical manpower development on a scientific basis.

The NTMIS comprises of a Lead centre in the Institute of Applied Manpower Research, New Delhi and 20 nodal centres are located at different parts of the country. The Kerala Centre is functioning in CUSAT from 1984 and is attached to the School of Engineering. This scheme is funded by the All India Council for Technical Education (A.I.C.T.E.). The A.I.C.T.E. is strengthening NTMIS with adequate infrastructure making it an upto date and dynamic national data-base. The NTMIS is becoming a unique, reliable and comprehensive information system.

B. OBJECTIVES

1. Estimation of short-term and long-term requirements of different categories of engineering and technical manpower in different fields with branches of specialization.
2. Estimation of supply of different categories of engineering and technical manpower on the basis of existing intake and out-turn figures.
3. Assessment of anticipated gaps in demand and supply position in the present and in the future years.
4. Collection and analysis of data to match the job requirements with facilities for education and training.
5. Provide forecasts about adequacy or shortage of manpower requirements in the future years.
6. Undertake study of assessment of future needs and for giving indications about the specialized areas requiring urgent attention for expansion of facilities for education and training

C. DATA COLLECTION

The data collection work mainly consist of the following

1. Graduate follow up survey – The details of candidates of diploma holders, degree holders and postgraduates are collected in a prescribed format.
2. Institutional survey – This consists of details of facilities from diploma level and degree level institutions in a prescribed format.



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3. Establishment survey – This consists of data collection from different establishments regarding the details of engineering and technical manpower employed. This work is done by the Board of Apprenticeship Training (BOAT), Chennai.

The details of institutions and the number of students covered in the survey are given in Appendix 1. Annual report is prepared based on the above three surveys in the Nodal Centre. This report gives comprehensive information and projections at the State Level.

D. WORK DONE

The graduate follow up survey for years 1983 to 2004 have been completed and the work for the year 2005 is in progress. Institute survey has been completed till the year 2006-07.

E. FACILITIES

The office is equipped with a fax, a photocopier, a franking machine, four computers and four printers.

F. ADVISORY COMMITTEE

For ensuring co-ordination and for developing the state modules an Advisory Committee for each state has been formed with the following composition

1. Vice Chancellor, CUSAT – Chairman
2. The Director of Technical Education of the State
3. The Director of Industries and Commerce of the State
4. The Regional Officer of Ministry of Education
5. The Director of Regional Apprenticeship Board
6. Head of the State Manpower Unit / Dept.
7. A representative from the Lead Centre
8. A representative from AICTE New Delhi
9. Head of Nodal Centre

The Advisory committee provides guidance and support to the Nodal Centre and will ensure that work in each state becomes comprehensive enough to constitute a complete information system at the state level.

G. ORGANIZATIONAL SET UP

The organizational set up is as follows:

- | | |
|--------------------------|------------------------------------|
| 1. Sri. Joseph Alexander | - Project Officer and Head |
| 2. Dr. Sabu Thomas | - Research Associate |
| 3. Smt. Preetha Thomas | - Computer Operator Cum Programmer |



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A Personal Assistant and four Investigators are also working for this project on temporary basis for the scheme.

H. FUNDING

An amount of Rs.1.69 crores have been received from the M.H.R.D. and A.I.C.T.E. till 31.03.2008. The annual budget proposed for 2007-08 is Rs.21,28,000/- .

1. Faculty Members

Sl.No	Name	Designation	Qualification	Specialisation
1	Sri Joseph Alexander	Project Officer	M.Sc(Engg)	Mechanical Production

2. Research Staff : 5

Sl.No	Designation	No. of Posts
1	Research Associate	1
2	Investigators	4

3. Administrative Personnel

Sl.No	Designation	No. of Posts
1	Personal Assistant	1

4. Technical Personnel

Sl.No	Designation	No. of Posts
1	Computer Operator Cum Programmer	1

5. Research Facilities

a. Laboratories (List of Major equipments available)

Details of Major Equipments in the Nodal Centre

Sl.No.	Items & Specifications
Computers	
1	HCL Server Intel P-III 866 MHz
2	HCL Node Intel P – III850 MHz
3	PCL Server 486 66 MHz
4	PCL Node 486 50 MHz (Upgraded Intel Celeron 730 MHz)



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Printers

- 1 HP Laser Jet 1000 Series
- 2 Dot Matrix Printer Epson LQ 1050 24 Pin
- 3 Epson Lx – 300 Printer
- 4 HP DeskJet 39400 Printer

UPS

- 1 UPS 1.0 KV
- 2 UPS 1.5 KV

Others

- 1 Photo Copier – Modi Xerox
- 2 Fax Machine F2100
- 3 Fax Machine – FC 335
- 4 Franking Machine
- 5 Air Conditioner – Window type

b. Library : Nil

c. Others : Nil

6. Distinguished visitors : Nil

7. Ph.Ds Awarded : Nil

8. Publications : Nil

9. Publications

Books

Sl.No	Name of Book
1	Annual Technical Manpower Review 2007 (Engineering)
2	Annual Technical Manpower Review 2006 (MBA, Pharmacy, Hotel Management & Catering Technology)

10. Participation in Seminar/Conference/Refresher Courses etc by Faculty

Name of Participant	Name of Seminar / Conference/Workshop	Role
Joseph Alexander	Southern Regional Project Officers Meeting at J.N.T.U. Hyderabad on 14th and 15th Nov. 2007.	Member
Joseph Alexander	National Meeting of Project Officer's at AICTE Delhi on 13th March 2008	Member



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11. **Awardes/Honours/Fellowships etc. received : Nil**

12. **Sponsored Research Projects : Nil**

13. **Research Programmes and Activities**

Sl.No	Problem/Topic	Investigator(s)
1	Technical Manpower Planning	Joseph Alexander

14. **Seminar / Conference / Workshop / Refresher Courses conducted by the Department : Nil**

15. **Consultancy Work : N.A.**

16. **Any other**

The Website <http://nodalcentre.cusat.ac.in> provides a lot of information about Technical Education in the State.

Appendix 1

Nodal Centre for Kerala

Details of Institutions and Number of Students covered in the survey during 2006-07

Sl.No	Category	No.of Institution in 2007		No of Students (2005 survey)	
1	Engineering College	87		Degree	8781
				P.G.	1310
				Total	10091
2	Polytechnics	55		5848	
3	MBA	38		550	
4	Pharmacy	Diploma	23	Degree	792
		Degree	24	Degree	60
		P.G.	2	P.G.	13
		Total	49	Total	865
5	HMCT	Diploma	2	Diploma	55
		Degree	2		
		Total	4	Total	55
TOTAL		233	17409		

* * *



UNIVERSITY EMPLOYMENT INFORMATION AND GUIDANCE BUREAU

Joint Venture of Cochin University of Science and Technology & National Employment Department, Kerala State. From January 10, 1973.

1. Programmes of Study/Research

Vocational Guidance, Collection of Occupational Information.

2. Faculty Members

Sl. No.	Name	Designation	Qualification	Specilisation
1	Dr. M.Bhasi	Chief of the Bureau & Reader, SMS, CUSAT	M Tech, MBA PhD	Operations Research

3. Visiting Faculty

Sl. No.	Name	Designation	Qualification	Specilisation
1	Dr. P.R.Venkitaraman	Professor	MSc Zoology	Genetics
2	Edwin Thomson	Lecturer	M Sc Mathematics	Calculus
3	Anandakrishnan	Professor (Retd)	MSc Physics	Mechanics
4	Dr. Ravi Divakaran	Professor	M Sc Chemstry	Theoretical Chemistry
5	Sri Alexander		B Tech	English
6	Antony Joseph	Professor (Retd)	M Sc Botony	

4. Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Chief	1
2	Deputy Chief	1

5. Research Facilities

a. Library

No of books and Journals as on 31st March of the Previous Year	Additions during the current year
772	81



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6. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students

Name of Participant	Name of Seminar/ Conference/Workshop	Role
C.K.Ramachandran, Deputy Chief	Workshop for career Guidance Officers	Participant

7. Seminar/Conference/Workshop/Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1	Emerging Employment Opportunities	1 Day	U E I & G B and Association of British Scholars	U E I & G B
2	Career Guidance Workshop for HSEs/+2 Passed outs	1 Day	U E I & G B	U E I & G B
3	Career Guidance Workshop for Matriculates	1 Day	U E I & G B	U E I & G B
4	UGC/CSIR Paper I Coaching	15 Day	U E I & G B	U E I & G B
5	UGC/CSIR Paper II (Life Science) Coaching	15 Day	U E I & G B	U E I & G B
6	UGC NET Paper I Coaching	15 Day	U E I & G B	U E I & G B
7	UGC/CSIR Paper II (Physics) Coaching	15 Day	U E I & G B	U E I & G B
8	Bank P O Coaching	15 Day	U E I & G B	U E I & G B
9	UGC/CSIR Paper I	15 Day	U E I & G B	U E I & G B
10	UGC NET Paper I Coaching	15 Day	U E I & G B	U E I & G B
11	UGC/CSIR Paper II (Physics) Coaching	15 Day	U E I & G B	U E I & G B

* * *



UNIVERSITY LIBRARY

Cochin University Library was established in 1975, with the objective to meet the information requirements of the academic community of the Cochin University of Science and Technology. It has built up a balanced and rich collection on all branches of Science and Technology. At the same time books of general interest having high intellectual standard in various subject fields were not neglected. At present the collection includes several valuable reference books, doctoral theses and back volumes of periodicals, patents, CD-ROM's, Online Journals etc.

1. Administrative Personnel

Sl. No.	Designation	No. of Posts
1.	Section Officer	1
2.	Assistant	2
3.	Typist	2
4.	Peon	4
5.	Sweeper/Cleaner	2
6.	Photocopier/duplicating operator	1

2. Technical Personnel

Sl. No.	Designation	No. of Posts
1.	Information Scientist	1

3. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1.	Membership			2342

4. Research Facilities

a) Laboratories (List out Major equipments available)

b) Library

No. of books and Journals as on 31 st March of the Previous Year	Additions during the current year
Books - 71900	2681
Journals -160	160
Online databases - 2	2

5. Distinguished visitors : Nil

Sl.No.	Name of Paper
1.	Continuing Education, Training, Research - A Kerala Scenario by Santha Devi Antherjanam in NACLIN 2007 Conference Proceedings



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2. Continuing Education, Programme and Competency Development- A Kerala Perspective with Special Reference to the Cochin University of Science and Technology by Santha Devi Antherjanam & Sheeja N.K. in IASLIC 2007 Conference Proceedings.
3. Public library as a community information center/ knowledge center with special reference to Ernakulam Public Library by Santha Devi Antherjanam ILA 2007 in Conference Proceedings.
4. LIS education, training, research - a Kerala scenario by Smt. Santhadevi Antherjanam in NACLIN 2007 Conference Proceedings.
5. Impact of ICT on Library and Information Science: Major Shifts and Practices in CUSAT Central Library by Santha Devi Antherjanam & Sheeja N.K. in CALIBER 2008 Conference Proceedings.
6. Access to Information: Current Trends in Document Delivery Services in University Library of CUSAT by Sheeja N.K. in NACLIN 2007 Conference Proceedings
7. Accessing E-resources in a Networked Multi campus Science and Technology University : Problems and Prospects by Sheeja N.K. and Santha Devi Antherjanam in IASLIC 2007 Conference Proceedings.
8. Librarianship in the Changing Scenario of Education By Dr. Beena C. and V.S.Kunji Muhamed in Proceedings of Future librarianship in knowledge society, Ess Ess Publications 2008.

6. Participation in Seminar/ Conference / Refresher Courses etc by Faculty/ Students

Name of Participant	Name of Seminar/Conference/Workshop	Role
Mrs. Santha Devi Antharjanam	ILA Conference 2007, Osmania University Hyderabad, 13-16 Dec, 2007	Participant
	International CALIBER - 2007, Pubjab University, Chandigarh 8-10 Feb 2007	
	NACLIN 2007, New Delhi, 20-23 Nov, 2007	
	KOHA Workshop at CUSAT	
	DSPACE Workshop at CUSAT	Coordinator
	Preserving Scientific Heritage at IIAP, Bangalore	Participant
Mrs. Beena C.	Workshop at IIM-A	
	One day workshop on sensitization com awareness programme of Technology Information facilitation Programme (TIFP), Govt. of India on Dec 10 2007	Coordinator
	KOHA Workshop at CUSAT	Coordinator



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	Greenstone at IIM Kozhikode on 26.11.07 to 1.12.07	Participant
	Refresher Course on E-Content at CUSAT on 5.3.2007-26.3.2007	Participant
	Refresher Course in Library Science by Academic Staff College, University of Kerala, 3.5.07 - 24.5.07	Participant Participant
Mrs. Thajima K.P.	KOHA Workshop at CUSAT DSPACE Workshop at CUSAT LINUX Training at CUSAT	Participant Participant Participant
Mrs. Sobhana Devi A.K.	KOHA Workshop at CUSAT DSPACE Workshop at CUSAT	Participant Participant
Mrs. Solli A.M.	KOHA Workshop at CUSAT DSPACE Workshop at CUSAT	Participant Participant
Mr. Shibu Ray	KOHA Workshop at CUSAT DSPACE Workshop at CUSAT LINUX Training at CUSAT Library at Cross Roads on 2/2/2008	Participant Participant Participant Participant
Dr. Sheeja N.K.	International CALIBER 2007, Punjab University, Chandigarh, 8-10 Feb, 2007 KOHA Workshop at CUSAT LINUX Training at CUSAT 2008	Participant Participant Participant
Mrs. Saira P.	LINUX Training at CUSAT Library at Cross Roads on 2/2/2008	Participant Participant
Mrs. Anita R.	Koha Workshop at CUSAT DSPACE Workshop at CUSAT	Participant Participant
Mr. Padmakumar P.K.	DSPACE Workshop at CUSAT LINUX Training at CUSAT Library at Cross Roads on 2/2/2008	Participant Participant Participant
Mr. Anoop Varma	KOHA Workshop at CUSAT DSPACE Workshop at CUSAT Library at Cross Roads on 2/2/2008	Participant Participant Participant
Mrs. Archana S.N.	KOHA Workshop at CUSAT DSPACE Workshop at CUSAT LINUX Training at CUSAT	Participant Participant Participant
Miss. Beena A.L.	KOHA Workshop at CUSAT DSPACE Workshop at CUSAT Preserving Scientific Heritage at IAP, Bangalore	Participant Participant Participant



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7. Awards / Honours / Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour/ Award	Awarding Agency
Sheeja N.K.	Ph.D.	University of Calicut

8. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1.	Developing an Institutional Repository of Science	DSIR, Department of Science and Technology,	6.65 Lakhs	Dr. C.Beena Assistant Librarian (Principle Investigator) & Padmakumar P.K., Junior Librarian (Co-Investigator)

9. Seminar/Conference/Workshop/Refresher Courses conducted by the Department.

Sl. No.	Title	Duration	Coordinator	Funding Agency
1.	Training Programme on Koha	1 day	Dr. Beena C.	
2.	Workshop on sensitization com awareness programme of Technology Information facilitation Programme (TIFP), Govt. of India on Dec 10, 2007	1 day	Dr. Beena C.	

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INTERNATIONAL RELATIONS AND ACADEMIC ADMISSIONS

The CAT 2007 and 2008 were notified in February 2007 & 2008 and an amount of Rs.2.78 crores and Rs.3.35 crores were collected respectively through the sale of application forms. The CAT was held at 27 centres in 79 venues in 2007 and 92 venues in 2008 including a centre at Dubai. The CAT was held on April 21st & 22nd in 2007 and June 14th & 15th in 2008. The result of CAT 2007 was published on May 2007 and CAT 2008 was on June 2008. The counselling of LET, MCA, PG and UG courses started in the concerned year in the month of July. Admissions were done in centralized manner as were done in previous years. Admission to the MCA programmes offered in ER & DCI, Trivandrum and KVM College, Cherthala was also done from the CAT rank list.

Her Excellency Dr.Rawya Saud Al Busaidia, Minister of Higher Education, Sultanate of Oman and her delegation visited CUSAT on 29-03-2008.

The Minister was given a hearty welcome by Dr.Gangan Prathap, the then Hon'ble Vice Chancellor of CUSAT. This was followed by a discussion in presence of Dr.A.Ramachandran, Registrar and Deans of various faculties. The Minister of Higher Education shared interest in signing an MOU for Academic Co-operation and one to one programme with Department of Marine Engineering, Marine Sciences and Engineering and also showed keen interest in Antenna propagation work concerned by Department of Electronics. The discussion was followed by a brief visit to Kunjali marakkar School of Marine Engineering.

M.Neboru Ueda, Chairman and President of Nippon Kaiji Kyokai, Japan also known as class Nk which is the world's largest ship classification Society visited CUSAT on 29th April 2008 and a meeting was held with the then Hon'ble Vice Chancellor, Dr.Gangan Prathap.

An International Students Day was held on 11th November 2008 at SMS Auditorium under the auspicious of Indian Council for Cultural Relations under the Ministry of External Affairs. The then Hon'ble Vice Chancellor Dr.Gangan Prathap was the Chief guest of the function.

The Italian Embassy Cultural Centre, New Delhi conducted a refresher course for Italian Teachers in India from 17-21 November 2008 at the Department of Culture & Heritage

An agreement of Co-operation between CUSAT & Universidad Autonoma De Neuvo Leon (UANL) Mexico submitted by Department of Physics and agreement of Co-operation with GL Academy for Advanced Training and Research (a concern of Germanisher Lloyd, one of the internationally leading classification societies in ship Building) submitted by the department of Ship Technology are under Processing.

**ANNUAL ACCOUNTS**

Statement Showing the Receipts & Expenditure for 2007 – 08

Sl. No.	Items	Plan	Non-Plan	Total
	Opening fund balance as 01.04.2006	114,318,953	146,765,519	261,084,472
I. RECEIPTS FOR 2007-08				
1	Internal Revenue (including fee receipts)	0	177,211,754	177,211,754
2	Grant from State Govt.	25,000,000	183,589,000	208,589,000
3	Grant from UGC	73,698,061	0	73,698,061
4	Grant from other GOI Sources	169,482,026	0	169,482,026
5	Grant from other Agencies	11,481,988	0	11,481,988
6	NSS Grant from State Govt.	713,000	0	713,000
7	Other Grants from State Govt.	9,399,996	0	9,399,996
8	Scholarships/Prizes	0	384,951	384,951
9	Net Debt Head Receipts (Excluding PF)			
	Debt Head Receipts	0	46,660,874	46,660,874
	(Less) Debt Head Expenditure	0	44,346,517	44,346,517
	Net Debt Head Receipts (Excluding PF)	0	2,314,357	2,314,357
	Total Receipts for 2007-08	289,775,071	363,500,062	653,275,133
II. EXPENDITURE FOR 2007-08				
10	Administrative Expenses			
	a) Salaries and other allowances	0	53,431,118	53,431,118
	b) Other revenue expenses	1,836,530	128,206,241	130,042,771
11	Examination Expenses	0	0	
	a) Salaries and other allowances	0	34,654,332	34,654,332
	b) Other revenue expenses	3,987	4,843,199	4,847,186
12	Academic Expenses	0	0	
	a) Salaries and other allowances	2,165,463	124,782,700	,948,163
	b) Other revenue expenses	3,047,645	8,334,643	11,382,288
13	Other Auxiliary Expenses	0	0	
	a) Salaries and other allowances	843,280	18,691,109	14,559,169
	b) Other revenue expenses	3,181,340	19,537,354	22,718,694



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Sl. No.	Items	Plan	Non-Plan	Total
14	Capital Expenses	0	0	
	a) Vehicles	0	0	0
	b) Computer & other Expenses	18,313,564	0	18,313,564
	c) Furniture	1,692,059	0	1,692,059
	d) Books & Journals	14,637,818	0	14,637,818
	e) Works	42,203,660	747,782	42,951,442
15	State Govt. Kerala Schemes	2,792,137	0	2,792,137
16	UGC-Bulk Grants & Schemes	16,604,774	0	16,604,774
17	Other GOI Sources	54,561,773	0	54,561,773
18	Scholarships/Fellowships/Prizes	23,002,514	3,814,358	26,816,872
19	Others (Bulk Grants & Schemes)	10,497,650	0	10,497,650
	Total Expenditure for 2007-08	195,384,194	397,042,836	592,427,030
	Closing fund balance as on 31.03.2008	208,709,830	113,222,745	321,932,575
	PF receipts for 2007-08	103,273,473		
	PF expenditure for 2007-08	68,460,670		

Non plan fund balance also includes endowments.



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ACADEMIC PROGRAMMES

Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
COCHIN UNIVERSITY COLLEGE OF ENGINEERING, KUTTANAD			
B.Tech Civil Engg. (8 Semesters)	Pass in the Plus Two Examination of the State of Kerala with Mathematics, Physics and Chemistry as optional subjects or any other examination accepted as equivalent thereto securing a minimum of 50% marks in Mathematics and 50% marks in Mathematics, Physics and Chemistry put together.	Full-time (Self-financing)	40
B.Tech. Computer Sci. & Engg. (8 Semesters)		Full-time (Self-financing)	60
B. Tech. Electrical & Electronics Engg. (8 Semesters)		Full-time (Self-financing)	60
B.Tech. Electronics & Comm. Engg. (8 Semesters)		Full-time (Self-financing)	60
B. Tech. Information Technology (8 Semesters)		Full-time (Self-financing)	60
B.Tech. Mechanical Engg. (8 Semesters)		Full-time (Self-financing)	60
M.C.A. (6 Semesters)	Any graduate with Mathematics as one of the main or subsidiary subjects or graduate in Electronics / Computer Science / Computer Applications / Engineering / Technology with aggregate 55% marks in all subjects other than languages and humanities.	Full-time (Cost-sharing)	30



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
SCHOOL OF ENGINEERING, THRIKKAKARA			
5 year Integrated M.Sc., Software Engg. (10 Semesters) (No admission in the current year)		Full-time (Self-financing)	40
B. Tech. Civil Engg. (8 Semesters)	Pass in Plus Two examination of the State of Kerala with Mathematics, Physics and Chemistry as optional subjects or any other examination accepted as equivalent thereto securing a minimum of 50% marks in mathematics and 50% marks in Mathematics, Physics and Chemistry put together.	Full-time (Self-financing)	90
B. Tech. Computer Sci. & Engg. (8 Semesters)		Full-time (Self-financing)	90
B. Tech Electrical & Electronics Engg. (8 Semesters)		Full-time (Self-financing)	60
B. Tech. Electronics & Commn. Engg. (8 Semesters)		Full-time (Self-financing)	90
B. Tech. Information Tech. (8 Semesters)		Full-time (Self-financing)	90
B. Tech Mechanical Eng. (8 Semesters)		Full-time (Self-financing)	90
B. Tech. Safety & Fire Engg. (8 Semesters)		Full-time (Self-financing)	30
B. Tech. Marine Engg. (Residential Programme) (8 Semesters)*	Pass in the Plus Two Examination of the State of Kerala with Mathematics, Physics and Chemistry as optional subjects or any other Examination accepted as equivalent thereto securing a minimum of 50% marks in Mathematics and 50% marks in Mathematics, Physics and Chemistry	Full-time (Self-financing)	30

* One semester will be afloat training with a fee of Rs. 50,000/-



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M. Tech. Civil Engg. (5 Semesters) (No admission in the current year)	B.Tech / B.Sc. (Engg.) or equivalent degree in the respective branch (candidates who have taken GRADE/IETE/AMIE Chem. Engg. Or AMII with a pass in section A & B are also eligible for admission).	Part-time (Cost sharing)	15
M. Tech Chem. Engg. (5 Semesters) (No admission in the current year)	(a) Should have a basic degree in Science or Diploma in Engg. Such candidates shall be required to undergo a make-up course in laboratory work before being admitted to the M.Tech Degree. This shall consist of two practical courses & only those candidates who secure not less than 50% marks in the examination conducted by the department for each of the two practical courses shall be eligible for the M.Tech. Programmes.	Part-time (Cost-sharing)	15
M. Tech Mechanical Engg. (5 Semesters)	(b) Should have two years experience after obtaining the basic degree. GRADE/IETE/AMII/AMIE Chem. Engg. should have seven years experience. (c) Open seats will be allotted on the basis of GATE Score and marks obtained in the qualifying examination.	Part-time (Cost-sharing)	15
P.G. Diploma in Coir Technology (2 Semesters) (No admission in the current year)	A pass in B.Sc., Degree with Physics or Chemistry as main with a minimum of 50% marks. The eligibility for SEBC candidates is 45% and pass for SC / ST.	Full-time (Cost-sharing)	20
M.E. by Research (5 Semesters) (Admission only for Civil, Chemical, Mechanical and Electronics Engg.)	Bachelor's Degree in appropriate branch of engineering from a recognized university with 60% marks in the qualifying examination. Candidates belonging to SC/ST communities shall be eligible for concession upto 5% in the minimum marks. Candidates shall have passed the Departmental Admission Test conducted by the School with 50% marks. Admission shall be based on the marks in the qualifying examination, Departmental Admission Test, interview and experience. Application for admission shall be submitted along with the consent of the Supervising Guide.	Part-time (Cost-sharing)	Variable
M.E. by Research (4 Semesters)		Full-time (Cost-sharing)	''
Ph.D			



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Note: The minimum eligibility for socially and educationally backward community candidates for admission to Programmes noted at Serial Numbers 1-8 and 11-15 is 45% for Mathematics and 45% for Mathematics, Physics and Chemistry put together in the qualifying examination. 50% of the total seats for B.Tech. (after excluding the 10% reservation of N.R.I.) are free seats. Candidates under SEBC category, whose family income is more than Rs. 2,50,000/- are not eligible for free seats under the respective community quota. Seats reserved under Sports quota will come under payment seats of B.Tech Programmes. 50% concession in fees will be granted to Physically Handicapped candidates admitted against the seats reserved for Physically Handicapped to the payment seats of B.Tech. Programmes, however they are not exempted from payment of refundable deposit of Rs. 1,00,000/-. Fees for the entire programme will be charged from students leaving the B.Tech. Programmes midway.

Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
SCHOOL OF ENVIRONMENTAL STUDIES			
M.Sc. Environmental Tech. Stream 1. Env. Engg. (4 Semesters)	Graduate in Chemistry with Physics and Mathematics as subsidiaries or graduate in Engg. (Civil / Public Health / Environmental or Chemical) with 55% marks.	Regular-Day	6
Stream 2. Env. Biotech, (4 Semesters) Ph.D.	Graduates in Life Sciences/ Environmental Sciences/Zoology/ Botany/ Microbiology with 55% marks.	Regular-Day	6
DEPARTMENT OF CULTURE AND HERITAGE			
Certificate Programmes in French/German/Japanese/Russian (1 year)	Pass in Plus Two or equivalent. Previous knowledge of the language is not essential.	Part-time	25
Diploma in Communicative English (1 year)	Bachelor's Degree in any discipline or any other examination recognized as equivalent thereto with English as one of the subjects of study from a University.	Part-time	25
Diploma Programmes in French/German/Japanese / Russian (1 year)	Pass in Plus Two or equivalent and Certificate level knowledge in the language concerned.	Part-time	10
Diploma in Functional Arabic (1 year)	Pass in Plus Two or equivalent. Previous knowledge in the language is not essential.	Part-time	20
Integrated Diploma in French/German/Japanese / Russian (1 year)	Pass in Plus Two or equivalent. Previous knowledge in the language concerned is not essential.	Part-time	20
M.A.Translation–German / Russian (4 Semesters) Ph. D.	Bachelor's Degree of any University recognized by CUSAT & Diploma level knowledge in the language concerned.	Full-time	5



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
DEPARTMENT OF HINDI			
M.A. Hindi Language and Literature (4 Semesters)	B.A. / B.Sc. Degree Hindi as a subject of study with atleast 45% marks in Hindi.	Regular-Day	28
M.Phil. Hindi (2 Semesters)	Master's Degree in Hindi with atleast 50% marks.	Regular-Day	10
P.G. Diploma in Translation, Functional Hindi (1 year)	Bachelor's Degree with Hindi as one of the Subjects.	Part-time	28
Ph.D.			
SCHOOL OF LEGAL STUDIES			
L.L.B. (6 Semesters)	Bachelor's Degree in any discipline with 40% marks of the total marks of the qualifying degree.	Regular-Day (Cost-sharing)	60
L.L.M. (4 Semesters)	Bachelor's Degree in Law with atleast 45% marks.	Regular-Day	36
Ph.D.			
SCHOOL OF MARINE SCIENCES			
P.G.Diploma in Coastal Zone Management (4 Semesters)	Bachelor's degree in Engineering/ Masters degree in science from CUSAT or any other university by the CUSAT with atleast 55% marks.	Regular-Day	16



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
SCHOOL OF INDUSTRIAL FISHERIES			
M.Sc., Industrial Fisheries (4 Semesters)	Bachelor's Degree with Zoology, Botany, Chemistry or Fisheries main, with Zoology & Botany as subsidiaries with atleast 55% marks in the optional subjects. Bachelor's Degree in Fisheries includes Bachelor's Degree in Industrial Fisheries in Aquaculture and in Fishery Science.	Regular-Day	16
Ph.D.			
DEPARTMENT OF ATMOSPHERIC SCIENCES			
M.Sc. Meterology (4 Semesters)	B.Sc. Degree with Physics/Mathematics as the main subject with 55% marks. Those with Mathematics as the main subject should have studied Physics as one of the subsidiaries and vice-versa.	Regular-Day	12
M.Tech. Atmospheric Science (4 Semesters)	i) M.Sc. Degree or its equivalent in Meteorology, Ocean-ography, Mathematics/ Physics/Space Physics with a first class (60%) marks from any recognized University or Institution. ii) A valid GATE score or pass in the joint UGC - CSIR test (NET) for JRF	Regular-Day	10
Ph.D.			
DEPARTMENT OF CHEMICAL OCEANOGRAPHY			
M.Sc. Hydrochemistry (4 Semesters)	B.Sc. Degree in Chemistry with Mathematics and Physics as subsidiaries or B.Sc. Degree of any University in Kerala with Polymer Chemistry / Industrial Chemistry /Petrochemicals /Environment and Water Management as the main subject and Mathematics and Physics / Computer Science as Subsidiaries, with a minimum of 55% marks in the respective main subject.	Regular-Day	12
M.Phil. Chemical Oceanography (2 Semesters)			
Ph.D.	Masters Degree in Chemistry with 50% marks.	Regular-Day	6



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
DEPARTMENT OF MARINE BIOLOGY, MICROBIOLOGY & BIOCHEMISTRY			
M.Sc., Marine Biology (4 Semesters)	B.Sc. Degree with any branch of Life Sciences such as Aqua culture, Biochemistry, Biotechnology, Botany, Microbiology, Zoology etc. as a main subject or B.Sc. degree in Fishery Science with atleast 55% marks in the optional subjects.	Regular-Day	19
M.Phil. Life Science (2 Semesters)	Master's Degree in Marine Biology / Zoology / any branch of Life Science such as Aquatic Biology and Fisheries, Biochemistry, Biotechnology, Botany, Fishery Science with 60% marks.	Regular-Day	6
Ph.D.			
DEPARTMENT OF MARINE GEOLOGY AND GEOPHYSICS			
M.Sc. Marine Geology (4 Semesters)	Bachelor's Degree in Geology with atleast 55% aggregate marks in optionals. (i) B.Sc. Degree with atleast 55% aggregate marks with (a) Geology main with Mathematics and Physics or Chemistry as subsidiaries; (b) Physics main with Mathematics and Geology or Chemistry or Electronics as subsidiaries; (c) Mathematics main with Physics and Geology or Chemistry as subsidiaries.	Regular-Day	10
M.Sc. Marine Geophysics (2 years)	(ii) Should not have completed 22 years of age on 1 st October of the year of admission except in the case of SC / ST candidates.	Regular-Day	10
Ph.D.			
DEPARTMENT OF PHYSICAL OCEANOGRAPHY			
M.Sc. Oceanography (4 Semesters)	B.Sc. Degree with Physics/Mathematics main with 55% marks. Those with Mathematics as the main subject should have studied Physics as one of the subsidiaries and vice-versa.	Regular-Day	12
M.Tech. Ocean Technology (4 Semesters)	(i) M.Sc. Degree in Oceanography / Physics/ Marine Geology/Meteorology/Marine Geophysics/Environmental Sciences or M.Sc (Tech.) Degree in Marine Geophysics or B.Tech or equivalent degree/AMIE in Civil Engineering/Environmental Sciences with 60% marks from any recognized University or Institution.	Regular-Day	8
Ph.D.	(ii) A valid GATE score with any of the subjects mentioned above as the second paper.		



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
DEPARTMENT OF APPLIED CHEMISTRY			
M.Sc.Applied Chemistry (4 Semesters)	B.Sc. Degree with Chemistry / Polymer Chemistry / Environmental Chemistry / Industrial Chemistry / Petrochemicals (main) with Mathematics as one of the subsidiary subjects with atleast 55% marks in the main subject.	Regular-Day	12
M.Phil. Chemistry (2 Semesters)	M.Sc. Degree in Chemistry with atleast 50% marks.	Regular-Day	9
M.Tech Industrial Catalysis (4 Semesters)	M.Sc. Degree in (Chemistry / Applied Chemistry) or any other degree recognized as equivalent with at least first class (60%) mark from any recognised University or Institution with a valid GATE score.	Regular-Day	10
Ph.D.			
DEPARTMENT OF BIOTECHNOLOGY			
M.Sc. Biotechnology (4 Semesters)	Bachelor's Degree in any branch of Life Sciences including Agricultural and Medical Sciences / Chemical Sciences / Chemical Engineering with minimum of 55% marks in aggregate.	Regular-Day	10
Ph.D.			
DEPARTMENT OF MATHEMATICS			
M.Sc., Mathematics (4 Semesters)	B.Sc. Degree with Mathematics main with atleast 55% marks for optional subjects taken together.	Regular-Day	20
M.Sc. (Operations Res. & Computer Applns.) (4 Semesters)	B.Sc. Degree in Mathematics or Physics or Statistics with Mathematics as subsidiary with not less than 55% marks in the main or subsidiary subjects or B.Sc. Engineering with atleast 55% marks.	Regular-Day	15
Ph.D.			



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
DEPARTMENT OF PHYSICS			
M.Sc. Physics (4 Semesters)	B.Sc. Degree with Physics main and Mathematics subsidiary with atleast 55% marks in Physics.	Regular-Day	25
M.Phil. Physics (2 Semesters)	M.Sc. Degree in Physics with atleast 50% marks.	Regular-Day	8
Ph.D.			
DEPARTMENT OF STATISTICS			
M.Sc. Statistics (4 Semesters)	B.Sc. Degree in Mathematics or Statistics main with atleast 55% marks for optional subjects taken together.	Regular-Day	15
M.Tech. Engineering Statistics (4 Semesters) (No admission in the current year)	B.Tech. or equivalent degree or AMIE in discipline with a first class (60%) from any recognised University or Institution with valid GATE score.	Regular-Day	8
Ph.D.			
DEPARTMENT OF APPLIED ECONOMICS			
M.Phil. Applied Economics (2 Semesters)	Master's Degree in Economics with atleast 50% aggregate marks.	Regular-Day	10
M.B.E. Master of Business Economics (4 Semesters)	Bachelor's Degree or Equivalent in any subject including Engineering, Technology, Agriculture and Medicine of the Universities in Kerala or any other Universities in India or abroad (accepted by the University as equivalent thereto) with a minimum of 55% aggregate marks.	Regular-Day	15
Ph.D.			



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
SCHOOL OF MANAGEMENT STUDIES			
M.B.A (Full-time) (4 Semesters)	Bachelor's Degree in any subject with 50% marks in aggregate.	Regular-Day	50
M.B.A. (Part-time) (6 Semesters)	(i) Bachelor's Degree in any subject with 50% marks in aggregate. (ii) 50% of the seats are reserved for candidates having 3 years of supervisory / executive experience after taking the degree. (iii) In the absence of such candidates as mentioned in (ii) vacancies will be offered to any other candidates satisfying eligibility as per (i).	Part-time (Evening)	30
M.I.B. (Master of International Business) (4 Semesters)	Bachelor's Degree in any discipline recognized by the University with 50% marks in aggregate.	Regular-Day	30
M.Phil. (Commerce) (2 Semesters)	Master's Degree in Commerce with atleast 50% marks.	Regular-Day	6
Ph.D.			
CENTRE OF EXCELLENCE IN LAZER AND OPTOELECTRONIC SCIENCES			
5 years integrated M.Sc. in Photonics (10 Semesters)	Pass in + 2 examination of the State of Kerala with Mathematics, Physics and Chemistry as optional subjects or any other examination accepted as equalent there to securing a minimum of 50% marks in Mathematics and 50% marks in Mathematics, Physics and Chemistry put together.*	Full Time	20
DEPARTMENT OF ELECTRONICS			
M.Tech Electronics (with specialization in Digital Electronics, Microwave & Radar Electronics) (4 Semesters)	i) B.Tech or equivalent degree/AIME/AMIETE in Electronics and Communication Engineering/Electrical Engineering/Electronics and Instrumentation or M.Sc. Degree in Electronics/Physics (with Electronics as specialization) with a First Class (60%) marks from any recognized University or Institution. ii) A valid GATE score in Electronics	Regular-Day	20

* The minimum eligibility for SCBC is 45% for Mathematics and 45% Mathematics, Physics and Chemistry put together



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
M.Sc. Electronic Science (with specialization in Artificial Intelligence, Robotic Microwave Electronics & Computer Technology) (4 Semesters) Ph.D.	<p>/ Electronic and Communication Engg.</p> <p>iii) If sufficient number of candidates are not available in category (ii) above, candidates with GATE score in instrumentation, Electronics Engg., Electrical Engg. or Physics will be considered. (Sponsored and Sc/ST candidates may have relaxation to this requirement, but they have to appear for DAT).</p> <p>i) First Class B.Sc. / B.Sc. (Hons.) Degree with not less than 60% aggregate marks in Electronics, Computer Science or Physics (with Electronics).</p> <p>ii) SC/ST candidates need only have pass minimum for the qualifying degree. Candidates with higher degrees are not eligible for admission.</p>	Regular-Day	25
DEPARTMENT OF INSTRUMENTATION			
B.Tech Instrumentation* (8 Semesters) Ph.D.	Pass in Plus Two examination of the State of Kerala with Mathematics, Physics and Chemistry as optional subjects or any other examination accepted as equivalent thereto securing a minimum of 60% marks in Mathematics, Physics and Chemistry put together with atleast 55% in Mathematics separately.	Regular-Day	28
DEPARTMENT OF POLYMER SCIENCE & RUBBER TECHNOLOGY			
B.Tech Polymer Science & Rubber Technology (8 Semesters)	Pass in Plus Two examination of the State of Kerala with Mathematics, Physics and Chemistry as optional subjects or any other examination accepted as equivalent thereto securing a minimum of 50% marks in Mathematics and 50% marks in Mathematics, Physics and Chemistry put together.	Regular-Day	20

* The minimum eligibility for SEBC is 55% for Mathematics, Physics and Chemistry put together with atleast 50% for Mathematics and the minimum eligibility for SC/ST is 50% for Mathematics, Physics and Chemistry put together with atleast 45% for Mathematics.



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
M.Tech. Polymer Technology (4 Semesters) Ph.D.	<p>i) B.Tech equivalent degree/AMIE in Polymer Science and Rubber Technology / Chemical Engg./ Technology / M.Sc. Polymer Chemistry / M.Sc. Chemistry with polymer Chemistry specialization with a first class (60%) marks from recognized University or Institution.</p> <p>ii) A valid GATE score.</p>	Regular-Day	10
DEPARTMENT OF SHIP TECHNOLOGY			
B.Tech. Naval Arch. & Ship Building (8 Semesters) M.Tech. Comp. Aided Structural Analysis & Design (4 Semesters) Ph.D.	<p>Should have passed Plus Two (10+2) / Pre-Degree examination conducted in Kerala in First Class or the examination of any other University / Board accepted by the Syndicate of the University as equivalent thereto with Mathematics, Physics and Chemistry as subjects of study. The candidate shall have secured a minimum of 50% marks in Mathematics as well as for Mathematics, Physics & Chemistry put together.</p> <p>i) B. Tech. or equivalent degree in Naval Architecture and Ship Building / Civil Engineering / Mechanical Engineering with a first class (60%) marks from any recognized University or Institution.</p> <p>ii) A valid GATE score.</p>	Regular-Day Cost-Sharing	24 15



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Programme Name and Duration	Eligibility Criteria for Admission	Nature of Programme	Intake
INTERNATIONAL SCHOOL OF PHOTONICS			
M.Tech. Opto-Electronics and Laser Technology (4 Semesters)	Master's Degree in Physics or Electronics Science or B.Tech or equivalent Degree/AMIE/AMIETE in Electronics & Communication Engineering / Electronics Engineering / Electrical Engineering with a first class (60%) from any recognized University or Institution and a valid GATE score (in the concerned branch of study) or pass in DAT if sufficient number of GATE score holders are not available. 55% marks in M.Sc. Physics / M.Sc. Electronic Science.	Regular-Day	10
M.Phil. Photonics (2 Semesters) Ph. D.		Regular-Day	6
DEPARTMENT OF COMPUTER APPLICATIONS			
M.C.A. (6 Semesters)	Any graduate with Mathematics as one of the main or subsidiary subjects or graduate in Electronics / Computer Science / Computer Applications / Engineering / Technology with aggregate 55% marks in all subjects other than languages and humanities.	Regular-Day	30
Ph.D		Cost-Sharing	30
DEPARTMENT OF COMPUTER SCIENCE			
M.Tech. Computer and Information Science (4 Semesters)	i) B.Tech or equivalent degree in any discipline/AMIETE / AMIE or M.Sc. Physics with Electronics as special subject or in M.Sc. Mathematics with First Class (60%) marks from any recognized University or Institution. ii) A valid GATE score.	Regular-Day	14
M.Tech Software Engg. (4 Semesters)	i) B.Tech or equivalent degree or AMIE/AMIETE in Computer Science / Information Technology or M.Sc. in Computer Software / Operational Research and Computer Applications or M.C.A. with a first class (60%) marks from any recognized University or Institution. ii) A valid GATE score	Regular-Day	13
Ph.D.			
<p>Note : *</p> <ul style="list-style-type: none"> * The University offers provision for lateral entry of Engineering Diploma holders directly into the third semester of B.Tech., Engineering programmes offered by the Centre for Engineering Studies. * Degrees obtained through distance education programmes other than IGNOU are not recognized Regulations of the University currently in force. * The University reserves the rights to withhold notification of any / all academic programmes listed Applicants are therefore advised to consult the Notification issued by the University and published leading newspapers to confirm the programmes notified for admission in the current academic year. 			

Based on CAT Hand Book 2006



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EXAM RESULTS

1. B.Tech VIII Semester Examination, May 2008 (2003 Admissions)

Sl. No.	Name of College	No. of Candidates Registered	No. of Candidates Appeared	I Class with Distinction	1 Class	Total No. of Candidates Passed
1.	School of Engg.Cusat	591	591	109	328	441
2.	Cochin University College of Engg.Kuttanad	254	254	20	133	154
3.	College of Engg. Chengannoor	186	186	30	111	141
4.	Model Engg. College, Thrikakara	232	232	84	114	198
5.	College of Engg. Adoor	236	236	22	122	144
6.	College of Engg. Kallooppa	84	84	8	48	56
7.	College of Engg. Poonjar	62	62	6	27	33
8.	College of Engg. Kidangoor	144	144	14	80	94
9.	College of Engg. Perumon	214	214	28	106	136
10.	College of Engg. Karunagappilly	76	76	1	36	37
11.	College of Engg. Trikkarippur	119	119	12	59	71
12.	College of Engg. Thalaseri	239	239	80	45	125
13.	CIT, Vadakara	162	162	7	78	85
14.	College of Engg. Munnar	125	125	11	50	61
15.	TOC H Institute of Tech., Arakkunnam	180	180	22	89	112
16.	TKM Institute of Technology, Kollam	97	97	10	26	36



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EXAM RESULTS

1. B.Tech VIII Semester Examination, May 2008 (2003 Admissions)

Sl. No.	Name of College	No. of Candidates Registered	No. of Candidates Appeared	I Class with Distinction	1 Class	Total No. of Candidates Passed
17.	College of Engg. Attingal	103	103	3	36	39
18.	SIST Thiruvananthapuram	113	113	7	46	53
19.	College of Engg. Cherthala	85	85	12	36	48
20.	College of Engg. Kottarakara	62	62	5	32	37
21.	M.G College of Engg. Thiruvananthapuram	41	41		15	15
22.	K.M. School of Main Engg. Cusat	30	30	4	16	20
23.	Dept. of PSRT Cusat	21	21		15	15
24.	Dept. of Instrumentation, Cusat	32	32		25	28
25.	Dept. of Ship Technology, Cusat	37	37	2	25	28
TOTAL		3509	3509	435	1747	2196



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P.G & Other Courses (Final) Semester Examination Details for the year 2007-08

Name of Courses	No. of Candidates Registered	No. of Candidates Appeared	1 Class with Distinction	I Class	Total No. of Students Passed
M.Sc Applied Chemistry	11	11	2	7	9
M.Sc Mathematics	20	20	10	7	18
M.Sc Statistics	22	22	3	13	18
M.Sc Environmental Technology	12	12	11	1	12
M.Sc. Meteorology	10	10		7	7
M.Sc Hydrochemistry	10	10	9	1	10
M.Sc Oceanography	9	9	3	4	9
M.Sc Industrial Fisheries	19	19	1	18	19
M.Sc Marine Geology	10	10	1	7	8
M.Sc Marine Biology	19	19	12	7	19
M.Sc Bio Technology	30	30	19	9	28
M.Sc Physics	23	23	12	10	22
M.Sc Electronic Science	24	24	15	6	24
M.Sc (Photonics)	14	12	4	7	11
MBA(FT)	52	52		48	48
MBA(PT)	18	18	2	13	15
MIB	31	31		28	28
MCA	230	230	74	132	206
MBE	15	15	5	9	14
MA (Hindi Language & Literature)	22	22	10	12	22
LLM	31	31		25	31
LLB	57	56		10	38
M.Phil-Chemical Oceanography	3	3		3	3
M.Phil-Applied Economics	10	10		10	10
M.Phil-Life Sciences	6	6		6	6
M.Phil-Physics	8	8		8	8



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Name of Courses	No. of Candidates Registered	No. of Candidates Appeared	1 Class with Distinction	I Class	Total No. of Candidates Passed
M.Phil-Mathematics	10	10		8	8
M.Phil-Chemistry	17	17		15	16
M.Phil-Hindi	16	16		16	16
M.Phil-Commerce	5	4		4	4
M.Tech-Electronics	19	19	18	1	19
M.Tech-CASAD	5	5	3	2	5
M.Tech-Polymer Technology	11	11	10	1	11
M.Tech-Opto Electronics	8	8	6	2	8
M.Tech-Computer & Information Science	20	20	16	4	20
M.Tech-Software Engineering	17	17	15	2	17
M.Tech-VLSI Embeded Systems	10	10	4	6	10
M.Tech-Industrial Catalysis	10	10	7	3	10
M.Tech-Atmospheric Sciences	3	3	2	1	3
M.Tech-Engineering Statistics	2	2	1	1	2
PG Diploma in Translation and Functional Hindi	33	32		24	32
B.FSc(Nautical Science)	14	14	8	3	11

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**LIST OF PH.D DEGREE AWARDEES FROM
01.04.2007 TO 31.03.2008**

Sl. No.	Name of the candidate & Title of the Thesis	Department/Centre of Research	Name & Designation of the Guides
<u>Faculty of Marine Science</u>			
1.	Dr. David Peter S "Design and Development of a Performance Evaluation Prototype for IT Organizations in the context of Outsourcing".	Department of Computer Science, CUSAT, Koch i- 22.	Dr. K Paulose Jacob Professor & Head Department of Computer Science, CUSAT, Kochi – 22.
2.	Dr. Sreejakumari S.S. "Influence of Alloying Additions on the Structure and Properties of Al-7 Si-0.3 Mag Alloy".	Regional Research Laboratory Trivandrum – 19.	Dr. R.M. Pillai Senior Deputy Director Head Minerals & Materials Division, RRLTrivandrum – 19.
3.	Dr. Pramod Gopinath "Studies on Optical & X - ray Emission Process in Laser Produced Plasma".	International School of Photonics, CUSAT, Kochi – 22.	Dr. V.P.N. Nampoori Professor International School of Photonics CUSAT, Kochi – 22.
4.	Dr. Mundan Kurian Chummar Sunny "Studies on Metallocene Polyolefen and Polyvinyl Chloride for Blood and Blood Component Storage Applications".	Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22.	Dr. K.E. George Professor Department of Polymer Science and Rubber Technology CUSAT, Kochi – 22
5.	Dr. Lovely Mathew P "Short Isora Fibre Reinforced Natural Rubber Composites".	Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22	Rani Joseph Professor Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22



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Name of the candidate & Title of the thesis	Dept. Centre of Research	Name & Designation of the Guides
6. Dr. Bindu G "Development of Active Microwave Imaging Techniques for Application in Mamography".	Department of Electronics, CUSAT, Kochi – 22.	Dr. K.T. Mathew Professor Department of Electronics, CUSAT, Kochi – 22.
7. Dr. Anoop Anand K "Polymer Nano composites Crystallization Reinforcement Conductivity through SWNTS".	Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22	Dr.Rani Joseph Professor Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22
8. Dr. Mary Lubi C "Novel Applications of Cashew Nut Shell Liquid in the Polymer Field".	Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22	Dr. Eby Thomas Thachil Reader Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22
9. Dr. Lity Alen Varghese "Novel Adhesive Systems Based on Neoprene Pheolic Blends".	Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22	Dr. Eby Thomas Thachil Reader Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22
10 Dr. Sreedevi K Menon "Enhancement of Microwave Properties of Planar Filters And Antennas using Photonic Band Gap (PBG) Structures".	Department of Electronics, CUSAT, Kochi-22	Dr. P. Mohanan Professor Department of Electronics, Cusat, Kochi-22
11. Dr. Santhi A "Investigations of Optical Interaction Process in certain Photonic Materials using Z – Scan and Thermal Lense Techniques".	International School of Photonics CUSAT, Kochi – 22.	Dr. V.P.N. Nampoori Professor International School of Photonics, CUSAT, Kochi– 22



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
12. Dr. Raghee O "Realisation of a Scanning Photo acoustic Technique: Thermal Properties of Bulk and Film Samples".	Department of Instrumentation, CUSAT, Kochi – 22.	Dr. Jacob Philip Director STIC, CUSAT, Kochi -22
13. Dr. Gisha Elezabeth Luckachan "Novel Approaches to Biodegradable Polymers: Synthesis And Biodegradation Studies".	Regional Research Laboratory Trivandrum – 19.	Dr. C.K.S. Pillai Biomedical Technology Wing, SCT Institute of Medical Science and Technology, Trivandrum – 12
14. Dr. Ritty J Nedumpura "Studies on ASE Lasing and NLO Characteristics in Certain Laser Dyes".	International School of Photonics, CUSAT, Kochi – 22.	Dr. P. Radhakrishnan Professor International School of Photonics, CUSAT, Kochi – 22.
15. Dr. Anupam R Chandran "Applications of Fractal Based Structures in Radar Cross-Section Reduction".	Department of Electronics, CUSAT, Kochi – 22.	Dr. C.K. Anandan Reader Department of Electronics, CUSAT, Kochi – 22.
16. Dr. Sunil Jose T "EPDM/CIIR Blends: Compactibility Morphology and Physical Properties".	Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22	Dr. Rani Joseph Professor, Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 22.
17. Dr. Shynu S.V. "Investigations on Reconfigurable Dual Frequency Microstrip Antennas Controlled By PIN Diodes and Varactors".	Department of Electronics CUSAT, Kochi – 22.	Dr. K. Vasudevan Professor, Department of Electronics, CUSAT, Kochi – 22.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
18. Dr. Rohit K Raj "Development and Analysis of a Compact Dual – Band Coplanar Antenna".	Department of Electronics, CUSAT, Kochi – 22.	Dr. P. Mohanan Professor, Department of Electronics, CUSAT, Kochi – 22.
19. Dr. Hamsakutty V "Hexagonal Dielectric Resonator Antenna –A Moved DR Antena for Wireless Communication".	Department of Electronics, CUSAT, Kochi – 22.	Dr. K.T. Mathew Professor, Department of Electronics, CUSAT, Kochi – 22.
Faculty of Science		
20. Dr. Daly Davis "Nonlinear Optical Properties of Polymers Containing Azomesogens and Chiral Molecules: Theoretical and Experimental Evaluations".	Department of Applied Chemistry, CUSAT,	Dr. K. Sreekumar Reader, Department of Applied Chemistry, CUSAT, Kochi - 22
21. Dr. Ramkumar S "Design and Fabrication of a Photo thermal Spectrometer And Investigations of Multilayer Thin Film".	Department of Physics CUSAT, Kochi – 22.	Dr. K.P. Vijayakumar Professor, Department of Physics, CUSAT, Kochi – 22.
22. Dr. Remalakshmy Bduval "Fabrication of Potentiometric Sensors for the Determination of Certain Metal Iron".	Department of Applied Chemistry, CUSAT, Kochi – 22.	Dr. K. Girish Kumar Reader, Department of Applied Chemistry, CUSAT, Kochi – 22.
23. Dr. Rapheal P.F. "Diversity in Structural and Spectral Characteristics Complexes Derived from Aldehyde Based Theosemearbazone Ligands".	Department of Applied Chemistry, CUSAT, Kochi – 22	Dr.M.R.Prathapachandra Kurup Professor, Department of Applied Chemistry CUSAT, Kochi – 22



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
24. Dr.Usha John "Photothermal Investigations on Certain Plasma Polymerised Thin Film and Near IR Overton Studies of some Organic Molecules".	Department of Physics CUSAT, Kochi – 22.	Dr. K.R. Rajappan Nair Professor, Department of Physics, CUSAT, Kochi – 22.
25. Dr. Santhosh D Shenoy "Studies on the Effect of High Energy Ball Milling on the Structural Electrical and Magnetic Properties of Normal Spinel on the ultrafine Regione".	Department of Physics CUSAT, Kochi – 22.	Dr. M.R. Anantharaman Reader, Department of Physics, Cusat Kochi – 22.
26. Dr. Akash K George "Dopamine D ₂ on 5-HT _{2A} Receptor Gene Expression their Functional Role on Aldehyde Dehydrogenase Regulation in Ethanol Treated Rats".	Department of Biotechnology, CUSAT, Kochi-22.	Dr. C.S. Paulose Professor, Department of Biotechnology, CUSAT, Kochi – 22
27. Dr. Shali N.B. "Transition Metal and Rare Earth Metal Modified Sol-gel Titania: A Versatile Catalyst for Organic Transformations".	Department of Applied Chemistry CUSAT, Kochi-22.	Dr. S Suguna Professor, Department of Applied Chemistry CUSAT, Kochi – 22
28. Dr. Asha Poorna C "Production and Characterization of Endoxylanase from Bacillus Premilus using solid state Fermentation and Its Application in paper pulp processing".	Regional Research Laboratory Trivandrum – 19.	Dr. P. Prema Scientist EI RRL Trivandrum – 19. and Technology, Kochi-22
29. Dr. Swapna S Nair "Investigations on the effect of Excitonic Conferment on Nanomagnetic Materials And Studies on the Optical Properties of Ferro fluids".	Department of Physics, Cusat, Kochi – 22	Dr. M.R. Anantharaman Reader, Department of Physics, CUSAT, Kochi – 22.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
30. Dr. Ramanathan R "Catalysis By Ferrcles and Coballites for the Alkylolation and Oxidation of Organic Compounds".	Department of Applied Chemistry, CUSAT, Kochi – 22	Dr. S Suguna Professor, Department of Applied Chemistry CUSAT, Kochi – 22
31. Dr. Ani Deepthi "Novel Multicomponent Reactions Based onTriphenel Phospheni Dimethoxycarbene and Isocyanicl synthesis of Phosphoranes and Oxygen Hetro Cycles".	Regional Research Laboratory Thiruvananthapuram-19	Dr. G. Vijay Nair Emeritus Scientist RRLTrivandrum – 19.
32. Dr. Sindhu G Nair "A Study of Elementary Operators".	Department of Mathematics, CUSAT, Kochi-22.	Dr. M.N. Narayanan Nampoothiri Department of Mathematics, CUSAT, Kochi – 22
33. Dr. Binitha M.N. "Structural Tuning of Montmorillonite Clays By Pillarong: Designing of shapes Selective Solid and Catalysts and PANI Montmorillonite Nanocompounds".	Department of Applied ChemistryCUSAT, Kochi – 22	Dr. S Suguna Professor, Department of Applied Chemistry CUSAT, Kochi – 22
34. Dr. Sudha D "Box Products Fuzzy Topological Spaces and Related Topics".	Department of Mathematics CUSAT, Kochi – 22	Dr. T. Thrivikraman Professor, Department of Mathematics, CUSAT, Kochi – 22.
35. Dr. Kochurani George "Studies on Surface Properties and Catalytic Activity of some Chromites and Realated Spinels".	Department of Applied Chemistry, CUSAT, Kochi-22.	Dr. P.V. Mohanan Lecturer Department of Applied Chemistry, CUSAT, Kochi-22



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
36. Dr. Jose K.P. "Stochastic Inventory With/Without Service Time, Reneging an Retrieval of Customers".	Department of Mathematics, CUSAT, Kochi – 22.	Dr. A Krishnamoorthy Professor, Department of Mathematics, CUSAT, Kochi – 22.
37. Dr. Gireesh G "Muscarinic M, Receptor Gene Expression in Streptozolocin Induced Diabetic Rats: Regulations of Insulin Secretion By Aegle Marmelose And Costur Active Leaf Extracts".	Department of Biotechnology CUSAT, Kochi – 22.	Dr. C.S. Paulose Jacob Professor Department of Biotechnology CUSAT, Kochi – 22.
38. Dr. Maya G "Catalysis of Transition Metal Modified Ceria and Ceriazirconia Mixed Oxide Prepared Via Sol-Gel Route".	Department of Applied Chemistry, CUSAT, Kochi – 22	Dr. S Suguna Professor Department of Applied Chemistry CUSAT, Kochi – 22.
39. Dr. Sajeev V.S. "Plasma Polymeresed Organic Thin Film – A Study on the Structural Electrical and Physics NonlinearOptical Properties for Possible Applications".	Department of Physics CUSAT, Kochi – 22.	Dr. M.R. Anantharaman Reader Department of Physics CUSAT, Kochi – 22.
40. Dr. Subin P Joseph "Topological Invariants in Hydro dynamics and Hydromagnetics".	Department of Mathematics, CUSAT, Kochi – 22.	Dr. M. Jathavedan Professor Department of Mathematics CUSAT, Kochi – 22.
41. Dr. Maya T. Nair "On Finite Mixture of Parato and Beta Distribution".	Department of Statistics CUSAT, Kochi – 22.	Dr. P.G. Sankaran Reader Department of Statistics CUSAT, Kochi – 22.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
42. Dr. Manoj R. "Characterization of Transparent conducting Thin Film Crown By Pulsed Laser Deposition and RF Magnetron Sputtering".	Department of Physics CUSAT, Kochi – 22	Dr. M.K. Jayaraj Reader Department of Physics Cusat, Kochi-22
43. Dr. Soorej M Basheer "Lepase Production By Marine Fungus Aspergiller Awamori Vagazaula".	Department of Biotechnology CUSAT, Kochi – 22.	Dr. M.Chandrasekharan Department of Biotechnology CUSAT, Kochi – 22.
44. Dr. Finla Chathee "Adrenergic And Glutameric Receptor Gene Expression include Their functional Regulation n the Cerebral Cortex of Hypoxia Induced Neonatal Rats:Role of Oxygen Epenephrine and Clucose Supplementation".	Department of Biotechnology CUSAT, Kochi – 22	Dr. C.S. Paulose Professor Department of Biotechnology CUSAT, Kochi – 22.
45. Dr. Archana Kishore "Purification and Characterization of Vibriophage Isolated from Mangalavanam Mangrove".	Department of Biotechnology CUSAT, Kochi – 22	Dr. Sarita G Bhat Department of Biotechnology CUSAT, Kochi – 22.
46. Dr. Jasmin C "Molecular Clonine of Alkalene Protean Geno from Marine Fungus By Engyodontccen Album".	Department of Biotechnology CUSAT, Kochi – 22	Dr. M. Chandrasekharan Professor Department of Biotechnology CUSAT, Kochi – 22
47. Dr. Bernard Rajeev S.W. "Studies on Ribolyping Integron Genes And Pathogenecity of Marine Vibrios".	Department of Biotechnology CUSAT, Kochi – 22	Dr. Sarita G Bhat Department of Biotechnology CUSAT, Kochi – 22
48. Dr. Rajeswari Devi M.B. "A Study on Vertex Knots".	Department of Mathematics CUSAT, Kochi – 22.	Dr. M. Jathavedan Professor Department of Mathematics CUSAT, Kochi – 22.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
49. Dr. Indulal G "Studies on the Spectrum And the Energy of Graphs".	Department of Mathematics CUSAT, Kochi - 22	Dr. A Vijayakumar Reader Department of Mathematics CUSAT, Kochi – 22.
50. Dr. Jose P Kalbopparamban "Synthesis Characterization And Application Studies of some Polymer Supported Complexes".	Department of Applied Chemistry, Cusat Kochi – 22.	Dr. K Girishkumar Reader Department of Applied Chemistry, CUSAT, Kochi-22
51. Dr. Pearly Sebastian Chittilappilly "Studies on Same New Schiff Base Complexes of Ruthenium And Neodymium".	Department of Applied Chemistry CUSAT, Kochi - 22	Dr. K.K. Mohammed Yusuff Professor Department of Applied Chemistry, Cusat Kochi – 22.
52. Dr. Ratheesh Kumar P.M. "Spray Pyrolysed Zinc Oxide Thin Films: Effects of Doping And Ion Beam Irradiation".	Department of Physics CUSAT, Kochi – 22.	Dr. K.P. Vijayakumar Professor, Department of Physics, CUSAT, Kochi – 22.
53. Dr. Nisha M "Growth and Characterization of Radio Frequency Magnetron Sputtered Indium Tin Oxide Thin Films".	Department of Physics Cusat, Kochi-22	Dr. M.K. Jayaraj Reader Department of Physics CUSAT, Kochi – 22
54. Dr. Babu S "Impact of Self Generation of Priorities and Non-Preampture Service in Single/Multi Service Queues".	Department of Mathematics CUSAT, Kochi – 22.	Dr. A Krishnamoorthy Professor Department of Mathematics CUSAT, Kochi – 22.
55. Dr. Reas Khan S "Muscarinic M ₁ and Glutamate Receptor Gene Expression And their Functional Role in Pilocarpine Induced Temporal Lobe Epilepsy in Rats: Regulation by Bacoside A and Bacopa Monnaceri Extracts".	Department of Biotechnology CUSAT, Kochi – 22.	Dr. C.S. Paulose Professor Department of Biotechnology CUSAT, KOCHI - 22



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
56. Dr. Remya Robinson "Dopamine D ₁ and D ₂ Receptor Functional Regulation: Glutamate Receptor Gene Expression in the Brain of Hypoglycaemic And Hyperglycaemic Rats".	Department of Biotechnology Cusat, Kochi - 22.	Dr. C.S. Paulose Professor Department of Biotechnology CUSAT, Kochi – 22.
Faculty of Marine Sciences		
57. Dr. Sunil P.S. "Crystal Structure and Tectonic Evolution of south Western Granulite Terrain of Indian Peninsular Shield Based on Gravity Data".	Department of Marine Geology, Marine Geophysics, CUSAT, Kochi – 16.	Dr. M. Radhakrishna Reader Department of Marine Geology, Marine Geophysics, CUSAT, Kochi – 22.
58. Dr. Pramod P.K. "Resource Abundance And Survival of Indigenous Ornamental Fishes of Central Kerala With Emphasis on handling and Packing stress in Punlicis Filament –os (Valenciennes)."	School of Industrial Fisheries, CUSAT, Kochi – 16.	Dr. A Ramachandran Registrar CUSAT, Kochi – 22.
59. Dr. Venu G Nair "Impacts of Western Ghats Orography on the weather and Climate over Southern Peninsular India – A Mesoscale Modelling Study".	Department of Atmospheric Sciences, CUSAT, Kochi – 16.	Dr. K. Mohankumar Dean Faculty of Marine Sciences, CUSAT, Kochi – 16
60. Dr. Arun P.R. "Sedimentology and Hydrochemistry of Aruvikkara And Peppara Reservoir Basins Kerala India".	Centre for Earth Science Studies, Trivandrum – 31.	Dr. D. Padma Scientist Centre for Earth Science Studies, Trivandrum – 31.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
61. Dr. Hamza Varikkoden "Dynamic Characteristics of Atmospheric Boundary Layer During Different Phases of Mansoon".	Department of Atmospheric Sciences, CUSAT, Kochi – 16.	Dr. C.A. Babu Professor Department of Atmospheric Sciences, CUSAT, Kochi – 16.
62. Dr. Abdu Rahman K.P. "Studies on Food and Feeding of Marine Demersal Finfisher with Special Reference to Trophic Interactions".	Central Marine Fisheries Research Institute, Kochi – 18.	Dr. K. Sunil Mohammed Scientist Central Marine Fisheries Research Institute, Kochi – 18.
63. Dr. Unnikrishnan U. "Nutritional Value of fresh Processed and formulated Diets for the Green Mud Grash Scylla Serrata Juvenites".	Central Marine Fisheries Research Institute, Kochi – 18	Dr. R. Paulraj Principal Scientist, Central Marine Fisheries Research Institute, Kochi – 18
64. Dr. Soja Louis "Taxonomy Bronomics And Biofouling of Bryozocians from the Coasts of Indian and Antarctic Waters".	Department of Marine Biology, Microbiology & Biochemistry, CUSAT, Kochi - 16.	Dr. N.R. Menon Professor Department of Marine Biology, CUSAT, Kochi – 16
65. Dr. Santhosh Kumar R "Hydrogeological, Geophysical and Geochemical Studies in Rats of Coastal and Medland Areas, Central Kerala".	Department of Marine Geology, Marine Geophysics, CUSAT, Kochi – 16	Dr. S. Rajendran Professor Department of Marine Geology, Marine Geophysics, CUSAT, Kochi – 16.
66. Dr. Rajith K "Sediment Budgeting Studies for the Kollam District".	Centre for Earth Science Studies, Trivandrum – 31.	Dr. N.P. Kurian Scientist Centre for Earth Science Studies Trivandrum – 31.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
67. Dr. Baiju K.R. "Metamorphism And Fluid Inclusion Studies of Charnofites And Associated Rocks from the Madurai Granitites Block, Southern India weather Special Reference to Graphics Mineralization".	Department of Marine Geology, Marine Geophysics, CUSAT, Kochi – 16	Dr. C.G. Nandakumar Professor Department of Marine Geology, Marine Geophysics, CUSAT, Kochi – 16
68. Dr. Bindu K.B. "Studies on Diatoms Along the South West Coast of India in Relation to the Hydrological Parameter".	Central Marine Fisheries Research Institute Kochi-18	Dr. C.P. Gopinathan Principal Scientist Central Marine Fisheries Research Institute, Kochi – 18
69. Dr. Latha Unnikrishnan "Polycyclic Aromatic Hydrocarbons And Toxic Trace Metals in Sea Water and Sediment from the West Coast of India And their Bioaccumulation in some selected species of fishes".	Central Institute of Fisheries Technology Kochi – 29.	Dr. K. Devadasan Director Central Institute of Fisheries Technology Kochi – 29.
70. Dr. Santhosh S "Studies on Antiulcerogenic And Antipepatotoxic Potential of chitosan And Glucosamine in Experimental Rate".	Central Institute of Fisheries Technology, Kochi – 29.	Dr. P. Mathew Principal, Scientist Fisheries Technology, Kochi – 29.
71. Dr. Narayanan T. "Studies in Mangrove of the Cochin Estuary Estuary".	Department of Chemical Oceanography, CUSAT, Kochi – 16.	Dr. N. Chandramohana-Kumar, Professor Department of Chemical Oceanography, CUSAT, Kochi – 16.
72. Dr. R.V. Rajan "Texture Minerology and Geochemistry of Sediments from the Coastal plans Between Kodungallor And Chellanam Central Kerala, India".	Department of Marine Geology, Geophysics. Cusat, Kochi-16	Dr. P. Seralathan Professor Department of Marine Geology, Geophysics, CUSAT, Kochi – 16.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
73. Dr. Somanatha Pai "Biocontrol of Vibrio Harveyi in Penacus Menodan Farval Reasons Systems Employing Probiotics And Vibrio Phage".	School of Environmental Studies, CUSAT, Kochi -22.	Dr. Bright Singh Dean & Director School of Environmental Studies CUSAT, Kochi -22.
74. Dr. Remasan M.P. "Studies on Inland fishing Gearr of North Kerala".	School of Industrial Fisheries, CUSAT, Kochi – 16.	Dr. A Ramachandran Registrar CUSAT, Kochi – 22.
75. Dr. Manoj Kumar T.G "Fish Habitats and Species Assemblage in the Selected Rivers of Kerala And Investigation on life history traits of Punitees Carnatives (Jerdonm 1849)".	School of Industrial Fisheries, CUSAT, Kochi – 16.	Dr. B. Madhusoodana Kurup, Professor Industrial Fisheries CUSAT, Kochi – 16.
76. Dr. Johny T Varghese "Carbon/Nitrogen Ratio of optimisation and periphylation Development on the production And Sustainability of Penaeus Mondom(FABRICIUS) in Extensive Culture system".	School of Industrial Fisheries,CUSAT, Kochi – 16.	Dr. B. Madhusoodana Kurup, Professor Industrial Fisheries CUSAT, Kochi – 16.
77. Dr. Renjth K.R. "Chemodynamics and Ecohydrology of Tropical Estuary".	Department of Chemical Oceanography, CUSAT, Kochi – 16.	Dr. N. Chandramohana-Kumar, Professor Department of Chemical Oceanography, CUSAT, Kochi – 16.
78. Dr. Sindhu O.K. "Incidence of Enteratoxigene staphyto Cocuss Aureus in Relation to the Microbial Safety of Seafood".	Central Institute of Fisheries Technology, Kochi – 29.	Dr. P.K. Surendran Principal, Scientist Central Institute of Fisheries Technology, Kochi – 29.
79. Dr. Radhakrishnan K.V. "Systematics germplasm Evaluation and Pattern of Distribution and Abundance Freshwater Fishes of Kerala (India)".	School of Industrial Fisheries, CUSAT, Kochi – 16.	Dr. B. Madhusoodana Kurup, Professor Industrial Fisheries Cusat, Kochi – 16.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
80. Dr. Gisha Sivan "Studies on the Venom of the Fish Sealophagus Argus from Cochin Estuary A Biochemical Approach".	Department of Marine Biology, Microbiology and Biochemistry, CUSAT, Kochi – 16.	Dr. C.K. Radhakrishnan Professor Department of Marine Biology, CUSAT, Kochi – 16.
81. Dr. Anil Earnest "Constraining the Active Tectonic Deformation Andaman Nicobar Arc in the Background of December 26, 2004 Grate Sumatra Andaman Earthquake".	Centre for Earth Science Studies, Trivandrum – 31.	Dr. C.P. Rajendran Scientist Centre for Earth Science Studies, Trivandrum – 31.
<u>Faculty of Humanities</u>		
82. Dr. Sreeja P.V. "Hindi Ke Visangath Natakam Aur Prayogdharmitha Ke Vividh Aayam".	Department of Hindi CUSAT, Kochi – 22.	Dr. P.A. Shemim Aliyar Professor Department of Hindi CUSAT, Kochi – 22.
83. Dr. Rajeswary K "Samakalin Hindi Kavitha Mein Sanskritik Sankat Ke Vividhaayam".	Department of Hindi CUSAT, Kochi – 22.	Dr. A Aravindakshan Professor, Department of Hindi, CUSAT, Kochi – 22.
84. Dr. Jayasree B "Adhunik Hindi Geeti Natyam Mein Midhak Tatwa".	Department of Hindi CUSAT, Kochi – 22.	Dr. K. Vanaja Reader Department of Hindi CUSAT, Kochi – 22.
<u>Faculty of Social Sciences</u>		
85. Dr. R Mahesh "Poverty Inequality And Natural Resource Degradation: An Investigation into the Small-Scale Fishing Sector of south Kerala".	Department of Applied Economics, Cusat, Kochi – 22.	Dr. Rajasenan Professor Department of Applied Economics, Cusat, Kochi – 22.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
86. Dr. K.S. Divakaran Nair "Development of an Instrument to Assess Human Resource Quality (HR Q) And Measuring the Impact of TQM Effects on HRQ Using the Instrument".	School of Management Studies, CUSAT, Kochi - 22	Dr. M Bhasi Professor School of Management Studies CUSAT, Kochi – 22.
87 Dr. Philip M.P. "Trends in Financial Intermediation by the Banking system in Kerala: An analysis in the context of the Growth Trends in the state is Economy".	Department of Applied Economics, CUSAT, Kochi - 22.	Dr. K.K. George Professor School of Management Studies CUSAT, Kochi – 22.
88 Dr. Poornima Narayan "Efficiency in Delivering Obstetric Care A Comparison of Public and Private Hospitals in Ernakulam District".	Department of Applied Economics, CUSAT, Kochi - 22.	Dr. K.C. Sankaranarayanan Professor Department of Applied Economics, CUSAT, Kochi - 22.
89 Dr. Haseena V A "Dynamics of Deforestation And Socio-Economic Profile of tribal Women/Old in Kerala – A Study/ Attappady".	Department of Applied Economics, CUSAT, Kochi - 22.	Dr. M. Meera Bhai Reader Department of Applied Economics, CUSAT, Kochi - 22.
90 Dr. D. Mavoothu "Career Advancement of MBA is a study on the Effect of Personal Professional Organisational and environmental varities".	School of Management Studies, CUSAT, Kochi – 22.	Prof. P. Ramachandra Poduval School of Management Studies, CUSAT, Kochi – 22.
Faculty of Environmental Studies		
91 Dr. Preetha R. "Bioprocess Technology for Antagonistic Pseudomonas MCCB 102,103, Micro Coccus MCCb 104 And Evaluation of Syncchocychilee MCC 114, 115 on Probiotics for the Management of Vibrio in Shrimp Culture Systems".	School of Environmental Studies, CUSAT, Kochi -22.	Dr. I.S. Bright Singh Director School of Environmental Studies, CUSAT, Kochi -22.



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Name of the candidate & Title of the thesis	Department/Centre of Research	Name & Designation of the Guides
92 Dr. Joseph P.J. "Bioremediation of Petroleum Sludge Through Phyto remediation Land farming and Microbial Enhanced Oil Separation".	School of Environmental Studies, CUSAT, Kochi - 22	Dr. Ammini Joseph Professor School of Management Studies, Cochin CUSAT, Kochi – 22.
Faculty of Engineering		
93 Dr. Renu Pawels "Biological Sulphate Reduction for Treatment of Sulphate Containing Wastewater".	School of Engineering CUSAT, Kochi – 22.	Dr. Babu T Jose Professor School of Engineering CUSAT, Kochi – 22.
94 Dr. Shouri P.V. "Effect of Improving Energy efficiency on system Reliability".	School of Engineering CUSAT, Kochi – 22	Dr. P.S. Sreejith Professor School of Engineering CUSAT, Kochi – 22
95 Dr. K.K.Babu "Utilisation of Coir Geotextiles Unpaved Roads And Embankments".	School of Engineering CUSAT, Kochi – 22	Dr. K.S. Beena Reader School of Engineering CUSAT, Kochi – 22
96 Dr. Jayadevan S Nair "Performers Rights in India – A Study with reference to Audio Visual Industry".	School of Legal Studies CUSAT, Kochi – 22.	Dr. G. Sadasivan Nair Professor School of Legal Studies CUSAT, Kochi – 22.



PLANNING AND DEVELOPMENT DIVISION

Planning and Development Division is the main branch of the University. It co-ordinates the overall development of the University under the assistance of various funding agencies like UGC, MHRD, CSIR, AICTE, DOD, DST, DBT etc. It also helps the Principal Investigators of the University to get various projects implemented with the financial assistance of the above agencies. The Planning Division with the assistance of the Engineering Department co-ordinates the construction and maintenance of all the buildings for offices / departments / hostels / quarters etc. It helps the teaching departments and Central Library for the purchase of equipments, books and journals and consumables for the Lab/Library etc.

Planning Division arrange both National and International Conferences/Seminars/Symposia, etc., with financial assistance of external funding agencies. It co-ordinates the travel of teachers in and outside the country to attend National and International Conferences. It helps the University to appoint Visiting Professors / Emeritus Fellows under the UGC Scheme. The Division also helps to provide financial assistance for the conduct of UGC sponsored refresher courses and to the teacher fellows of the FIP scheme. It also looks after functioning of the NODEL Centre and STIC as well as various centers under the University. The Division is headed by the Planning and Development Officer. The Division has one Assistant Registrar, 3 Section Officers 8 Assistants and 2 Supporting Staff. In addition to the ongoing projects, projects sanctioned during 2005-06 Seminars / Symposia and Refresher Courses conducted during 2005-06 are enclosed. Planning Division also prepares Annual plan proposals to the state and V year plan to UGC.

1. Seminars / Conference/ Workshop/ Refresher Courses held during 2007-08

Sl. No.	Title	Duration	Co-Ordinator	funding Agency
1.	National Symposium on Current Trends in Chemistry (Applied Chemistry)	18-19 January,	Dr. K.K.Mohammed Youseff, Professor	UGC-KSCSTE
2.	National Symposium on Emerging Trends in Meteorology and Oceanography (METOC-07) (Centre for Monsoon Studies)	21-22 May, 2007	Dr. C.K.Rajan, Director, Centre for Monsoon Studies	Ministry of Earth Sciences - DST
3.	Tow-day Brainstorming meeting of the ISRO-GBP Paleoclimah Sub-working Group (Biotechnology)	20-21 July 2007	Dr. C.S.Poulose MG & GP, Cusat Kochi - 16	National Physical Laboratory Ahamedabad
4.	National Seminar on the New Patents Regime in India (Applied Economics)	04 July, 2007	Dr. M.Meera Bai Reader, Dept of Applied Economics	KSCSTE



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Sl. No.	Title	Duration	Co-Ordinator	funding Agency
5	One-day Sensitization- cum- Awareness Programme for Technology Information Facilitation Programme (TIFP) (University Library)		Dr. C.Beena	DSIR-DST
6	International Conference on Biodiversity Conservation and Management (BIOCAM-08) (RGC)		Dr. P.Natarajan Professor RGC	UGC
7	National Seminar on Statistical Methods and Reliability Analysis (Statistics)	28-30 January 2008	Dr. N.Balakrishnan Reader	UGC-CSIR DAE DST
8	Annual Photonics Workshop (APW-08)- Ultra Fast Processes and their Application (International School of Photonics)	26-28 February 2008	Prof. P.Radhakrishnan	UGC
9	National Seminar on Contribution of Dinakar to National Integration (Hindi)	07-08 February, 2008	Dr. N.Mohanam Professor	UGC
10	National Seminar on Perspective on Post Modernisation (Culture & Heritage)	12-13 March 2008	Dr. Mariyamma Vincent Panikulangara	UGC
11	National Seminar on Bioactive Compounds, from Marine Organisms (MBD)	08-09 February 2008	Dr. A.V.Saramma	UGC-KSCSTE
12	SYMPOL-2007 International Symposium on Ocean Electronics (Electronics)	11-14 December 2007	Prof. P.R.S.Pillai	UGC-AICTE, DOD, CSIR, KSCSTE, DRDO, DIT
13	NHTEP-2007 (New Horizons in Theoretical and Experimental Physics (Physics))	08-10 October 2007	Dr. S.Jayalekshmi	UGC-DST
14	Seminar on Theoretical Physics 2007-08 TPS Programme (Physics)	08-10 October 2007	Dr. Ramesh Babu Professor	SN Bose National Centre for Basic Sciences, Kolkata



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15	IC-SOLACE 2008 International Conference on Solar Cells (Physics)	21-23 January 2008	Dr. K.P.Vijayakumar Professor	DST, KSCSTE, DRDO, DIT, ISRO
16	Centre for Population Studies Workshop on Health and Wellness	29-30 November 2007	The Head Department of Statistics	UGC Rs.50,000/-
17	School of Legal Studies			
1	Seminar on Ethics and Human Values	04-06 October	Director, School of Legal Studies	UGC Fund Rs.1,40,000/-
2	Seminar on Human Rights	29 February 2008	Director, School of Legal Studies	UGC Rs.60,000/-
3	Workshop on Human Rights	28-29 May, 2008	Director, School of Legal Studies	UGC Rs. 64,000/-
18	Centre for Science Communication			
1	National Orientation Programme	28-29 September, 2007	Director, Public Relations and Publication	University Fund Rs. 25,000/-
2	Workshop on creative Science Writing/ Science fiction Writing	1 March 2008	Director, Centre for Science Communication	University Fund Rs. 12,000/-
3	Essay Competition			Rs. 8,500/-
19	Centre for Science in Society Observing of International Ozone Day-07	16 September 2007	Director, C-SiS	KSCSTE Rs. 50,000/-
20	Centre for Rural Development and Appropriate Technology (CRDAT) Seminar on Decentralized Waste Management	24-26 March, 2008	Director, CRDAT	University Fund Rs. 50,000/-
21	Department of Applied Chemistry National Science Day Celebration	28 February 2008	Head of the Department	KSCSTE Rs. 10,000/-

Refresher Course - 2007-2008

1.	Atmospheric Physics and Climate Change	19-11-2007 to 13-12-2007	Dr. V.Madhu	UGC
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Sponsored Research Projects

No	Title	Sponsoring Agency	Amount	Investigator(s)
1	UGC Emeritus Fellowship to Dr. M.Ravindran	UGC	3,40,000	Dr.M.Ravindran, Professor (Rtd), Department of Applied Chemistry
2	Rural Livelihood Enhancement Through Community Participation	DBT	2,432,000	Dr. P.Natarajan, Professor, Rajiv Gandhi Chair in Contemporary Studies, School of Environmental Studies
3	Fish Waste Management and its Socio-environmental Impact Assessment in Cochin Corporation and Aroor Industrial Area	DST	7,85,450	Mr. Abhilash S., School of Industrial Fisheries
4	Synthesis and Characterization of Carbon Nanotube Polymer Composite Films of Polyanniline and Polypyrrole as Anode Materials in Polymer LEDs	UGC	8,77,100	Dr. S.Jayalekshmi, Reader, Department of Physics
5	Expression of Virulence in V.Harveyi in Organic Recirculation Prawn Seed Production System (ORPSVS) and its Management	UGC	9,27,600	Dr. I.S.Bright Singh, Professor, National Centre for Acquatic Animal Health
6	Black Holes Information Loss and Entanglement	UGC	7,86,600	Dr. V.C.Kuriakose, Professor (Rtd), Department of Physics
7	Assistance to the Department of Instrumentation Under SAP at the level of DRS I	UGC	4,500,000	Dr. K.Madhusoodanan, Professor, Department of Instrumentation
8	Assistance to the Department of Hindi at the level of DRS III under SAP	UGC	2,300,000	Dr. A.Aravindakshan, Professor, Department of Hindi
9	Dynamics of the Coastal Waters of Southwest Coast of India and its Impact on Fisheries	INCOIS	2,700,000	Dr. R.Sajeev, Lecturer, Department of Physical Oceanography
10	Social Safety Nets, Technology and Industrial Policies for Ieformal Women Workers in Globalized India: A Microlevel Study	UGC	3,93,400	Dr. Meera Bhai M., Reader, Department of Applied Economics



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No	Title	Sponsoring Agency	Amount	Investigator(s)
11	UGC Assistance to the Department of Electronics under the DSA Phase II	UGC	7,500,000	Dr. K.Vasudevan, Professor, Department of Electronics
12	UGC Assistance Under Special Assistance Programme (SAP) DRS - II	UGC	3,650,000	Dr. K.Mohankumar, Professor, Department of Atmospheric Sciences
13	Cultural Background of the Hindi and Konkani Folklore	UGC	6,72,500	Dr. L.Suneetha Bhai, Professor (Rtd), Department of Hindi
14	Dynamics of Nutrients in Mangroves Ecosystem Along Kerala Coast	DST	7,17,480	Dr. R.Geetha, Department of Chemical Oceanography
15	Grouting: An economical Method for Effective Utilization of Water Resources and for Improvement of Foundation Soils	AICTE	7,05,000	Dr. Benny Mathews Abraham, Professor, Division of Civil Engineering, School of Engineering
16	Staff Development Programme	AICTE	2,00,000	Dr. Job Thomas, Lecturer, Division of Civil Engineering, School of Engineering
17	Science Popularization Programme - Strengthening of Children's Science Library of C-SiS	KSCSTE	2,00,000	Dr. K.G.Nair, Director, Centre for Science in Society
18	Assessment of Salt and Nutrients Uptake Capacity of Heavy Mineral Coastal Sediments of Tsunami Affected Areas of Kerala	KSCSTE	1,76,000	Dr. V.Sivanandan Achari, Lecturer, School of Environmental Studies
19	Nanostructured Conjugated Polymeric Ink for Printable Chemical Sensors	KSCSTE	7,61,750	Dr. K.Sreekumar, Reader, Department of Applied Chemistry
20	Design Optimization and Development of Compact Microstrip Antenna Configuration Using Genetic Algorithms	KSCSTE	9,90,000	Dr. P.Mythili, Reader, Division of Electronics, School of Engineering
21	Innovation of Technology for the Manufacture of Redispersible Natural Rubber	AICTE	1,270,000	Dr. Thomas Kurian, Professor, Department of Polymer Science & Rubber Technology



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No	Title	Sponsoring Agency	Amount	Investigator(s)
22	Isolation Characterization and Application of Protease Enzyme Inhibitors from Marine Micro Organisms	DBT	3,369,000	Dr. Elyas K.K., Lecturer, Department of Biotechnology
23	Green Wealth for Rural Women Through Filter Extraction from Agriwaste	DBT	1,846,000	Through Filter Extraction from Agriwaste
24	Weather Data Applications of Kerala by Centre for Monsoon Studies	ISRO	2,450,000	Dr. C.K.Rajan, Professor (Rtd), Department of Atmospheric Sciences
25	Adrenergic Gabaergic and Serotonergic Gene Expression and Their Interaction on Insulin Secretion and Pancreatic B - Cell Proliferation	ICMR	1,861,840	Dr. C.S.Paulose, Professor, Department of Biotechnology
26	Developing an Institutional Repository of Science & Technology	DSIR	6,59,000	Dr. C.Beena, University Library
27	UGC Emeritus Fellowship to Dr. K.T.Mathew	UGC	3,40,000	Dr. K.T.Mathew, Professor (Rtd), Department of Electronics
28	Advanced Research in Neuro Transmitters Functional Regulation in Diabetics and Pancreatic Regeneration Insulin Secretion and Function at Molecular Level	DST	19,000,000	Dr. C.S.Paulose, Professor, Department of Biotechnology
29	Studies on the Effect of Preparation Technique Particle Size and Shape of Conducting Polymers on Dielectric Properties in the Microwave Field	DST	1,284,000	Dr. Honey John, Department of Polymer Science & Rubber Technology
30	Production Purification Genetic Characterization and Application Studies of Tannase Enzyme from Marine Fungus Aspergillus Awamori	DST	984,000	Ms. Beena P.S., Department of Electronics
31	Design Modification and Commercialisation of Nitrifying	DBT	1,037,000	Dr. I.S.Bright Singh, Professor, National



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No	Title	Sponsoring Agency	Amount	Investigator(s)
	Bio-reactor Technology for the Establishment of Organic Recirculation of Prawn Seed Production System			Centre for Acquatic Animal Health
32	Identification & Removal of Blocks on Invitro Transormation and Estaablishment Permanent Cell Lines From Penaeus Mondon	DBT	3,176,000	Dr. I.S.Bright Singh, Professor, National Centre for Acquatic Animal Health
33	Recognition of Storm Surge and Paleotsunami Events in Selected Coastal Plains of Southern Tamilnadu	CSIR	1,088,000	Dr. P.Seralathan, Professor, Department of Marine Geology & Geophysics
34	Catalysis by Nanocrystalline Ceria Modified With Transition Metals	IRELTDC	2,038,790	Dr. S.Sugunan, Professor, Department of Applied Chemistry
35	Pillared Clay Catalyzed Green Route Oxidation of Phenol in Aqueous Media	KSCSTE	1,001,000	Dr. S.Sugunan, Professor, Department of Applied Chemistry
36	Study on Eosin Dye Sensitized Polymers for Holographic Applications	KSCSTE	536,250	Dr. C.Sudhakartha, Reader, Department of Physics
37	Risk Assessment of Bi-Valve Shell Fish From Kumarakom Estuary and Development of a Closed Water Depuration System With Bio-filter to Remove the Pathogeneic Bacteria from the Shell Fish	KSCSTE	880,000	Dr. A.a.Mohammed Hatha, Reader, Department of Marine Biology, Micro Biology and Bio Chemistry
38	Dynamics and Institutions in Community Based Fisheries Resources Management of Kerala State : A Sustainable Development Option	ICSSR	520,300	Dr. D.Rajasanan, Director, Centre for Rural Development & Appropriate Technology
39	Development of Bio-reactor Technology for Bioconversion of Coir Pith : Isolation and Screening and Identification of Appropriate Micro Organisms	DBT	1,681,000	Dr. I.S.Bright Singh, Professor, National Centre for Acquatic Animal Health



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No	Title	Sponsoring Agency	Amount	Investigator(s)
40	Compact Microwave Dielectric Resonator Antennas for Communication Applications	DSIR	1,500,00	Dr. Jaimon Yohannan, Department of Electronics
41	Tunable Microwave Materials and Devices Based on Photonic Band Gap Structure	DST	2,980,000	Dr. P.Mohanan, Professor, Department of Electronics
42	Mesocale Modelling for Monsoon Related Weather Predictions - Phase II - Development of topography Module and Coupled Slab Ocean Atmosphere Model Simulations of Intra-Seasonal Variability of Monsoon Using Varsha GCM (Two R&D Compnents)	CSIR	3,193,000	Dr. K.Mohankumar, Professor, Department of Atmospheric Sciences
43	Development of Database of the Fish Germ Plasm Capture Fisheries and Biodiversity threads of the rivers of Kerala	KSCSTE	2,00,000	Dr. B Madhusoodhana Kurup, Professor, School of Industrial Fisheries
44	Bioconversion of Water Hyacinth for Sustainable Livelihood	DST	4,53,220	Dr. P.Natarajan, Professor, Rajiv Gandhi Chair in contemporary Studies, School of Environmental Studies
45	Studies on Photocatalysis by Nanotitania for Detoxification of Water Containing Pollutants	DRDO	14,95,000	Dr.S.Sugunan, Professor, Department of Applied Chemistry
46	Development of Anti-WSSV Drugs from Mangrove Plants Endemie to Indian Coastal Zone	DBT	37,45,000	Dr.I.S.Bright Singh. Professor, National Centre for Acquatic Animal Health
47	Metagenomics Approches to Evaluaate Diversity of Nitrifying Bacterial Community in the Sedements of Zero Water Exchange System Shrimp Prones	DST	13,68,000	Dr. Valsamma Joseph, National Centre for Acquatic Animal Health
48	DSA SAP III in the School of Marine Sciences	UGC	65,00,000	Dr. K.Sajan, Professor, School of Marine Sciences
GRANT TOTAL			98,071,280	

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DIRECTORATE OF PUBLIC RELATIONS AND PUBLICATIONS

The Directorate of Public Relations and publications has done a commendable work during the period 2007-2008 and its activities helped the University to boost its image as a public organisation, committed to the cause of higher learning.

During 2007-2008, the Directorate took all efforts to provide up to date information to other academic institutions, research scholars, students and to the general public regarding higher education and related opportunities. It also assisted various departments in organising seminars, workshops and symposia by ensuring an excellent media coverage. Such programmes include, a workshop on rural environment and problems jointly organized by the Centre for Science Communication and Rajiv Gandhi chair in contemporary studies, a workshop on Grass Root Level Environmental Communication and awareness for self help groups and villages, national orientation programme for Public Relations Practitioners and Scientists in Science and Technology organizations, South- zone Vice Chancellors meet of AIU. Timely and effective briefing of the media by the Directorate of Public Relations were indeed a source of authentic information for all who were in pursuit of excellence in learning.

The staff of the Directorate took all effort in clearing the doubts of the general public regarding various academic programme of CUSAT directly and over phone besides propagating the message of science and technology among the public.

Many of the dignitaries from India and Abroad, who visit the University during the year, were welcomed by the Directorate of Public Relations and Publications. The directorate was able to give wide publicity to the Common Admission Test 2008, through the media for which an overwhelming response was received. It took all efforts to bring out the University Diary in time with up to date information of the University and circulated to all concerned, besides the publication of Annual Report of the University.

Around 1000 press releases and relevant notifications and advertisements were issued through this office to dailies in both Malayalam and English and to the Electronic Media. The Directorate was able to give wide coverage of the National and International Seminars conducted by the various departments.

The Directorate won appreciation from all quarters for the excellent coverage it ensured for all University activities through media.

The University has entrusted all publication activities with the Directorate and it could publish a total no of Nine books till day. The Books were



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1. Prayojanparak Hindi Vyakaran - Vyavaharik Paripreshya Mein (Functional Grammer) (edited by Dr. V.P.N.Nampoori, Dr. P. Rashakrishnan, Dr. K. R. Suresh Nair and Dr. V.M. Nandakumaran)
2. Acuqacultue and Marine Biotechnology - (edited by I.S. Bright Singh, Valsamma Joseph, Rosamma Philip, A. Mohandas)
3. Grameenam (Proceedings of Environmental awareness workshop conducted by CSE) — (edited by Dr. S. Anil Kumar)
ISBN No. 978-81-906050-0-7
4. Web of Language (Random thoughts in its Science and Technology) — (edited by Dr. N. G. Devaki, Department of Hindi)
ISBN No. 978-81-906050-1-4
5. Malayalam Sahitya (Vividh Ayam) — (edited by Dr. R. Sasidharan, Department of Hindi)
ISBN No. 978-81-906050-2-1
6. Corporate Social Responsibility (Current issues and future Trends) (edited by Dr. D. Rajasenan ICEPA, Department of Applied Economics)
ISBN No. 978-81-906050-3-8
7. Check-List of Male Female Differences of Some Indigenous Ornamental Fishes) – (edited by Dr. N. D. Inasu , Pro-Vice-Chancellor)
ISBN No. 978-81-906050-4-5
8. Perspectives on Comparative hiterature and Culture (Proceeding)—(edited by Dr. Mariamma Vincent Panikulangara)
ISBN No. 978-81-906050-5-2
9. Proceedings of National Symposium on Antennas and Propagation (APSYM) – (edited by Prof.K. G. Nair, Prof. PR.S. Pillai, Dr. K. Vasudevan, Dr. K. T. Mathew, Dr. P. Mohanan, Dr. C. K. Anandan),
ISBN No. 978-81-906050-7-6.

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CENTRE FOR SCIENCE COMMUNICATION

The Cochin University of Science and Technology has launched the Centre for Science Communication in early 2007 with the specific aim of popularising Science and Technology among the masses of this country. Its fundamental task is to create scientific temper and the 'spirit of inquiry and reform' among the fellow citizens, as encoded in the Constitution of India under 'Fundamental Duties'.

The Centre for Science Communication is an independent academic entity of Cochin University with an interdisciplinary framework. Its main focus is on the acquisition and propagation of scientific and technological research output and to translate the same into the layman's level with a view to making use of the same for the overall development of the society. Special care will be taken in the development of Science Communication in the regional languages especially in Malayalam. Providing an academic framework to the area of Science Communication and Science Journalism is another area of interest. Its major objectives includes.

- Co-ordinate all Science & Technology popularization activities in the State with academic inputs using modern and traditional communication devices to produce an army of Science Communicators/Science Journalists. Promotion of all Science popularization activities through all conventional and non-conventional forms.
- Impart training in Science and Technology communication to scientists, technologists, researchers, students and journalists by organizing short term workshops and refresher courses catering the respective target groups. Arranging special orientation programmes and training workshops for Scientists and Technologists assigned with Public Relations activities in S&T organizations in the country.
- Catalyse Science & Technology popularization through audio-video and print media and arranging programmes in association with recognized voluntary organizations/educational institutions in various parts of the state as part of extension activities.
- Initiating interdisciplinary research programmes leading to Ph.D in Science Communication, Science Journalism and allied areas, besides offering a Post Graduate programme in Science Communication and Public Relations to cater to the needs of the scientific community working with various Laboratories and Science & Technology organizations in India. Publication of instructional and popular Science Literature in Malayalam and English to cater to the demands of various audiences.

During the two years of its existence the centre could organize two National Workshops, few Seminars, Shanty Swarup Bhatnagar memorial oration, state level essay competitions, publications of a popular science book and training programmes in writing scientific articles/thesis (for research students), science reporting (for Journalism students) and other science popularization activities.

The following were the major [programmes organized by the centre during the period of 2007-2008]



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- Workshop on Grass Root level Environmental Communication and Awareness for Self Help Groups and villagers (31 May 2007). Vice Chancellor Dr. P.K.Abdul Aziz inaugurated the programme.
- National Orientation programme for Public Relations Practitioners and Scientists in Science & Technology organizations (28, 29, September, 2007) Dr. Sebastian Paul, MP inaugurated the programme.
- Inauguration of the new office space allotted to Centre for Science Communication by Sri. E.M.Dinesh Mani MLA, Syndicate Member CUSAT on (12 November 2007) Dr. N.D.Inasu, Pro-Vice Chancellor presided over.
- Training programme in Writing Scientific Articles and Thesis for research students in the area of Science and Technology (24 November 2007) and 2 February 2008) in collaboration with Sophisticated Test Instrumentation Centre, Cusat.
- Workshop on Creative Science Writing and Science Fiction for college students and science writers, inaugurated by Dr. Gangan Prathap, Hon'ble Vice Chancellor, Cusat on 01 March 2008.
- Conducted an all Kerala Essay competition for plus two students on 'Relevance of Science education in the era of Technology upheaval' in Malayalam. Dr. Gangan Prathap, Hon'ble Vice Chancellor gave away the prizes.
- Shanti Swarup Bhatnagar memorial oration on 'Future of Science and Technology; Predictions and Fantasies' by Dr. Achuth Sankar S.Nair on 24 March 2008.
- Published a compendium on rural environmental titled 'Grameenam' edited by Dr. S.Anil Kumar and published by Directorate of Public Relations and Publications for Centre for Science Communication.

The small library set up by the centre was made use by many research scholars and students in Science Communication and journalism. The centre is also planning to launch an interdisciplinary journal on Science Communication and Journalism, 'Science Communicator'. During the period of report Prof. (Dr.) A.Aravindakshan and Dr. S.Anil Kumar continued as the Director and Co-ordinator respectively.

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RECOGNISED COLLEGES / INSTITUTIONS

Sl. No.	Name of the Institutions	Courses Offered
1	ER & DCI Institute of Technology, PB No. 6520, Vellayambalam, Trivandrum-695 033	1. MCA 2. M.Tech (VLSI Design & embedded System)
2	Sarabhai Institute of Science and Technology, Uriacode, Vellanadu, Thiruvananthapuram - 695 543	1. B.Tech (Computer Science & Engineering) 2. B.Tech (Electronics & Communication Engineering) 3. B.Tech (Electrical & Instrumentation Engineering) 4. B.Tech (Mechanical Engineering)
3	College of Engineering, Government ITI Campus, Attingal, Thiruvananthapuram - 695 101	1. B.Tech (Computer Science & Engineering) 2. B.Tech (Electronics & Communication Engineering)
4	CONSPI Academy of Management Studies, Plankalamukku, Industrial Estate P.O., Thiruvananthapuram - 695 109	1. MBA
5	M G College of Engineering, Thrikkanamangalam, Thiruvallam, Thiruvananthapuram - 691 531	1. B.Tech (Computer Science & Engineering) 2. B.Tech (Electronics & Communication Engineering) 3. B.Tech (Information Technology)
6	College of Engineering, Kottarakkara, Kollam - 691 531	1. B.Tech (Computer Science & Engineering) 2. B.Tech (Electronics & Communication Engineering)
7	College of Engineering, Perinad P.O., Kollam - 691 531	1. B.Tech (Computer Science & Engineering) 2. B.Tech (Electronics & Communication Engineering) 3. B.Tech (Information Technology) 4. B.Tech (Electrical & Electronic Engineering)
8	College of Engineering Karunagapally, Kollam - 690 518	1. B.Tech (Computer Science & Engineering)



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		2 B.Tech (Information Technology)
		4 B.Tech (Electrical & Communication Engineering)
9	T K M Institute of Technology, Musaliar Hills, Karuvellil, Ezhukone, Kollam	1 B.Tech (Computer Science & Engineering)
		2 B.Tech (Electronics & Communication Engineering)
		3 B.Tech (Information Technology)
		4 B.Tech (Applied Electronics & Instrumentation)
10	College of Engineering, Adoor, Pathanamthitta - 691 523	1 B.Tech (Electrical & Electronic Engineering)
		2 B.Tech (Computer Science & Engineering)
		3 B.Tech (Information Technology)
11	College of Engineering, Kalloppara, Pathanamthitta - 689 603	1 B.Tech (Electrical & Electronic Engineering)
		2 B.Tech (Computer Science & Engineering)
		3 B.Tech (Information Technology)
12	College of Engineering, Kidangoor, Kottayam - 686 583	1 B.Tech (Computer Science & Engineering)
		2 B.Tech (Electronics & Communication Engineering)
		3 B.Tech (Information Technology)
		4 B.Tech (Electrical & Information Engineering)
		5 B.Tech (Electrical & Electronic Engineering)
13	College of Engineering, Poonjar Thekkekara P.O., Poonjar, Kottayam - 686 583	1 B.Tech (Computer Science & Engineering)
		2 B.Tech (Electronics & Communication Engineering)
		3 B.Tech (Information Technology)
14	College of Engineering, Chengannur, Alappuzha	1 B.Tech (Computer Science & Engineering)
		2 B.Tech (Electronics & Communication Engineering)
15	College of Engineering, Pallipuram, Cherthala Alappuzha - 688 541	1 B.Tech (Computer Science & Engineering)
		2 B.Tech (Electronics & Communication Engineering)



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16	K V M College of Engineering and Information Technology, Kokkothamangal, P.B.No. 30, Cherthala, Alappuzha - 688 583	1 MCA 2 M.Sc (General Biotechnology)
17	College of Engineering, Munnar, P.B.No. 45, County Hills, Munnar, Idukki - 685 612	1 B.Tech (Computer Science & Engineering) 2 B.Tech (Electronics & Communication Engineering) 3 B.Tech (Electrical & Electronics Engineering)
18	Model Engineering College, BMC P.O., Thrikkakara, Ernakulam-21	1 B.Tech (Electronics & Communication Engineering) 2 B.Tech (Computer Science & Engineering) 3 B.Tech (Electronics & Biomedical Engineering)
19	The Co-operative Medical College, HMT Colony P.O., Kalamassery, Ernakulam - 683 503	1 MBBS
20	Toch Institute of Science and Technology Arakunnam, Ernakulam - 682 313	1 B.Tech (Computer Science & Engineering) 2 B.Tech (Electronics & Communication Engineering) 3 B.Tech (Information Technology) 4 B.Tech (Electrical & Electronics Engineering) 5 B.Tech (Civil Engineering) 6 B.Tech (Mechanical Engineering)
21	Central Institute of Fisheries & Nautical Engineering Training, Fine Arts Avenue, Ernakulam	1 Bachelor of Fishing Science (Nautical Science)
22	Co-operative Institute of Technology, Palayanada P.O., Vadakara, Kozhikode - 673 530	1 B.Tech (Computer Science) 2 B.Tech. (Electronics & Communication & Engineering) 3 B.Tech (Information Technology) 4 B.Tech (Electrical & Instrumentation Engineering)
23	College of Engineering, Ernaholi, Thalassery Kannur - 670 107	1 B.Tech (Computer Science & Engineering) 2 B.Tech (Electronics & Communication Engineering) 3 B.Tech (Information Technology) 4 B.Tech (Mechanical Engineering)



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24	College of Engineering, Thrikkaripur, Kasargod - 671 313	5 B.Tech (Electrical & Electronics Engineering) 1 B.Tech (Computer Science & Engineering) 2 B.Tech (Electronics & Communication Engineering) 3 B.Tech (Information Technology) 4 B.Tech (Electrical & Electronics Engineering)
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SOPHISTICATED TEST & INSTRUMENTATION CENTRE

The Sophisticated Test and Instrumentation Centre (STIC) is an autonomous institution (estd. 1995) sponsored by the Kerala State Council for Science, Technology and Environment (KSCSTE) of the Government of Kerala and Cochin University of Science and Technology (CUSAT).

- (1) Undertake research and development activities in the field of instrumentation and related areas, which are of relevance to industries in the state,
- (2) Provide advanced instrument facilities for analysis, testing, measurement and calibration to users from industries, R&D establishments and academic institutions,
- (3) Design and develop trainer kits, demonstration sets and scientific instruments needed for Engineering/Science Colleges,
- (4) Encourage taking up projects, which will motivate younger scientists for undertaking hardware generation in experimental research,
- (5) Co-operate with professionals and academic staff in frontier areas of instrumentation,
- (6) Undertake training and services for personnel from industries, R&D establishments and academic institutions.

STIC has established highly sophisticated test, measurement analysis and research laboratories in the area of instrumentation, quality evaluation/calibration, chemical analysis and testing. A good number of industrial organisations, academic institutions and research establishments have recognised STIC as a potential centre for the calibration of their instruments, product testing and chemical analysis. In addition to regular calibration and testing activities, the scientific personnel are also involved in research and development activities in instrumentation and allied areas.

1. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr. Jacob Philip	Director	M.Sc., Ph.D	Analytical Instrumentation, Calibration, Testing
2.	Dr. J. Jagannath Bhat	Scientist C	M.Sc, Ph.D	Calibration, Testing
3.	Mr. Paul V. John	Scientist C	M.Tech	Calibration, Testing
4.	Ms. Sreeja V.	Scientist C	B.Tech	Calibration, Testing
5.	Dr. Shibu M. Eappen	Scientist B	M.Sc, Ph.D	Analytical Instrumentation
6.	Mr. Adarsh K.J.	Scientist B	B.Tech	Analytical Instrumentation



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2. Research Staff

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr. Bindu M. Krishna	Scientist (DST Project)	M.Sc., Ph.D	Nonlinear Dynamics

3. Research Scholars

Sl.No.	Name	Funding Agency	Guide	Area of work
1.	Mr. Ginson T.J.	CSIR	Dr. Jacob Philip	sensors and Instrumentation
2.	Mr. Prasanth M.N.	KSCSTE	Dr. Jacob Philip	Biomedical Instrumentation

4. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Financial Assistant	1
2.	Reprographic Assistant	2
3.	Assistant Grade II	2
4.	Helper	2
5.	Driver	1

5. Technical Personnel

Sl.No.	Designation	No. of Posts
1.	Senior Technical Assistant	1
2.	Technical Assistant	6
3.	Technician	4

6. Research Facilities

a. Laboratories (List out Major equipments available)

STIC has set up the following facilities to carry out its activities.

A. Calibration laboratories

- (i) Electro-Technical
- (ii) Thermal
- (iii) Mechanical

B. Testing laboratories

C. Incubation, Research and Development laboratory (IRDL)

D. Sophisticated Analytical Instrument Facility (SAIF)



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Major equipment available are :

Equipment		Equipment	
1	500 MHz Digital Storage Oscilloscope	21	ICP-AES Spectrometer*
2	150 MHz Digital Storage Oscilloscope	22	Thermal Analyser DSC*
3	8 1/2 digit Digital Multimeter	23	Thermal Analyser DTA/ TGA*
4	True RMS 4 1/2 digit Multimeter	24	UV-VIS Spectrophotometer with internal DRA*
5	Portable Pneumatic Pressure Source	25	FT-IR Spectrometer*
6	Portable Hydraulic Pressure Source	26	X-ray powder Diffractometer*
7	High Temperature Bath	27	Temperature/ humidity cyclic chamber
8	7-Dial Decade Resistance Box	28	Teraohm Meter
9	5-Dial Decade Resistance Box	29	3f Power Analyser
10	Data Logger	30	High Voltage Probe
11	Universal Testing Machine	31	Logic State Analyser*
12	Standard Multi-parameter Source	32	Photoacoustic Spectrometer ⁼
13	Standard Platinum Resistance Thermometer	33	Ultrasonic Interferometer ⁼
14	Standard S-type thermocouple	34	Photopyroelectric Spectrometer ⁼
15	Low Temperature Bath	35	Electrical Conductivity Measurement set up ⁼
16	Universal Testing Machine	36	Scanning Electron Microscope with EDS*
17	Decade Capacitance Box	37	Ultrapure Water Distillation unit*
18	Decade Inductance Box		
19	CHN Analyser*		
20	GC Mass Spectrometer*		

IN addition, a wide variety of minor instruments and facilities are available in STIC

* Instruments in SAIF (supported by DST)

* Instruments brought under different projects

b. Library

No. of books and Journals as on 31 st March of the Previous Year	Additions during the current year
1105	-

C. Others

(i) NABL Accreditation :

STIC is a Calibration laboratory accredited by NABL (National Accreditation Board for Calibration and Test Laboratories, Government of India) in the following areas

- (i) Electro-Technical
- (ii) Thermal
- (iii) Mechanical



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(ii) Patent filed

STIC has filed a patent on "A Pressure sensor for the pressure range 0- 120 kPa based on e-field sensing". This patent has been filed through TIFAC, Department of Science and Technology, New Delhi. This patent is on a new pressure sensor system developed by Dr. Jacob Philip and his research scholars.

(iv) Publication of Directory of Scientific Instruments in Kerala.

STIC has compiled and edited a Directory containing information about expensive scientific instruments available in the State of Kerala. The financial support for this project was provided by Kerala State Council for Science, Technology and Environment. The Directory was released on the National Technology Day 2007.

7. Distinguished visitors : Nil

Sl.No.	Name	Affiliation	Remarks
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8. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	"Realization of a scanning photoacoustic technique : thermal properties of bulk and film samples"	O. Raghu	Dr. Jacob Philip

9. Publications

a. Papers

1. S. Dhanuskodi, A. Pricilla Jayakumari, S. Manivannan, J. Philip and S. K. Tiwari
Semiorganic nonlinear optical material for frequency doubling: Preparation and properties of sodium p-nitrophenolate dihydrate (SPNP)
Spectrochemia Acta Part A 66 (2007) 318-322
2. J. Philip
Thermal characterization of solids by photoacoustic/photothermal effects: Some results.
Science & Society, 5(1) (2007) 7-22
3. R. Rejikumar, S. Najmal Hussain and J. Philip
Measurement of dry rubber content of natural rubber latex with a capacitive transducer.
J. Rubb. Res. (Malaysia) 10 (1)(2007) 17-25
4. G. Subodh, M.V. Manjusha, J. Philip and M.T. Sebastian
Thermal properties of Polytetrafluoroethylene/Sr₂Ce₂Ti₅O₁₆ Polymer/Ceramic composites
Journal of Applied Polymer Science 108(2008) 1716- 1721



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5. S. Dhanuskodi, S. Manivannan and J. Philip
Synthesis, spectral, optical and thermal studies of 1-methyl-2, 6-dimethyl-4-hydroxypyridinium chloride monohydrate and bromide monohydrate
Spectrochimica Acta Part A 69 (2008) 1207 – 1212
6. S. Manivannan, S. Dhanuskodi, S.K. Tiwari and J. Philip
Laser induced surface damage, thermal transport and microhardness studies on certain organic and semiorganic nonlinear optical crystals
Applied Physics B (2008) 1 - 8

10. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students

Name of Participant	Name of Seminar/ Conference/Workshop	Role
Dr. Jacob Philip	National Symposium on Instrumentation 23-26 October 2007 Rangaswamy College of Engg. Tiruchengode, T.N.	Invited Speaker, Session Chairman
Dr. Jacob Philip	National Symposium on Ultrasonics 17 – 19 December 2007 STIC, CUSAT, Cochin	Organizer
Dr. Jacob Philip	National Seminar on Advances in Materials Science, 4 – 5 February 2008 M.S. University, Tirunelveli	Chief Guest, Invited Speaker, Session Chairman
Dr. Jacob Philip	International Conference on Advanced Materials 19 – 22 February 2008 M.G. University, Kottayam	Session Chairman, Member, Organising Committee
Dr. Jacob Philip	19 th Kerala Science Congress 29 – 31 January 2008 KSCSTE, Trivandrum	Session Chairman Paper presentation

11. Awards/Honours/Fellowships etc. received : Nil

Name of Recipient	Name of Fellowship/Honour /Award	Awarding Agency

12. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1.	“Development of human pressure mapping unit / foot pressure monitor employing E-field imaging sensor array”	Kerala State Council for Science, Technology & Environment	8.14 Lakhs	Dr. Jacob Philip



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2	Development of a Wireless plantar foot pressure measurement system	This is an industry sponsored project	2.00 Lakhs	Dr. Jacob Philip
3	Development of plastic-wood profile based partition boards	Department of Industries, Govt. of Kerala	0.72 Lakhs	Dr. Jacob Philip

13. Research Programmes and Activities:

Sl.No.	Problem/Topic	Investigator(s)
1.	Photoacoustic / photopyroelectric techniques to study thermal / optical properties of solids	Dr. Jacob Philip
2.	Development of Photoacoustic scanning technique to measure thermal properties of coatings	Dr. Jacob Philip
3.	Ultrasonic technique to study elastic properties of solids	Dr. Jacob Philip
4.	Development of biomedical instrumentation systems	Dr. Jacob Philip Mr. Ginson T.J. Mr. Prasanth M.N.
5.	Preparation and characterization of different application oriented materials, including nanomaterials	Dr. Jacob Philip
6.	“Devising a secure communication system based on directly modulated semiconductor lasers”	Dr. Bindu M. Krishna

14. Seminar/Conference/Workshop/Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1	National Technology Day 2007	11.05.2007	Dr. Jacob Philip	KSCSTE
2.	Group Monitoring Workshop of Science Research Scheme Projects	3 – 4.07.07	Dr. Jacob Philip	KSCSTE
3.	Modern Trends in X-ray Crystallography	06.09.2007	Dr. Jacob Philip	Self Supporting basis



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4.	One day workshop on The Art of Writing research papers and doctoral thesis	24.11.2007	Dr. Jacob Philip	Self Supporting basis
5	National Symposium on Ultrasonics	17-19.12.2007	Dr. Jacob Philip	CSIR, DST, BRNS(DAE), Ministry of Earth Sciences, ICMR
6	One day workshop on The Art of Writing research papers and doctoral thesis	02.02.2008	Dr. Jacob Philip	Self Supporting basis
7	National Science Day 2008	28.02.2008	Dr. Jacob Philip	KSCSTE
8	One day workshop on Scanning Electron Microscopy	28.03.2008	Dr. Jacob Philip	Self Supporting basis

15. Consultancy Work :

Sl.No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1.	Development of Capacitive Detector	Dr. Jacob Philip	General Electric, Bangalore.

* * *



CENTRE OF EXCELLENCE IN LASERS & OPTOELECTRONICS SCIENCES (CELOS)

Estd: 2002

The University Grants Commission recognized Cochin University of Science and Technology as a "University with potential for Excellence" in the field of "Lasers and Optoelectronics Sciences" in March 2002 and released an amount of Rupees 5 crores for various activities under the "University with potential of Excellence" programme. Consequently a "Centre of Excellence in Lasers and Optoelectronics Sciences" (CELOS) was established in CUSAT in July 2002.

The primary objectives of this Centre are to initiate and organize innovative teaching, research and extension activities in this highly specialized field of lasers and optoelectronics otherwise known as Photonics. The CELOS is also expected to cater to the research requirements of the workers in this field from nearby universities and institutions by offering them major laser facilities and associated accessories. The Expert Committee appointed by the University Grants Commission consisting of Dr.D.D.Bhawalkar, Director, Centre for Advanced Technology, Indore and Professor A.K.Sood, Indian Institute of Science, Bangalore along with Dr.K.Gunasekharan, Joint Secretary, University Grants Commission visited Cochin University of Science and Technology during 30th September to 1st October 2003. The Committee emphasized the need for greater overlap and focus for the research proposal from different groups. The Committee cleared an amount of Rs.194 lakhs with immediate effect for conducting the Five year Integrated M.Sc. Degree programme under CELOS. The remaining amount was set apart for establishing research facilities.

CELOS is at present functioning the permanent building. A full-time Director has been appointed for CELOS with effect from 1.6.2003 as per the recommendation of the UGC Expert Committee. At present there is one full-time Lecturer and two Hon. Professors in the CELOS. Teaching programme is one of the major activities of CELOS which conducts the five year (10 semesters) Integrated M.Sc. Degree course in Photonics. This is a unique course which is in good demand by students from all over India as it is the only course of its kind in this country. The course structure, syllabus and regulation for this course have been approved by the University and six batches of students (20 each) have so far joined the course. Services of the Guest faculty are utilized to engage the classes so that the entire course material for a semester is covered within the prescribed time limit.

Two Research Associates, two Senior Research Fellows and four Junior Research Fellows are working in CELOS during the period under the report.

A Programmable Network Analyzer E8362B working in the range 10MHz-20GHz for setting up a light wave technology lab and a PCB prototyping machine for fabrication of Photonic Band Gap microwave devices are other major items of equipment procured by CELOS for the use by the group working in the area of Microwave Photonics. A Tektronix 1 GHz DSO and a spectrophoto fluourometer also have been purchased for facilitating the research programme undertaken by CELOS. Research activities have been initiated by CELOS in the fields of



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Optical Fiber Amplifier, Fiber Optic Sensors, Laser produced Plasma, nonlinear processes, etc.

The subpicosecond/femto second laser system installed in CELOS is one of the most advanced and sophisticated systems and CUSAT has become the third University in the country to possess such a system (other than the National Laboratories). The system comprises of a Spectra Physics make "Tsunami" Ti:Sapphire laser system pumped by 5W "Millenium" diode pumped solid state laser along with an amplifier "Spitfire" which is pumped by a 30W Q-switched DPSS called "Empower". The entire system is costing US\$3,00,000.

As suggested by the National Advisory Committee the newly established laser system in CELOS is operated as a National Facility for the benefit of research workers from anywhere in the country.

In addition to the major pico/femtosecond laser system, CELOS has procured a number of other items of equipment consisting of 1 GHz and 500 MHz Digital Storage Oscilloscopes, Spectrofluorimeter, vibration isolation system, Green DPSS lasers, HP 20GHz Network Analyzer, two workstations, specialized software like EDA tools, Femlab etc.

M.Sc. Laboratories are also being upgraded by purchasing additional sophisticated instruments. Most of the equipments are being utilized by students of CELOS and other departments.

1. Programmes of study/research :

- (1) Five year Integrated M.Sc. Degree course in Photonics
- (2) The Centre is engaged in promoting research activities in the area of Lasers and optoelectronics science and technology. Various kinds of research work in this directions are in progress in the participating departments namely the International School of Photonics, Department of Electronics and Department of Physics.

2. Faculty Members:

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr.C.P.Girijavallabhan	Director	Ph.D.	Lasers, Optoelectronics, Photonics materials
2.	Dr.Sheenu Thomas	Lecturer	Ph.D.	Photothermal phenomena
3.	Dr.V.M.Nandakumaran	Hon.Professor	Ph.D.	Theoretical photonics
4.	Dr.V.P.N.Nampoori	Hon.Professor	Ph.D.	Laser spectroscopy Laser matter interaction Neural networks
5.	Dr. P.Radhakrishnan	Hon. Professor	Ph.D.	Laser Physics
6.	Dr.Reethamma Thomas	Reader (On Contract)	Ph.D.	Laser Physics
7.	Dr. Annie Joseph Vallamattom	Reader (On Contract)		Physics



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8.	Smt.Geetha K.	Lecturer (On Contract)	M.Sc.	Physics
9.	Shri. Sumesh K.S.	Lecturer (On Contract)	M.Sc.	Physics

3. Visiting Faculty (If any) : Nil

4. Research Staff:-

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Pramod Gopinath	Research Associate	Ph.D.	Laser induced plasma
2.	Geetha K.	Research Associate	Ph.D.	Polymer photonic devices

5. Research Scholars:-

Sl.No.	Name	Funding Agency	Guide	Area of work
1.	Dann V.J. SRF	UGC	Dr.V.M.Nandakumaran	Lasser produced plasmas
2.	Anoop G SRF	"	Dr. M.K.Jayaraj	Laser matter interaction
3.	Mathew S. SRF	"	Dr. C.P.Girijavallabhan	Non linear optics
4.	Saji K.J. JRF	"	Dr.M.K.Jayaraj	Laser induced plasma
5.	Parvathy M.R. JRF	"	Dr.V.M.Nandakumaran	Nonlinear dynamics of laser
6.	Prabhathan Patinharekandy JRF	"	Dr. V.P.N.Nampoori	Fiber optics
7.	Sreelekha G. JRF	"	Dr. C.P.Girijavallabhan	Optical studies of polymer and related materials
8.	Tintu R. JRF	"	Dr. Sheenu Thomas	Photo induced effects on chalcogenide glasses
9.	Sudeesh K. JRF	"	Dr. C.P.Girijavallabhan	Imaging and analysis related to light matter interaction
10.	Vineeth T.M. JRF	"	Dr. M.Sabir	Optical network



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6. Administrative personnel:

Sl.No.	Designation	No. of posts
1.	Secretary	1
2.	Personal Assistant	1
3.	Office Assistant	1
4.	Peon	1
5.	Sweeper-cum-cleaner	1

7. Technical personnel:

Sl.No.	Designation	No. of posts
1.	Laboratory Technician	1
2.	Lab Assistant	1
3.	Librarian	1

8. Students enrollment

Sl.No.	Programme of study	Men	Women	Total
1.	Five year Integrated M.Sc. Degree in Photonics			
	2002-03	13	8	21
	2003-04	16	4	20
	2004-05	17	4	21
	2005-06	16	4	20
	2006-07	16	6	22
	2007-08	13	7	20

9. Research facilities:

(a) Laboratories (List out Major equipments available)

Sl.No.	Equipment
1	Computers & Peripherals 10 Nos
2	EDA Tool Femlab
3	EDA Tool Microstripes
4	Workstation Standalone Terminal
5	Digital Storage Oscilloscope
6	Vector Network Analyser
7	Diode Pumped Solid State Laser System
8	Sub Pico Second Laser System
9	Spectro Photo Flourimeter
10	20 KVA Online UPS System



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- 11 25 MHz Oscilloscope
- 12 Special Vibration Isolation Table
- 13 Functin Generator Power Supply etc.
- 14 LCD Multimedia Projector
- 15 CCD Camera
- 16 Laser Power Energy Meter
- 17 Ultrafast Optical components
- 18 6¹/ Digital Multi Meter
- 19 Rocking and Rotation Furnance
- 20 CO Laser
- 21 Fringe Capture System

(b) Library:

No. of books/journals as on 31 st March of previous year	Additions during the year
1054	90

(c) Others :

10. Distinguished visitors:

Sl.No.	Name	Affiliation	Remark
1.	Dr. L.M.Kukreja	The Centre for Advanced Technology (CAT), Indore	Gave Icctures
2.	Dr. Vinod Menon	Queen's College of CUNY, New York, U.S.A.	"
3.	Prof. R.Unnikrishnan	California State University, Fullerton, CA, U.S.A.	"
4.	Dr. V.P.Nair	City University of New York (CUNY), New York, U.S.A.	"
5.	Dr. Virendra N.Mahajan	The Aerospace Corporation, Los Angeles, U.S.A	"
6.	Prof. Ajoy Ghatak	Emeritus Professor, IIT Delhi	"

11. Ph.Ds. Awarded : Nil

12. Publications

(a) Papers

Sl.No.	Name of Paper
1	Size-dependent enhancement of nonliner optical properties in nanocolloids of ZnO, Litty Irimpan, V.P.N.Nampoori, and P.Radhakrishnan , Bindu Krishnan, A.Deepthy, J.Appl. Phys. 103, 033105 (2008)



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2. Effect of self assembly on the nonlinear optical characteristics of ZnO thin films, Litty Irimpan, A.Deepthy, Bindu Krishnan, L.M.Kukreja, V.P.N. Nampoori and P.Radhakrishnan, Optics Communications, 281(10), 2938-2943 (2008).
3. A comparative study of energy transfer in dye mixtures in monomer and polymer matrices under pulsed laser excitation, M.Kailasnath, P.R.John, P.Radhakrishnan, V.P.N.Nampoori and C.P.G.Vallabhan, Journal of Photochemistry and Photobiology A:Chemistry, (2007).
4. A Comparative Study of Fiber Optic Humidity Sensors Based on Chitosan and Agarose, Jinesh Mathew, K.J.Thomas, V.P.N.Nampoori and P.Radhakrishnan, Sensors & Transducers Journal, Vol.84, Issue 10, October 2007, pp. 1633-1640.
5. Photoacoustic studies on thermal parameters of liquid crystal mixtures, Sajan D.George, A.K.George, P.Radhakrishnan, V.P.N.Nampoori and C.P.G.Vallabhan, Smart Mater. Struct. 16(4), 1298-1301 (2007). Cited by : 0 Impact factor : 1.67.
6. Excitation wavelength dependent fluorescence behaviour of nano colloids of ZnO, Litty Irimpan, Bindu Krishnan, A.Deepthy, V.P.N.Nampoori and P.Radhakrishnan, J.Phys. D: Appl. Phys. 40(18) 5670-5674 (2007). Cited by : 0 Impact factor : 1.957.
7. Spectroscopic Characterization of Laser Induced Plasma from Titanium Dioxide, V.J.Dann, Manoj V.Mathew, V.P.N.Nampoori, C.P.G.Vallabhan, V.M.Nandakumaran, P.Radhakrishnan, Plasma Science and Technology, 9(4), 45-459(2007). Cited by : 0 Impact factor : 0.261
8. Fabrication and Characterization of dye doped polymer optical fibre as a light amplifier, Mandanparambil Rajesh, Mavila Sheeba, Karinjamma Geetha, Chakkalakkal P.G.Vallabhan, Padmanabhan Radhakrishnan & Vadakkedathu P.N.Nampoori Applied Optics, 46(1), 106-112 (2007)
Cited by : 0 Impact factor : 1.637.
9. Thermal characterization of ceramic tapes using photo acoustic effect, Annieta Philip K., Lyjo K.Joseph, Litty M.Irimpan, Bindu Krishnan, P.Radhakrishnan, V.P.N.Nampoori, Raghu Natarajan, Physica status solidi (a) 204, 737-744 (2007).
Cited by : 0 Impact factor : 1.041.
10. "Laser induced fluorescence based optical fiber probe for analyzing bacteria, P.M.Sandeep, S W B Rajeev, M.Sheeba, S.G.Bhat and V.P.N.Nampoori, Laser Physics Letters, 1-5 (2007). Cited by : 0 Impact factor : 1.225.
11. Light Amplification in dye doped polymer films, Ritty. J. Nedumpara, K.Geetha, V.J.Dann, C.P.G.Vallabhan, V.P.N.Nampoori and P.Radhakrishnan, J. of Opt.A:Pure Appl.Opt. 9, 7-14 (2007) Cited by : 0 Impact factor : 1.295
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Cited by : 0 Impact factor : 0.940.
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Cited by : 0 Impact factor : 0.439.



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14. Thermal lens technique to study the effect of pH on electronic energy transfer in organic dye mixtures, Achamma Kurian, Sajjan D.George, C.V.Bindhu, V.P.N.Nampoori and C.P.G.Vallabhan, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 67, 678-682 (2007)
Cited by L: 0 Impact factor : 1.290

13. Participation in Seminar/Conference/Refresher courses etc. by the Faculty Members/Students:

Name of Participant	Name of Seminar/Conference/ Workshop	Role
Dr.Sheenu Thomas	Annual Photonics Workshop- APW 2008 February 26-28, 2008	Committee Member and Participant

14. Awards/ Honours/ Fellowships etc. received : Nil

15. Sponsored Research Projects : Nil

16. Research programmes and activities

Sl.No.	Problems/Topics	Investigator(s)
1	Optoelectronics, Fiber Optics	Dr. C.P.Girijavallabhan
2.	Nonlinear Optics, Biophotonics	Dr. V.P.P.Nampoori
3.	Nonlinear dynamics	Dr. N.M.Nandakumaran
4.	Fiber Optics sensors, Biophotonics	Dr. P.Radhakrishnan
5.	Microwave Photonics	Dr. P.Mohanan
6.	Laser induced thin film deposition	Dr. M.K.Jayaraj
7.	Photo induced effects on chalcogenide glasses	Dr. Sheenu T. Thomas

17. Seminar/Conference/Workshop/Refresher course conducted by the Dept. /Centre

Sl.No.	Title	Duration	Co-ordinator	Funding Agency
1	APW-2007	26-27 February 2008 (Jointly with ISP)	Dr. P.Radhakrishnan	UGC

18. Consultancy Work : Nil

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DEPARTMENT OF PHYSICAL EDUCATION

Sports & Games activities in the University Campus were very much active and alive during the year 2006-07. A large number of students actively participated daily in many of the major and minor games.

Inter University Programmes South Zone Inter University Tournaments

This Year we took part in 4 South Zone Inter University Tournaments.

- 1) Inter University Foot Ball (Men) tournament held at Madras University. In this tournament we reached in the 2nd round.
- 2) Inter University Shuttle Badminton (Men) tournament at Annamalai University. In this tournament we reached in the pre-quarter level.
- 3) Tennis (Men) tournament at Madras University. In this tournament we reached in the 2nd round.
- 4) Basket Ball (Men) tournament at Kerala University. Here also we reached in the 2nd round.

All India Inter University Tournament

- 1) Chess tournament at CSJM Kanpoor. Here we reached in the 18th position where 125 Universities have participated.
- 2) Power lifting (Men)/ Best Physique Competition at LNIPE, Gwalior. In this competition our Midhun Joseph won Gold Medal in 52 Kg power lifting championship with 520 Kg which is a new All India Inter University record in this category. Our Bibin Benedict secured the 5th position in the heavy weight category. These two boys has got few other great achievements in the State, National and International level.

Midhun Joseph, B.Tech CUCEK

- 1) First place in 52 Kg category at the Junior National Power lifting Championship held at Awadi, Chennai during January 2007.
- 2) Won the little "Junior Strongman of India" at the Junior National Power lifting Championship held at Chennai during January 2007
- 3) Second place in 52 Kg Category at the Junior National Power lifting Championship held at Durgapur (West Bengal) during January 2006.
- 4) First place in 52 Kg. Category at the Asian Games Power lifting Championship held at Alapuzha during April 2005.

Bibin Benedict, School of Management Studies

- 1) Won 2nd position in the + 125 Kg. Category in the Kerala State Men & Women Power lifting Championship held at Thrissur in July 2005.
- 2) Won First position + 125 Kg. Category at the Kerala State Junior Power lifting Championship held at Kollam in December 2006.



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Shuttle Badminton (Men & Women)

Our Badminton Men & Women team won the overall runner up in PEAK TELECOM Rolling Trophy in the South Indian Shuttle Badminton tournament in January 2006. Mr. Arjun Prasad of B.Tech, CUSAT won the runner up prize in this South Inter Engineering College Badminton Tournament. Mr. Arjun Prasad has participated in the XXX Junior Inter State and National BAdminton Championship 2005 representing Kerala State in December 2005. Mis. Greeshma B. of B.Tech, CUSAT won the first prize in the women category in the South Inter Engineering College Badminton Tournament in 2006.

Inter Collegiate Programmes

Inter Collegiate Tournaments were conducted in the following games.

1. Football (Men)
2. Cricket (Men)
3. Volley Ball (Men)
4. Basket Ball (Men)
5. Throw Ball (Women)
6. Badminton (Men & Women)
7. TT (Men & Women)
8. Chess (Men & Women)

Two teams from CUSAT (CUSAT & SOE CUSAT) and 23 of the recognized colleges of CUSAT took part in this tournaments.

Annual Athletic Meet

The University Athletic Meet was conducted in the CUSAT ground on 07.03.2007 and 08.03.2007. Competition, were conducted in 17 events for boys and 12 events for girls.

The overall championship for sports & games for the year 2006-07 was won by CUSAT with 154 points. The overall runner up was won by School of Engineering, CUSAT with 87 points, and MEC won the 3rd position with 39 points. The Individual Championship for Men was won by Mr. Hemanth Kumar of CUSAT with 18 points. Susan George of School of Engineering, CUSAT won the Individual Championship for women with 20 points in her credit.

In addition to the above mentioned activities CUSAT teams took part in so many All Kerala Inter Collegiate Tournaments in Foot Ball and Basket Ball.

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DEPARTMENT OF YOUTH WELFARE

A CUSAT team consisting of 14 students participated in the South Zone Inter-University Youth Festival held at Madurai Kamaraj University, Madurai during 27-31 December 2006. The Department of Students Welfare coordinated the activities in connection with the event and provided all support to the participants. The CUSAT team competed in many events such as Drama, Mime, Poster making, Clay modeling, Group song, Skit, Cartooning, Rangoli etc. and performed well. Our team was placed third in the Marchpast. The students welfare department had spend Rs. 1,03,454/- towards meeting the expenditure in connection with the event.

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ENDOWMENTS AND AWARDS

Thirty-Six Merit Awards / Memorial Prizes instituted in the University in commemoration of important personalities provide encouragement / financial support to eligible candidates:

Sl. No.	Name of Endowment Amount	Corpus Award	Amount of which awarded	Programme for	Criteria of Award
1	ABS India Merit Awards	30,000/-	(400,500,500, 600,1000)	B.Tech (NA & SB)	Meritorious students in the I, II, V, VII & VIII Semesters of the B.Tech. Degree Programme in NA & SB
2	Antony James Memorial Scholarship	5,000/-	650	M.B.A. (F.T.)	Awarded to the student who secure the highest mark added together in the papers of Organizational Behaviour I & II at the M.B.A. Programme.
3	Antony James Prize	3,500/-	Interest	M.B.A. (F.T.)	Awarded to the student who secure the First Rank in the M.B.A. Degree full-time Programme.
4	Arpan Banerjee Endowment	1,000/-	1,000/- and a Silver Medal	Dept. of Ship Technology	All round, meritorious student of B.Tech Naval Architecture and Ship Building assessed by the academic performance in all semesters with extra curricular activities.



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Sl. No.	Name of Endowment Amount	Corpus Award	Amount of which awarded	Programme for	Criteria of Award
5	D. Sunil Memorial Prize	7,500/-	750/-	Physics Quiz	Award to a winner in a Physics Quiz conducted each year for the M.Sc. student of the Department of Physics
6	Dr. Justice T. Kochuthomman Prize	3,000/-	Interest	L.L.M. (Maritime Law)	Awarded to the best outgoing student in Maritime Law.
7	Dr. L.M. Singivi Endowment	11,258/-	Citation	Multi-disciplinary in nature	Annual Essay competition on Endowment, open to teachers of any University, College or Academic or Research Institute and doctoral or post-graduate scholars.
8	Dr. N.K. Panicker Memorial Prize	3,000/-	Interest	M.Sc. (Meteorology)	Awarded to the best student passing out of the M.Sc. programme in Metrology adjudged by the total marks in all semesters added together.
9	Dr. S. Lakshmanan Endowment	10,000/-	1,000/-	M.Sc (Marine Geology)	Students who secure First Rank in the II year M.Sc. Degree Examination in Marine Geology Division in every year.



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Sl. No.	Name of Endowment Amount	Corpus Award	Amount of which awarded	Programme for	Criteria of Award
10	Dr. Terry Adams Prize	2,500/-	2,500/-	-	-
11	K.A. Damodara Menon Memorial Endowment	75,000/-	Interest	-	Oration
12	K.C. Menon Memorial Endowment	10,000/-	Interest	School of Legal Studies	Awarded to the First Rank holder in the L.L.M. Degree Examination
13	K.Kelappan Memorial Prize	10,000/-	Interest	M.A. Hindi	Student who secures the first rank in the M.A. Degree exam in Hindi every year.
14	Kanichai Thomas Jose Endowment	50,000/-	Interest	Department of Physics	First Rank holder of M.Sc. Physics
15	Kerala Management Association Scholarship	8,000/-	500/-	M.B.A. (F.T.)	Awarded to the student who secures the highest mark, not less than 60% during the first year M.B.A. (F.T.)
16	Lyka Olefin's Endowment	10,000/-	Interest	Dept. of Polymer Science & Rubber Technology	First Rank holder of B.Tech Polymer Science and Rubber Technology
17	M.M. Cherian Memorial Labour Law Prize	10,000/-	Interest	L.L.M. (Labour Law)	Student who secure the highest mark in the aggregate in the papers on labour law in the L.L.M. Degree Examination



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Sl. No.	Name of Endowment Amount	Corpus Award	Amount of which awarded	Programme for	Criteria of Award
18	Manjula Madhavan Memorial Endowment	25,000/-	Interest	M.Sc. (Hydro Chemistry)	Student who secures Second Rank in M.Sc. Hydrochemistry Examination.
19	N.C. John Memorial Award	8,000/-	Equal to the Interest accrued divided in the ratio 1:3	M.B.A. (P.T.) M.B.A. (F.T.) Scholarship	Awarded to the student who secures the highest mark at M.B.A. (P.T.) Degree Exam and Completes the programme within the minimum period prescribed. Awarded to the student who secures highest mark during the first year of M.B.A.
20	Prof. C.C. John Memorial Endowment Prize	10,001/-	1,000/-	M.Sc. (Marine Biology)	Awarded to the student who secures First Class and First Rank in aggregate in the M.Sc Degree Examination in Marine Biology at the First appearance.
21	Prof. C.P. Menon Memorial Endowment	50,000/-	Interest	Dept. of Physics	Popular Oration on a Scientific or technical topic.
22	Prof. C.T. Samuel Endowment	12,000/-	1,001/-	M.Sc. (Industrial Fisheries)	Student who secures First Rank in M.Sc. Industrial Fisheries.



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Sl. No.	Name of Endowment Amount	Corpus Award	Amount of which awarded	Programme for	Criteria of Award
23	Prof. C.V. Kurian Endowment Prize	10,000/-	Interest	M.Sc. (Marine Biology, Marine Geology, Meteorology, Oceanography)	First Rank holder of the M.Sc Degree Exam in Marine Biology Meteorology, Marine Geology and Oceanography.
24	Prof. (Dr.) M.V. Pylee Endowment	10,00,000/-	20,00,000/-	Distinguished academician	As adjudged by an expert panel
25	Prof. (Dr.) P.N. Krishnan Nambisan Memorial Prize	25,000/-	2,000/-	M.Sc. (Hydro Chemistry)	Student who secures First Rank in M.Sc. (Hydrochemistry) every year.
26	Prof. Joy George Endowment Prize	10,000/-	Interest	M.Sc Physics	Awarded to M.Sc. student of Department of Physics who secures the highest marks in the first year / first two semesters taken together.
27	Prof. P. Madhavan Pillai Gold Medal	30,000/-	Interest	M.Sc. (Applied Chemistry)	Student who secures First Rank in M.Sc. (Applied Chemistry)
28	Prof. K.Venkiteswaralu Shashtiabdapoorthy Prize.	3000/-	200/-	M.Sc. (Physics)	First Rank Holder at the M.Sc. Degree in Physics Exam. on the basis of overall results.
29	Prof. Wazir Hazzan Abdi Endowment Prize	27,000/-	Interest	M.Sc. (Maths, Statistics, OR and CA)	First Rank holder of the Final Examination of M.Sc. (Mathematics, Statistics, OR & CA)



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Sl. No.	Name of Endowment Amount	Corpus Award	Amount of which awarded	Programme for	Criteria of Award
30	R.V. Kelkar Memorial Prize	10,000/-	Interest	L.L.M. (Criminal Law)	Highest mark in L.L.M. (Criminal Law every year)
31	Sir Robert Bristow Endowment	10,000/-	1,000/-	B.Tech (Naval Architecture & Ship Building)	Awarded to the student who secures the First Rank at B.Tech Degree Exam. (NA & SB)
32	The Bommareddi Venkatari Reddy Memorial Prize	5,000/-	400/-	M.Sc. (Oceanography)	Best Student of M.Sc. (Oceanography) Class of Department of Physical Oceanography with First Class and First Rank in aggregate after passing all the examinations in full appearance.
33	V.N. Padmanabha Pillai Memorial Prize for Law	10,000/-	Interest	L.L.M.	Awarded to the student who secures first class and First Rank at the L.L.M. Degree Examination.
34	Dr. T.S. A. Padmanabhan Endowment Prize		500/-	M.Sc. (Maths / OR and CA)	Awarded to the First Rank holder of M.Sc. Maths and M.Sc. (OR and CA)
35	Classic, 83 Endowment	1,50,000		B Tech PS&RT	Course at CUSAT. Awarded to the First Rank holder / CGPA Topper of B Tech Course in PS&RT

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SCHOLARSHIPS / FELLOWSHIPS for the year 2007-08

I. Scholarship

Name	Funding Agency	Amount	No. of existing Scholars/Fellows
1. University Merit Scholarship	University	Rs. 1200/- p.a.	42
2. M.Phil Scholarship	University	Rs. 600/- per month for 10 months	36

II. Fellowship

Name	Funding Agency	Amount	No. of existing Scholars/Fellows
1. University Junior Research Fellowship	University	1. Rs. 5000/- per month for the first 2 years	120
		2. Rs.6000/- per month for the next 1 1/2 years	
In both cases annual contingent grant of Rs. 10000/- is eligible			
2. Post Doctoral Fellowship	University	Rs. 10000/- per month for the academic year + Annual Contingent Grant of Rs.20000/-	8

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CENTRE FOR RURAL DEVELOPMENT AND APPROPRIATE TECHNOLOGY (CRDAT)

Conceived as a Center for development studies under CUSAT, the Centre for Rural Development and Appropriate Technology (CRDAT) is dedicated to the betterment of rural Kerala through academia-society interaction. The academic year 2007-08 has marked progress for the Centre for Rural Development and Appropriate Technology in a new direction.

CUSAT, drawing from its considerable expertise in applied research, has immense potential in the field of rural development planning which calls for inputs from science, technology and social science faculties. Taking cue from this understanding, the University has rightly initiated rural development project under the aegis of MHO programme culminating in the establishment of CRDAT. Under the present set-up, it should be possible for the Center to extend the sphere of its activities to address issues in industries connected with farming, fishing and forestry as well as numerous cottage industries in coir, bamboo, cashew and cotton textile sectors. The primary objective of rural development programme is to help rural businesses unite with the resources they need to grow and sustain. Certainly an important factor in this effort involves providing information and training to rural entrepreneurs. Ideally located in a research environment, The CRDAT aims to initiate and spearhead the process of modernizing traditional production systems and enhance their competitiveness faster than in the past.

The Center also holds high prospects for developing into a specialized department for rural developments studies. The UGC has acknowledged the importance of Rural Studies as a discipline in higher education in its policy documents and provides assistance to begin courses in the area. The Center may utilize its capacities at a later stage to start regular academic programmes - encompassing rural industrialization and entrepreneurship, natural resource management, rural development institutions and strategies etc - leading to masters or doctoral degree.

Formerly known as the School of Rural Development and Appropriate Technology, the CRDAT has revised its vision plan in tune with the need for dissemination of the benefits of research and innovation for generating economic opportunities and thereby empowering rural communities. The revised vision plan has been forwarded to all members of the advisory committee and is awaiting final approval. As per the document, an expansion plan is envisaged and the prime objectives are stated as follows:

1. To conduct research studies on the vitality of rural industries and other major income generating activities and formulate remedial measures for revitalizing backward sectors.
2. To organize seminars and discussions involving resource persons and policy makers for identifying and implementing suitable innovative technologies needed by workers and craftsmen of the villages.



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3. To facilitate technical assistance and training programmes for supporting the growth and creation of rural businesses and cooperatives.
4. To act as a nodal agency to assist the state government and local administration to formulate rural development projects with the help of different funding agencies at state/national/international level.
5. To train professionals in the area of rural management by starting an interdisciplinary course, leveraging on the expertise of the technical and social science schools in CUSAT.

Activities of the Centre

- The CRDAT organized a one-day seminar in collaboration with Sevashram (NGO) on 'Wealth from Waste: Bio Remediation and Rural Electrification' (22-10-2005). The seminar explored possibilities of developing technically feasible and financially viable waste disposal systems as well as prospects of manufacturing value added products from waste materials. The discussion invoked creative response from all participants, and the Center is looking forward to involve in further joint efforts in this area.
- CRDAT has worked with the Kerala State Planning Board on prioritizing the issues in the resource-based industries in the state. The policy prescriptions submitted by the Center was included in the Task Force Rural Poverty Elimination and Resource Based Industries (November 2005) session held at Thiruvananthapuram and also incorporated in the Approach Paper on Handloom, Handicraft, Cashew and Bamboo Sub-sectors by the Board. The Planning Board has also entrusted the Center for conducting a seminar on bamboo as part of the efforts of Kerala State Bamboo Mission to formulate revival strategies concerning bamboo sector.
- CRDAT in collaboration with the Information Bureau, a Cochin based NGO, has coordinated several discussion panels with various Panchayaths in Kerala pertaining to the income generation aspects and development schemes for the betterment of rural sectors.
- CRDAT undertook a study in collaboration with District Rural Development Agency (DRDA) titled "Market Surey and Feasibility Study for Micro Enterprises under the SGSY Scheme in Ernakulam District".
- Organized a seminar on "Appropriate Technology for Sustainable Rural Development". The seminar articulated the possibilities of sustainable rural development through application of scientific and technological knowledge. Major areas covered are :-
 - Rural Electrification
 - Rural Housing
 - Resource based industries
 - Waste management
- Organized a two day national seminar on "Decentralised Waste Management" in collaboration with Centre for Environment and Waste management (CEWM) and Local



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Self Government Department, Govt. of Kerala. The seminar inculcates an awareness programme to local administration and people by providing information on waste management and to understand the problem. It also brings to focus the various aspects of infrastructure requirement and social dimensions could be effectively integrated to evolve workable and sustainable solutions. Along with the seminar, CRDAT also conducted an exhibition along with technical sessions associated with waste management. The overall participation comes about 600 participants both from Panchayaths and experts from various institutions. Themes presented are :

- Municipal solid waste management
- Industrial waste management
- Bio-medical waste management
- Fishery and slaughter house and waste processing
- Community based sanitation and decentralized option for waste water treatment
- At source treatment of organic waste
- Legal aspect of environment and waste management

CRDAT in collaboration with Centre for Environment and Waste management (CEWM) developed a new cost effective technology for the solid waste disposal for the households and other sectors.

Other Initiatives

The CRDAT has submitted development study/project proposals to various government agencies including the Kerala State Planning Board and Ernakulam District Rural Development Agency. The major project completed so far:

- Formulation of Special Projects for Skill Development of Rural Youths Under SGSY
- Strengthening NGO capacity to improving the living conditions of the poor in Kuttanadu, Kerala - study undertaken with Tillburg University Assistance
- Micro credit and Women Empowerment: The Role of SHGs submitted to the National Commission for Women.
- "Effects of Reforms in Kerala's Public Distribution System on Food Security and Poverty" under the Ministry of Food and Civil Supplies, Govt. of Kerala.

Major Research Projects (on-going)

- "Dynamics and Institutions in Community-Based Fisheries Resources Management: A sustainable Development Option - A Study of Coastal Kerala" funded by ICSSR, New Delhi. The aim of the project is to identify the issues and dynamics emerging in community based fisheries resource management and its possible impact on the sustainability of resources so as to benefit future policy frames.

The project focuses on:-

- Identifying potential stakeholders



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- Fisherman's income patterns
- Local livelihood
- Formal and informal institution in fisheries resource
- Sustainability of fisheries resources
- Organizational dynamics
- Gender sensitization

Personnel's workings for the project are Project Director and two Research officers.

- "Community Based Ecotourism in a Globalised Economy: A Sustainable Development Option for Kerala" granted by University Grants Commission, New Delhi. The object of the project is to explore the economic potential of community based eco-tourism activities and its impact on the sustainable economic development of Kerala. The study also aims at suggesting appropriate management policies for sustainable tourism.
 - To evaluate eco-tourism linkages
 - Determine societal value of eco-tourism
 - Identify community values
 - Local and tribal communities in eco-tourism
 - Ecological sustainability
 - Sustainability of communities

Along with Principle Investigator, a Project Fellow is also working in the project.

Major Project in Pipeline

- National Agricultural innovation project "Jeewaiswarya Integrated Development of Farmers' Potential (IDFP)" in collaboration with Sevashram (NGO-Registered Charitable Society). The focus of the project is to develop a model farm having agricultural and allied activities, using eco-friendly and sustainable methods as far as possible; Engage in activities aimed at the intergrated human development (social, cultural, moral and economic); Actualize the ideal of a sustainable life community at the micro level so that it could be projected for emulation at macro levels; Assist the members and their families to build up and sustain an ideal sustainable life community through developing their own potentials, engaging themselves in agricultural and allied activities.

The Center is also communicating with agencies that can provide with appropriate technologies and resources for upgradation in selected sectors. The Advisory Committee for CRDAT identified several such sectors, which need to be improved with application of advanced technology. Some of the priority sectors are:

- (i) Khadi, Spinning Mills and Sprinkle Chakra - Experience from Tamil Nadu Shows that even unskilled laborers can successfully utilize systems like power sprinkle weaving.



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- (ii) Food processing
- (iii) Winding machine and clay products
- (iv) Coir industry
- (v) Cost effective methods for rain water harvesting and water purification
- (vi) Waste water management, and
- (vii) Low cost rural housing and construction techniques.

Other avenues for the Center in the immediate future are (i) acting as advisory to local self-governments in matters of rural development and employment schemes like SGSY, (ii) similar consultancy services to Self Help Groups (SHG) and NGOs and (iii) conducting studies on livelihood issues of tribal and backward communities.

Also frontier areas of research can be undertaken in the center namely

- Rural Social Development
- Economics and Management of Natural Resources
- Entrepreneurship among the Rural People
- Rural Enterprise Management and Development
- Rural Resources and the Environment

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COCHIN UNIVERSITY UNION

Brief History of the Union Office

It is the University Union Office, Under the guidance of Honorary Treasurer that Co-ordinate and maintain the Election to the University union. As soon as the University Order appointing Chief Returning Officer is released the Election process gain its momentum. Dr. Muhammed Yusuf was the Chief Returning Officer for 07-08. The Heads of the Departments were the Returning Officer's for the respective constituencies coming under them. Each and every semester of the department is taken as a constituency expect the part time and evening batches. Full time research scholars were considered under two constituencies and they would elect two representatives to the University Union. The preparation of constituency wise Electoral roll was done by University Union Office strictly according to the University and Supreme Court directions in this regard. Students who lacked required percentage of attendance and had academic arrears were not allowed to contest the Election but had the right to vote. Nomination papers from more candidates than that are required to fill the vacancies of the respective constituencies were received. Returning Officers had made arrangements at respective Departments for Election through Ballot where more valid nominations were received. The Election to the constituency of Research Scholars were done at the University Union Office. After the free and fair election the elected members were

Patron : Prof.(Dr.)AbdulAzis, Vice-Chancellor

Treasurer : Dr.K.Vanaja, Hon. Treasurer

The Cochin University Union assumed charge on 16.05.2007. The office bearers were as follows:

1. Chairman : Hemanth N.K., Dept. of Instrumentation
2. Vice-chairman : Reshma Divakaran, School of Legal Studies
3. General Secretary : Shan S Mohammed, School of Engineering
4. Secretary : Faisal.N., Dept.of Ship Technology
5. Executive Members :
 - 1) Muhammed Rishad, CELOS
 - 2) Aravind.M.R., School of Management Studies
 - 3) Ramiz Ahammed,T.A., Dept. of P.S. & R.T
 - 4) Vijith.V., Dept. of Physical Oceanography
 - 5) Rengith.P., Model Engg. College, Thrikkakara



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Cochin University Union inaugural ceremony On 21st July 2007 at SMS Auditorium.

The Cochin University Union during the year 2007-08 had conducted Chess tournament, Onam Festival, Youth Festival, Film Festival etc.

Chess Tournament : Conducted the 19th CUSAT International Rating Chess Tournament from 24-30 June 2007 at SMS Auditorium. Tournament was inaugurated by Padmashree Shiny Wilson, Olympian and Arjuna Awardee. Shri. Willson Cherian, Arjuna Awardee and Sports Officer ICF, Railway, The Chief Guest Of the day. Dr.Ramachandra, Registrar, CUSAT was presided over the function.

Conducted the Onam Festival NIRAVU-07 on 22nd & 23rd August 2007. Prof.M.K. Sanu was inaugurated the function.

University Youth Festival SARGAM-07 was conducted on 15-19 October 2007. Debate on Nuclear deal - Seminar was conducted on October 2007.