AUTHORITIES

The President of India is the visitor of this University. The Vice-President of India is the Chancellor and Lt. Governor of Puducherry is the Chief Rector.

The University is governed by the court, executive council, academic council, finance committee, building committee, school boards, planning board and advisory committees.

PROGRAMMES OFFERED

157 Academic programmes are offered under 15 schools, 34 departments and 10 centres along with 5 years integrated Programmes.

- Ph.D. - 46
- M.Phil. - 24
- P.G. - 54
- P.G. Diploma - 01
- Add-on Diploma - 22
- Certificate - 10
Pondicherry University, a centrally-funded University, is located 150 kms. south of Chennai on the east coast with a Wi-Fi-enabled lush green 780-acre campus. Established in the year 1985 through an Act of Parliament, it is an affiliating University with 87 colleges of Engineering, Medicine, Para-medical programmes, Education, Management, Science & Arts spread across Pondicherry, Karaikal, Mahe, Yanam and Port Blair. It has two off-campuses at Karaikal and at Andaman & Nicobar Islands. The main campus has 14 Schools, 46 Departments and Centres offering 157 Master’s, M.Phil. and Ph.D. programmes in the disciplines of Science & Technology, Management Sciences, Social Sciences, Humanities and Education.

The University Library is remotely accessible through a dedicated portal with over downloadable 40,000 e-resources. The campus also provides accommodation at 19 hostels, international hostel and five cafeterias and two messes are spread across the campus. Free transport is provided on the campus and off the campus.

Research in emerging areas of science and technology are one of the major activities pursued in tandem with teaching. The research activities encompass both basic and applied aspects and the problems are carefully chosen by the eminent faculty members to solve problems of outstanding importance. The research activities are supported by various national funding agencies and some by international organizations. A number of collaborations between the faculty members within and outside the University have resulted in confluence of ideas, innovations and sharing of resources. The research students, enrolled in M.Phil., M.Tech. and Ph.D. take part in the research activities of various departments of science and technology. Highlights of major areas of research undertaken, major research facilities developed and sophisticated equipments available for the use of researchers in various departments / centers of the Pondicherry University are presented in this short brochure. These facilities are also availed by the researchers from other universities and institutions from various parts of the country.
The Department of Biotechnology is offering M.Sc. and Ph.D. programmes in Biotechnology since its inception in the year 1992. The students admitted to M.Sc. Biotechnology programme are those selected in the combined entrance examination conducted by Jawaharlal Nehru University, New Delhi on all India basis. The Department of Biotechnology, Govt. of India has given an additional grant to strengthen the M.Sc. Biotechnology teaching programme. To augment the infrastructure facility and to develop a vibrant research group, the members of the faculty have attracted extramural funding from both national (UGC, DBT, DST, CSIR, AICTE and BRNS) and international (Rockefeller Foundation and Danish Government) funding agencies. The publications coming out from the Department attest the exemplary research work carried out in the Department.

I. Major Areas of Research

- Drug discovery from microbes and plants
- Nucleic acid and immunodiagnosis of plant pathogens and fish pathogens
- Immunostimulant and probiotics for disease control in fish and shrimp
- Plant genomics and Genetic engineering of crop plants
- Quorum sensing in bacterial pathogens
- Stem Cell Biology and Nanobiotechnology
- Epigenetics and Protein Engineering

II. Major Research facilities

The Department has well-equipped, spacious laboratories with all modern facilities such as Cold room, Photodocumentation facility, Plant tissue culture facility, Biosafety facility, Animal cell culture facility and Animal house.

III. Major Sophisticated Equipment

- High speed refrigerated centrifuges
- UV spectrophotometers,
- Bioreactor system, Fermentor, CO2 incubator
- Gel apparatus, Gel documentation system,
- ELISA reader, Multimode detector,
- PCR, Real-time PCR, Flash Chromatography,
- HPLC, GC, LCMS,
- vacuum concentrator,
- TG and IEF Electrophoresis,
- Flow cytometer, Lyophilizer and Phase contrast
- Fluorescence and inverted microscopes

Faculty

Professor

N. Sakthivel, Ph.D. (University of Madras, Chennai)
Specialization: Plant Biotechnology, Molecular Plant Microbe Interaction.

Associate Professor

N. Arumugam, Ph.D. (University of Delhi, Delhi)
Specialization: Plant Biotechnology, Biochemistry, Molecular Plant Breeding.

V. Arul, Ph.D. (Madurai Kamaraj University, Madurai)
Specialization: Aqua Culture, Marine Biotechnology.

Readers

A. Hannah Rachel Vasanthi, Ph.D. (Tamil University, Thanjavur)
Specialization: Biochemical Pharmacology and Toxicology, Herbal Drug Development
**B. Sudhakar, Ph.D.** (Indian Institute of Science (IISc), Bangalore)

Specialization: Stem Cell Biology, Nano Biotechnology

**Assistant Professors**

**Lata Shukla, Ph.D.** (Jawaharlal Nehru University, New Delhi)

Specialization: Plant Biotechnology, Free Radical Research

**K. Prashanth, Ph.D.** (JIPMER, Pondicherry University, Puducherry)

Specialization: Medical Biotechnology, Immunology, Medical Microbiology

**V. Venkateswara Sarma, Ph.D.** (Madras University, Chennai)

Specialization: Marine Microbiology and Microbial Ecology

**V. Balasubramanian M.Sc.** (Tamilnadu Agricultural University, Coimbatore)

**Arunkumar Dhayalan, Ph.D.** (Jacobs University, Bremen, Germany)

Specialization: Epigenetics, Protein Engineering

The Department of Biochemistry & Molecular Biology was started as Department of Biological Sciences under School of Life Sciences in 1987 and had been offering M.Sc., M.Phil., and Ph.D degrees in Life Sciences. In 2004,

The research focus includes Reproductive Biology & Toxicology, Microbial Biochemistry, Protein Biochemistry, Metabolism involving Natural Products, Biopesticides, Liver toxicity, Immunology, Cancer biology, and Diabetes. The Faculty in the Department have established research collaborations with Indian and foreign investigators. Faculties were Visiting Scientists to Population Council (USA), John Hopkins University (USA), University of Virginia, Cleveland Clinic (USA), and some were Fogarty Fellows, INSA-DFG, CSIR-CNRS and have visited USA, Germany and France. Apart from these prestigious awards, the faculty members have been traveling within India and abroad on various academic assignments.

The Department has received support from DST as special funding under DST-FIST beginning 2002 with a repeat support in 2009. The Department Faculty secured extramural funding worth several crores of rupees from different National funding agencies such as DST, DBT, UGC, CSIR, ICMR, DRDO and Ministry of Environment & Forests. The Department has also attracted funding from international agencies like Population Council (USA) and the Rockefeller Foundation (USA). The Department has established collaboration with the Cleveland Clinic, USA for training students in Reproductive Biology.

### I. Major Areas of Research

- Reproductive Biology
- Thermostable Enzymes, Phytohormones/ Natural products, Metabolism, Gene Expression.
- Microbial Biochemistry & Biotechnology
- Natural Principles, Cell Signaling, Degenerative diseases: Cancer, Diabetes, Parkinson’s, Alzheimer’s, Heart and Liver diseases
- Reproductive toxicology
- Phytomedicine
- Gene delivery –Targeted therapy

### II. Major Research facilities

The Department has state of the art laboratories with an excellent modern instrumentation facility for teaching and advanced research in Biochemistry and Molecular Biology. The Department has facilities to carry out research in in-vitro and in-vivo systems. Some of the major instruments available are:

- High Speed Refrigerated Centrifuges,
- Ultracentrifuge, Ultra sonicator,
- PCR, ELISA, Trans-blot apparatus, Geldoc apparatus,
- Temperature controlled plant growth chamber,
- CO2-incubators,
• Phasecontrast microscope,
• UV-Vis Spectrophotometers,
• Ultra pure water-purifier and cold room.

**Faculty**

**Professor**

P. P. Mathur, Ph.D (Banaras Hindu University, Varanasi)

Specialization: Reproductive Biochemistry and Molecular Biology, Environmental Endocrinology and Bioinformatics

K. Jeevaratnam, Ph.D. (IISc, Bangalore)

Specialization: Nutrition Biochemistry, Microbial Biochemistry and Biotechnology

K. Srikumar, Ph.D. (University of Hyderabad, Hyderabad)

Specialization: Protein Biochemistry, Enzymology, Cytokines and Molecular biology

**Assistant Professors**

R. Rukkumani, Ph.D., (Annamalai University, Chidambaram) Natural Principles and Liver Toxicity, Gene Delivery-targeted therapy

S. Sudha Rani, Ph.D., (VCRC, Pondicherry University, Puducherry)

Specialization: Immunology, Cell Signaling in Degenerative Diseases-Diabetes, Parkinson's and Alzheimier's Disease

C. Thirunavukkarasu, Ph.D., (University of Madras, Chennai)

Specialization: Cancer biology, Cell Signaling in Liver, Phytomedicine.

P. Latha, Ph.D., (University of Madras, Chennai)

Specialization: Genetic engineering, Natural Principles and Heart disease, Reproductive toxicology

The mandate of the Centre is to train manpower and conduct research in various areas of Bioinformatics. Recognizing the progress made by the Centre, DBT upgraded the Centre to a full Centre level in 2002 and several new positions were sanctioned and additional funding was allocated. The Centre is identified as a Centre of Excellence in Bioinformatics Teaching and Research by the Department of Information Technology, Govt. of India, New Delhi in 2007 and awarded a special grant of around 3.79 Cores. The Centre has taken up research projects and has been offering modular courses in Bioinformatics under this Grant. The Centre started offering a M.Sc., program in Bioinformatics in 2007 with the funding from the University Grants Commission (UGC) under its scheme of “Innovative Programme - Teaching & Research in Interdisciplinary and Emerging Areas”. The centre is also offering Ph.D. Programme in Bioinformatics. The Centre has started Network M.Sc., Computational Biology teaching programme fully funded by DBT in collaboration with Madurai Kamaraj University, Madurai and Anna University, Chennai. This programme will be first of its kind in the country. The Centre has also signed MoUs with Institute of Bioinformatics (IoB), Bangalore and University of Sienna, Italy for collaborative research and Ph.D. guidance. The Ph.D. students can visit these labs for collaborative research.

The Centre is also offering Modular Courses in Bioinformatics. The details are available at www.bicpu.edu.in All the students, research scholars and faculty are provided modern round-the-clock computing facility with a separate 11 Mbps dedicated internet connectivity in addition to the regular internet connectivity provided by the University.

**I. Major Areas of Research**

- Molecular Biology,
- Systems biology,
- DNA-Protein Interactions,
- Genome Sequence analysis,
- Protein Structure Modeling,
- Molecular modeling,
- X-ray Crystallography,
- Drug Design, Metabolic Pathways and re-constitution,
II. Major Research facilities

- High performance Liquid Chromatography (AKTA-HPLC),
- UV-Visible Spectrophotometer,
- ELISA Reader, Gel Documentation System,
- PCR Thermal Cycler,
- Deep Freezers -80°C, Freezer -20°C,

Computers & Communication Facility:

- Tesla GPU server, Xeon Quad Core Servers,
- Xeon Cluster Servers, Itanium Server,
- AMD Opteron Server, Wipro Xeon Server,
- HP Workstations, Silicon Graphics Fuel Machine,
- Apple iMac, HCL Laptops, HCL Pentium Core Duo/ Dual Core/Pentium IV Workstations (135 nos.) – Works on both Windows and Linux Operating Systems.
- The Centre has a dedicated 11 Mbps internet connectivity exclusively for the Centre from BSNL and is managed by Cisco Routers and manageable switches.
- The students have the modern computing facilities and round the clock internet facility to meet their academic and research needs.

Scientific software packages:

- Schrodinger Mastero,
- Tripos Sybyl 8.1, SPSS,
- Discovery Studio 3.0,
- Amber 10, Autodock,
- Dock, Modeller, Gromos 96,
- V-Life, Whatif, EMBOSS, BioEdit, Phred,
- Consed, GeneScan, Statistica, Endnote.

The Centre is in the process of establishing a cell culture facility.

Faculty

Professor

P. P. Mathur, Ph.D. (Banaras Hindu University, Varanasi)
Specialization: Reproductive Biochemistry, Environmental Toxicology, Bioinformatics.

Readers

Basant K. Tiwary, Ph.D. (University of Calcutta, Kolkata)
Specialization: Molecular Evolution, Systems Biology, Bioinformatics

A. Dinakara Rao, Ph.D. (Sri Ventakeswara University, Tirupati)
Specialization: Cell Signaling, Molecular Entomology, and Biochemistry.

P. T. V. Lakshmi, Ph.D. (University of Madras, Chennai)
Specialization: Phytomatics, genomics and Proteomics, biofuel from Cyanobacteria.

Assistant Professors

R. Krishna, Ph.D. (University of Madras, Chennai)
Specialization: X-ray Crystallography (Proteins), Molecular Modeling (Protein & DNA).

M. Suresh Kumar, Ph.D. (University of Madras, Chennai)
Specialization: Structural Studies on Viral Proteins, Promiscuity of Antibodies, Inhhelloibitors for Viral Proteases.

Archana Pan, Ph.D. (Jadavpur University, Kolkata)
Specialization: Comparative Genomics, Molecular Evolution, Drug Design.

R. Amutha, Ph.D. (University of Madras, Chennai)
Specialization: Computational Biology, Molecular Dynamics, Simulations, Drug Design.

B. Syed Ibrahim, Ph.D. (University of Madras, Chennai)
Specialization: Macromolecule Crystallography, proteinprotein interaction analysis, venom protein studies.
A. Murali, Ph.D. (Sri Venkateswara University, Tirupati)
Specialization: Structural Biology, Trasmission electron microscopy, Single particle analysis, nano-biotechnology.

S. Mohane Coumar, M.Pharm, Ph.D. (Punjab University, Chandigarh)
Specialization: Drug design and Medicinal Chemistry Development.

V. Amouda, M.Sc., M.S. (Birla Institute of Technology & Science, Pilani)

Ecology and Environmental Sciences

The major objective of this Department has been to provide interdisciplinary high quality education to students in order to deepen their understanding of contemporary ecological and environmental problems. The faculty have received international and national research awards and medals. Some have also been elected to the fellowship of National Academics and Professional Societies and are on the editorial boards of national & international journals. The programmes offered are M.Sc., M. phil. and Ph.D.

I. Major Areas of Research

- Biodiversity and conservation; Environmental Pollution;
- Agro-Ecosystem; Weed Ecology; Land use planning;
- Wetland Ecology; Marine Ecology; Coastal Zone Management;
- Human Ecology and Environmental Health;
- Remote sensing and GIS; Resource management;
- Conservation Biology; Plant Animal Interactions (Pollination Ecology);
- Ornithology, Wildlife Ecology, and Mathematical Modeling;

II. Major Sophisticated Equipment

- Atomic Absorption Spectrophotometer,
- Skalar Auto analyzer;
- UV Spectrophotometer, Gel-apparatus,
- Cooling high speed Centrifuge,
- FTIR Stereoscopic microscopes

Faculty

Professors

Priya Davidar, Ph.D. (Bombay University, Mumbai)

Anisa B. Khan, Ph.D. (Andhra University, Visakhapatnam)

M. Vikram Reddy, Ph.D. (North Eastern Hill University, Shillong)
Specialization: Applied Soil Ecology; Soil Faunal Biodiversity; Pesticide Effects; Water Pollution; Wildlife Ecology; Ecotechnology and Environmental Biotechnology.

N. Parthasarathy, Ph.D. (University of Madras, Chennai)
Specialization: Biodiversity & Conservation, Forest Ecology, Diversity and Ecology of lianas, Medicinal Plant Resources

K. V. Deviprasad, Ph.D. (Purdue University, USA) (on leave)
Specialization: Bio-Physics;Theoretical Studies; Environmental Law & Policy.

Associate Professors

G. Poyyamoli, Ph.D. (Madurai Kamaraj University, Madurai)
D. Ramamoorthy, Ph.D. (Annamalai University, Chidambaram)
Specialization: Agriculture and Weed Ecology.

A. Yogamoorthi, Ph.D. (Annamalai University, Chidambaram)
Specialization: Marine Ecology, Marine Biodiversity, Constructed wetlands, Bioactive compounds

Readers

S. Jayakumar, Ph.D. (Bharathidasan University, Tiruchirapalli)
Specialization: Remote Sensing & GIS, Biodiversity inventory and characterization, Forest Ecology, Natural resources assessment and management, Land cover dynamics and modeling, Carbon mapping and modeling, Climate change impact assessment and modeling, Environmental informatics.

A. Vijaya Bhaskara Rao, Ph.D. (Sri Krishnadevaraya University, Anatapur)
Specialization: Environmental Biotechnology, Environmental Seri-biotechnology, Plant Biotechnology, Environmental molecular biology, Environmental Physiology, Toxicology, Proteomics and metabolomics, Bioindustry, Structural biology.

Assistant Professors


S. M. Sundarapandian, Ph.D. (Madurai Kamaraj University, Madurai)

Suja P. Devipriya, Ph.D. (Cochin University of Science and Technology, Kochi)
Specialization: Photocatalysis, Nanotechnology-Preparation, Characterization and Application of Nanocatalysts for Water Treatment, Water Quality and Water Treatment Technologies, Environmental Biotechnology, Solid Waste Treatment and Environmental Toxicology

Ocean Studies & Marine Biology

The Department of Ocean Studies and Marine Biology was started as a Centre of Ocean and Island studies in the year 2000, and later it was upgraded to the present Department in the year 2004 with a major funding from UGC. The Department is located at Port Blair, capital of the Andaman and Nicobar islands. The Department has sophisticated laboratory facilities equipped with latest instruments for field investigations in ocean related sciences. Research and M. Sc. programmes are designed to train the students in the field of Marine Biology. The Department offers two year masters degree and Ph.D., programs in Marine Biology. The Department's location at Port Blair provides a unique opportunity to get extensive exposure to various environments comprising of mangrove and coral ecosystems.

I. Major Areas of Research

- Coral reef environmental monitoring
- Marine Biology and Microbial Ecology
- Marine Biotechnology and Bioactive compounds
- Marine Planckton, Fisheries and Pisciculture
- Benthic Ecology

II. Major Research Facilities

- HPLC
- Hydrolab
- Ultracentrifuge, Laminar air flow, Rotary Evaporator
- Water, Sediment Samplers and Plankton Nets
- UV Spectrophotometer – Double Beam
- Inverted Microscope with Image Analyser

Faculty

P. M. Mohan, Ph.D. (Cochin University of Science and Technology, Kochi)
Specialization: Marine Geology, Coral reef environmental monitoring, Meiobenthic studies and Coastal management.
**R. Mohanraju, Ph.D.** (Annamalai University, Chidambaram)

Specialization: Marine Biology, Microbial Ecology and Marine microbial processes in corals, mangroves and deep sea ecosystems.

**Jayant Kumar Mishra, Ph.D., D.Fs.(Japan)**

Specialization: Marine Biotechnology, Marine Bioactive Compounds, Induced Breeding and Larval Chemical Ecology of Marine Invertebrates.

**Gadi Padmavathi, Ph.D., D.Fs.(Japan)**

Specialization: Marine Biology, Marine Plankton, Fisheries and Pisciculture.

**S. Venu, Ph.D.**

Specialization: Marine Biology, Fish and Fisheries Sciences, Deep Sea and Coastal Fish Taxonomy, Aquaculture.

**T. Ganesh, Ph.D.**

Specialization: Marine Biology and Macro Benthic Community Study.

**K. A. Jayaraj, Ph.D.**

Specialization: Marine Biology and Benthic Ecology.

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**Department of Coastal Disaster Management**

The Department of Coastal Disaster Management was established after the Tsunami Disaster at Port Blair with the objective of developing Globally Competent Research Facility and producing trained Human Resources to combat potential coastal disasters.

The M.Sc. Coastal Disaster Management Course is intended to develop basic understanding of the Natural Disaster such as Earthquake, volcano, landslide, tsunami, cyclones, floods, land subsidence, coastal erosion, salt water intrusion and long term disasters of climate change and sea level rise and manmade disasters like nuclear, epidemic and air pollution.

The curriculum is planned to identify the Natural earth related problems by Microzonation mapping through Geophysical, Remote Sensing and Geographical Information System. Both theory and practical classes and handled by experienced faculty members.

The Ph.D. Programme includes courses designed to develop research orientation, and supervised research work in the emerging areas of Disasters related problems with the support of the sophisticated Geophysical and Remote Sensing Laboratory amenities.

**I. Major Areas of Research**

- Identification and mitigation of Natural Disasters
- Earthquake monitoring and prediction,
- Coastal Landslides,
- Paleoseismological,
- Saltwater intrusion,
- Tsunami Inundation modeling
- Impact of Tectonic subsidence of the islands with advent GPR, Terra TEM, Resistivity Imaging and Resistivity Variometer.

**II. Major Sophisticated Equipments & Software**

- Seismograph with 12 channels
- SIR 2000 Ground Penetration Radar
- Electrical Resistivity Imaging
- Transient Electromagnetic (terra TEM)
- Total Organic Carbon Analyser
- Differential Global Positioning System (DGPS)
- Automatic Weather Station
- Microscope with Image Analyser
- Oceanographic Equipments
- Marine Magnetometer
- Side Scan Sonar
- Echo Sounders
- Current Meter
Chemistry

The Department of Chemistry, started in 1987, offers 2 years M.Sc. (Chemical Sciences), 5 year M.Sc. (Chemistry) Integrated, M.Phil. and Ph.D. programs. From the very beginning, the department has an excellent track-record of finding its postgraduate students qualify for the National level tests, such as UGC-CSIR NET/GATE to seek academic progression. In fact, during 2009, all the M.Sc. students of the Department have qualified either CSIR JRF/UGC JRF/Lectureship and GATE or both. Pharmaceutical companies visit the Department every year and conduct campus interviews to recruit students for suitable positions. The Department of Chemistry is well equipped to support high quality teaching and international standard research activities. The Department has highly qualified faculty members to conduct research in forefront areas of Chemistry. Research work of faculty members is supported by the premier national funding agencies such as DST, CSIR, UGC and AICTE. Research output is recognized by publications in International and National journals and by awards. Interdisciplinary and collaborative research is a feature of the Department. Periodically experts from various parts of the country and world visit the department and interact with the faculty / students through seminars. There are about 50 Ph.D. scholars and 12 M.Phil. students engaged in research activities. The Department is supported by the Department of Science & Technology, Govt. of India through FIST program and by the University Grants Commission's SAP (DRS) program to achieve the academic potentials.

I. Major Areas of Research

- Magnetic Resonance, Organic
- Synthesis, Solid-State Chemistry, Photocatalysis of Nano particles, Inorganic Photochemistry, Organometallic Chemistry,
- Porphyrin Chemistry, Green Chemistry, Supramolecular
- Chemistry, Bio-inorganic Chemistry, Theoretical Chemistry and
- Drug design. The Department has excellent computational
- facility and computer networking for intra and internet.

II. Major Research facilities

The Department has excellent working culture and facilities to carry out research in forefront areas of Chemistry. All the faculty members have individual

- Remote Sensing and GIS Laboratory with Software of ArcGIS
- ERDAS

Faculty

Professor & Head

N.Ramnugam, Ph.D. (Panjab University, Chandigarh)

Specialization: Geophysics, Exploration Technique, Resistivity Imaging, Landslide and Earthquake Prediction.

Assistant Professor

K.Dharanirajan, Ph.D. (Anna University, Chennai)

Specialization: Geographical Information Systems (GIS), Coastal Zone Management, Software Development in GIS and Disaster Management

S.Balaji, Ph.D. (Bharathidasan University, Trichirapally)

Specialization: Geophysics, Disaster Management, Tectonics, Ground Water

Glow Box
laboratories with good research facilities to carry out day-to-day research. A glass blowing facility is also available. The scholars have access to several online journals and databases. The major instruments available for researchers are:

- EPR (X-band), NMR (400 and 60 MHz),
- Single Crystal XRD,
- FT-IR, GC-MS, HPLC,
- Digital Polarimeter,
- Atomic Absorption Spectrometer,
- C/H/N/S analyzer, UV-Vis spectrometer,
- Glove Box and Silicon graphics.

Other sophisticated instruments such as ESI-MS, X-ray fluorescence, EPR (Q-band), etc. will be added very shortly.

**Faculty**

**Professors**

**H. Surya Prakash Rao, Ph.D.** (IISc, Bangalore)

**P. Sambasiva Rao, Ph.D.** (IIT-Madras, Chennai)
Specialization: Single Crystal EPR Studies on transition metal ions; EPR and Optical Studies on minerals; Bio-chemistry EPR, EPR Dating, Chemical Oscillators.

**Bidhu Bhushan Das, Ph.D.** (IIT-Kanpur, Kanpur)
Specialization: Synthesis and state-of-the-art structure-Property relations in Electronic and Magnetic Materials, Magnetic Resonance Spectroscopy (EPR, NMR).

**K. Anbalagan, Ph.D.** (University of Madras, Chennai)
Specialization: Nanomaterial Photocatalysis, Optical / Electronics properties of Nano crystalline semi conductors, Reaction modelling by Correlation Analysis, Surface Adsorption Dynamics.

**K. Tharanikkarasu, Ph.D.** (University of Madras, Chennai)
Specialization: Polymer synthesis using Controlled Radical Polymerization and Anionic Polymerization, Fuel Cell Membrane, Nanocomposite, Polymeric Solar Cells, Organic Semiconductor, OLED and PLED.

**Associate Professors**

**R. Venkatesan, Ph.D.** (IIT-Bombay, Mumbai)

**Bala. Manimaran, Ph.D.** (IIT-Bombay, Mumbai)
Specialization: Organometallics, Nanoscale Materials and Supramolecular Chemistry.

**G. Vasuki, Ph.D.** (Madurai Kamaraj University, Madurai)

**C. Sivasankar, Ph.D.** (IISc, Bangalore)
Specialization: Homogeneous Catalysis, Organometallics, Bioinorganic and Computational Chemistry.

**Assistant Professors**

**N. Dastagiri Reddy, Ph.D.** (IIT-Kanpur, Kanpur)
Specialization: Main group organometallics, transition metal based homogenous catalysis.

**M. M. Balakrishnarajan, Ph.D.** (Bharathidasan University, Tiruchirapalli)
Specialization: Chemical Information Sciences.

**C. R. Ramanathan, Ph.D.** (University of Hyderabad, Hyderabad)
Specialization: Asymmetric synthesis, Drug design and discovery.

**Binoy Krishna Saha, Ph.D.** (University of Hyderabad, Hyderabad)
Specialization: Crystal Engineering, Host-guest Chemistry, Polymorphism.
I. Major Areas of Research

- Geochemistry, Isotope Geochronology,
- Structural Geology, Metamorphic Petrology & Tectonics,
- Ore Geology, Sedimentology,
- Paleontology, and Paleoclimate studies.

Interdisciplinary research with the Departments of Chemistry and Physics are being actively pursued in the fields of EPR spectroscopy of minerals and paleomagnetism.

II. Major Research facilities

Mineralogy, Petrology & Paleontology Laboratories: Student's and Research model Polarizing Microscopes with Photographic facility heating-freezing stage for fluid inclusion Analysis Stereoscopic zoom microscopes, Laser Particle Size Analyser, X-ray Powder Diffractometer, Isodynamic Magnetic Separator are available in the Department. SEM, XRF and EPMA are available in CIF to support paleontological / mineralogical / petrological studies.

Museum: The department has a Geology museum with a collection of about 800 rock forming minerals, ore minerals, industrial minerals, various types of rocks and fossils.

Geochemical Laboratory: Advanced analytical facilities like ICP-AES, ICP-MS are available. This laboratory also has other minor equipment like Furnace, Electronic balance, Spectrophotometer, Flame photometer, Conductivity meter, pH meter, MilliQ Water Purifier etc.
Isotope Geoscience Laboratory: Thermal ionization mass spectrometer with ultra-clean laboratory to carry out Rb-Sr, Sm-Nd and U-Th-Pb geochronological and isotope studies is available. This laboratory is also used for cosmogenic isotope studies (10Be, 26Al) in collaboration with IUAC, New Delhi.

Computing and Remote sensing & GIS Facility: Adequate number of PCs with internet connectivity through University intranet and online access for large number of journals and other e-sources. ERDAS, ArcGIS, ENVI-IDL, Total Station Microsurvey CADD2010 softwares and digital satellite imageries for remote sensing and GIS applications are available.

Field Equipment: Global positioning system, Survey equipments, SLR and Digital cameras are available to carryout geological field studies effectively using modern tools.

Geoscience Workshop: Rock cutting machine, thin section preparing machine, Mounting machine for polished ore blocks are available for preparing thin sections and ore mounts. Ball mill and Planetary mill with agate grinding sets, Automatic sieve shaker are available for sample preparation.

Geophysics Laboratory: Digital refraction seismic timer with geophone, Terrameter, Portable magnetometer and Resistivity meters are available.

Topographic maps and Geological maps: Large collection of topographic maps in 1: 50000 scale covering southern states of India and Geological maps of Indian states, Districts and important mineral deposits in various scales have been procured.

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**Ultra Clean Lab for Isotope Analysis**

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**Faculty**

**Professors**

- **S. Balakrishnan, Ph.D.** (Jawaharlal Nehru University, New Delhi)
  Specialization: Isotope Geology, Geochemistry.
- **M. S. Pandian, Ph.D.** (Indian School of Mines, Dhanbad)
  Specialization: Economic Geology, Mineral Exploration.

**Associate Professor**

- **D. Senthil Nathan, Ph.D.** (IIT, Kharagpur)
  Specialization: Paleontology, Sedimentology.

**Readers**

- **Rajneesh Bhutani, Ph.D.** (Physical Research Laboratory, Ahmedabad)
  Specialization: Isotope Geology, Tectonics.
- **Pramod Singh, Ph.D.** (Jawaharlal Nehru University, New Delhi)
  Specialization: Geochemistry, Sedimentology.
- **Srinivasa Moorthy, Ph.D.** (Annamalai University, Chidambaram)
  Specialization: Geohydrology, GIS.

**Assistant Professors**

- **Subhadip Bhadra, Ph.D.** (IIT, Kharagpur)
  Specialization: Structural Geology, Geochemistry.
- **S. Lasitha, Ph.D.** (Cochin University of Sci. & Tech.)
  Specialization: Geophysics (Seismology & Gravity.
- **Manisha Kumari, Ph.D.** (Mohanlal Sukhadia University, Udaipur)
  Specialization: Palaeontology, Stratigraphy, Micropalaontology.
- **Managave Shyreyas Ramesh, Ph.D.** (Maharaja Sayajirao University, Ahmedabad)
  Specialization: Paleoecology & Isotope Geology.
Amit Basu Sarbadhikari, Ph.D. (IIT, Kharagpur)
Specialization: Igneous and Metamorphic Petrology, Geochemistry, Oregeology.

Nural Absar, Ph.D. (Aligarh Muslim University, Aligarh)
Specialization: Sedimentary Geochemistry, Precambrian Crustal Evolution, Sedimentology.

III. Major Sophisticated Equipment

- X-Ray Diffractometer
- Inductively Coupled Plasma-Atomic Emission Spectrometer (ICP-AES)
- Inductively Coupled Plasma-Mass Spectrometer (ICP-MS)
- Thermal Ionization Mass Spectrometer (TIMS)
- Research Petrological Microscopes fitted with Fluid-Incusion Stage

Physics

The Department of Physics came into existence in June 1987. The department offers postgraduate programmes and conducts research in frontier areas of Physics. The Department has been recognized for special funding by DST under the fund for Improvement of Science and Technology Infrastructure (FIST-Level II) and UGC-SAP DRS-I Programms. The faculty members have obtained major research grants exceeding Rs 7.0 crore from different funding agencies such as DST, AICTE, UGC, IFCPAR, DRDO, DAE, INSA and CSIR, Government of India. The research activities have resulted in publication of more than 425 research papers in peer-reviewed journals. The members of the faculty have been accorded with several national, international awards, fellowships and are members in the National Committees, referees of many national and international journals. A large number of visitors come to interact with faculty/students and for collaborative research work with faculty members. At present, our faculty members are doing collaborative research work with leading scientists in India and Abroad and are doing International projects with Germany and Brazil Scientific agencies. The Department currently offers a five-year integrated M.Sc., a two-year M.Sc with three specializations viz., Lasers, Condensed Matter Physics and Electronics.

I. Major Areas of Research

- Solid State Ionics
- Nonlinear optics and dynamics
- Magnetism & Magnetic Materials
- Lasers & Photonics
- Nanomaterials
- Computational Physics & Biophysics
- Ion-Solid Interactions
- Spintronics, Multiferroics and Photovoltaics
- Quantum mechanics and Field theory
- Plasma physics
- Atomic Physics

II. Major Research Facilities

- Impedance analyzer,
- FTIR spectrometer,
- Laser based optics experiments,
- Computer laboratory,
- Ultrasonic interferometer, Microwave bench, Glove box,
- Battery cycle tester,
- High temperature furnaces,
- Thin film unit.

**III. Sophisticated Equipment**

- Powder X-ray diffractometer,
- AFM/STM,
- Differential scanning calorimeter,
- Spinermagnetometer.
- Susceptibility meter,

**Faculty**

**Professors**

N. Satyanarayana, Ph.D. (I.I.T, Chennai)
Specialization: Solid State Ionics and Batteries, Nanomaterials.

G. Govindaraj, Ph.D. (University of Madras, Chennai)
Specialization: Impedance /Dielectric Spectroscopy, Solid State Ionics

K. Porsezian, Ph.D. (Bharathidasan University, Tiruchirapalli)
Specialization: Nonlinear Dynamics, Nonlinear fiber optics, Solitons.

G. Chandrasekaran, Ph.D. (Annamalai University, Annamalai Nagar)
Specialization: Magnetism and Magnetic materials. R. Murugan, Ph.D. (Pondicherry University, Puducherry)

**Associate Professors**

V. V. Ravi Kanth Kumar, Ph.D. (S. V. University, Tirupati)
Specialization: Photonic Crystal Fibers, Glass / Glass-ceramics, Spectroscopy.

S. Sivaprakasam, Ph.D. (University of Hyderabad, Hyderabad)
Specialization: Semiconductor Lasers, Secure communications.

R. Sivakumar, Ph.D. (I.I.T, Madras)
Specialization: Fluid dynamics, Computational Physics, Hydrogen Storage Materials.

**Assistant Professors**

S. V. M. Satyanarayana Ph.D. (University of Madras / IGCAR, Kalpakkam)
Specialization: Computational Biophysics, Statistical Mechanics, Nonlinear Dynamics.

A. Ramesh Naidu, M.Phil, Ph.D. (University of Hyderabad, Hyderabad)

Alok Sharan Ph.D. (I.I.T, Kanpur)
Specialization: Lasers, Experimental nonlinear Optics. Rabindra Nath Bhowmik Ph.D. (Jadavpur University / Saha Institute of Nuclear Physics, Kolkotta)
Specialization: Magnetism and Magnetotransport phenomena.

S. V. S. Nageswara Rao, Ph.D. (University of Hyderabad, Hyderabad; on EOL from 15th Dec 2010)
Specialization: Hydrogen in silicon, Ion-solid interactions.

B. Muthukumar, Ph.D. (Saha Institute of Nuclear Physics, Kolkata)
Specialization: Quantum mechanics and field theory on noncommutative spaces.

Suraj Kumar Sinha, Ph.D. (Institute for Plasma Research, Gandhinagar)
Specialization: Plasma physics.

Gangineni Ramesh Babu, Ph.D. (Technical University/IFW, Dresden, Germany)
Specialization: Spintronics, Multiferroics and Photovoltaics

D. Bharathi Mohan, Ph.D. (University of Hyderabad, Hyderabad)
Specialization: Superionic Conductors, Nanocomposite Coatings, Flexible Displays, Photovoltaics.
K. V. P. Lata, Ph.D. (Mangalore University / Indian Institute of Astrophysics, Bangalore)
Specialization: Atomic Physics: Ab-initio electronic structure calculations; Mesoscopic Physics

Mathematics & Statistics

Both the Departments of the School have distinguished faculty and well equipped laboratories with excellent computing facilities. Research activities in emerging research disciplines are being carried out in the Departments. About 17 research scholars mentored by experienced supervisors are currently pursuing their research works in these disciplines. Research projects funded by AICTE, NBHM, DST and UGC add to the credit of the School. The programmes offered are M.Sc., M.Phil. and Ph.D

I. Major Areas of Research

Mathematics

- Graph Theory
- Number Theory
- Functional Analysis
- Approximation Theory
- Integrable Systems
- Hydrodynamic Stability
- Algebra
- Numerical Analysis
- Fuzzy Set Theory

Statistics

- Distribution Theory
- Design of Experiments
- Sampling Theory
- Cluster Analysis
- Reliability Theory
- Statistical Computing
- Data Mining
- Operations Research

II. Major Research Facilities

- Computer laboratory
- Mathematica & Matlab software packages
- Statistical softwares SPSS 19.0, SYSTAT 12 and STATISTICA.

Faculty

Professors

A. M. S. Ramasamy, Ph.D. (I.I.T, Kanpur)
Specialization: Number Theory

V. Indumathi, Ph.D. (University of Madras, Chennai)
Specialization: Abstract Approximation Theory, Geometry of Banach Spaces

H. P. Patil, Ph.D. (Karnatak University, Dharwad), Doc. Math. Sci. (University of Warsaw, Poland)
Specialization: Graph Theory, Discrete Mathematics and Algorithms

K. M. Tamizhmani, Ph.D. (University of Madras, Chennai), FNASc.
Specialization: Integrable Systems

M. Subbiah, Ph.D. (I.I.T., Kanpur)
Specialization: Hydrodynamics Stability

Associate Professor

V. Muruganandam, Ph.D. (I.I.T., Kanpur), On Leave
Specialization: Harmonic Analysis

T. Duraivel, Ph.D. (Pondicherry University, Puducherry)
Specialization: Commutative Algebra

Reader

Rajeswari Seshadri, Ph.D. (I.I.T., Bangalore)
Specialization: Numerical Analysis
S. R. Kannan, PhD. (I.I.T., Chennai)
Specialization: Fuzzy Clustering

Assistant Professor

A. Joseph Kennedy, Ph.D. (University of Madras, Chennai)
Specialization: Combinational Representation Theory

Syeda Noor Fathima, Ph.D. (Mysore University, Mysore)
Specialization: Number Theory

S. Francia Raj, Ph.D. (SASTRA University, Thanjavur)
Specialization: Graph Theory.

Professors

P. Dhanavanthan, Ph.D. (University of Madras, Chennai)
Specialization: Distribution Theory, Operations Research

M. Rajagopalan, Ph.D. (Oklahoma State University, USA) UGC-Visiting Professor
Specialization: Statistical Inference

Reader

J. Subramani, Ph.D. (University of Madras, Chennai)
Specialization: Design of Experiments, Sampling Theory

Assistant Professors

Kiruthika, Ph.D. (University of Madras, Chennai)
Specialization: Cluster Analysis, Artificial Neural Network

Navin Chandra, Ph.D. (Banaras Hindu University)
Specialization: Reliability Theory

Sudesh Pundir, Ph.D. (Punjab University)
Specialization: Applied Statistics

R. Vishnu Vardhan, Ph.D. (Sri Venkateswara University)
Specialization: Biostatistics, Statistical Computing

V. S. Vaidyanathan, Ph.D. (University of Madras, Chennai)
Specialization: Data Mining, Regression Analysis

Emerging trends in the field of Science and Technology calls for an environmentally sound system of growth and development in the entire planet. The Centre for Nano-Science and Technology has been established in the year 2010 and it works in synergy with the Centre for Green Energy technology. This Centre offers 2 years M.Tech. (Nano Science and Technology) and Ph.D. programs. The Centre for Nano-Science and Technology has seven faculty members (one Professor, three Readers and three Assistant Professors) and the department has started to function with the admission of First year M.Tech. students during the Academic year 2010-2011. All the faculty members possess a high research profile with the ability to conduct research in the forefront areas of Nano Science and Technology. The research work of faculty members is supported by the various premier National funding agencies such as DST, CSIR, UGC, DRDO and AICTE.

I. Major Areas of Research

• Chemistry & Physics of Nanomaterials- Synthesis, Structure-Properties-Performance Relationship.
• Nanostructured hybrids for Electrochemical Energy Storage & Conversion and sensors.
• Functional Nanomaterials for Organic Electronics & Photovoltaics
• Carbon nanotubes/nanofibers development for device applications
• Solid ionic conductors & Structure analysis of nanomaterials
• Magnetic and semiconducting Nanomaterials,
• Photonic and Plasmonic nanostructures for solar energy
• Nanophotocatalysis, Nanocatalysis, Nano-electrocatalysis.
• Large area plasma based coatings
• Piezo and dielectric nanoceramics,
• Bioceramics & Coatings
• Metallic implants and Scaffold fabrications

II. Major Research Facilities

Research facilities recently established:
• X Ray Diffractometer,
• Nanoindenter,
• Impedance Analyzer
• Electrochemical workstation,
• E-beam thin film coating system,
• UV-Visible Spectrometer,
• Photoluminescence,
• Computer controlled Dip coater,
• Programmable Precision Spin coater
• LCZ meter for AC conductivity
• Computer Cluster for Simulations and Modeling,
• High Temperature Tubular and Muffle Furnaces (1200, 1400, 1800 °C)
• Automatic Hydraulic Press,
• High Speed Centrifuge System,
• Ultrasonic-Homogenizer,
• MilliQuest (Millipore) water purifier,
• Microwave Oven,
• Ultrasonicator
• Agilent Digital Meter
• Electronic Weighing Balance
• Double Distillation Unit
• Vacuum Pump
• Vacuum Oven
• Rotary evaporator

Faculty

Professor

N Satyanarayana, Ph.D. (Indian Institute of Technology- Madras, Chennai)

Specialization: Synthesis of Nano-Crystalline, Nano-Composite, crystalline and glassy, Silver and Lithium based electrolyte and Electrode Materials, by Sol-Gel, Combustion, Polyol, thermal, E-beam and sputtering evaporation techniques, for batteries, sensors and Fuel cells applications.

Readers

A. Vadivel Murugan, Ph.D. (University of Pune & National Chemical Laboratory, NCL Pune)

Specialization: Organic Electronics, Clean Energy Technologies (Solar, Fuel Cells, Batteries, Capacitors).

A. Subramania, Ph.D. (Central Electro Chemical Research Institute and Alagappa University, Karaikudi)

Specialization: Synthesis of inorganic and polymeric one dimensional nanomaterials and Nanofibrous polymer membranes by electrospinning/pulse current techniques for Advanced Lithium ion Batteries, Super-capacitors, Solid oxide fuel cells, dye sensitized solar cells and Sensors.

Dr. A. Kasi Viswanath, Ph.D (I.I.T Madras, Chennai)


Assistant Professors

Dr. K. Suresh Babu, Ph.D (I.I.T Madras, Chennai)


Dr. P. Thangadurai Ph.D. (University of Madras, Chennai)

Dr. S. Kannan Ph.D. (University of Madras, Chennai)

Specialization: Synthesis, Structural Characterization and In-vitro evaluation of Biomaterials, Ceramic/metal nanocomposites, fabrication of scaffolds for tissue engineering applications

Green Energy Technology

The centre for Green Energy Technology (C-GET) was established on 2010 under the aegis of Madanjeet School of Green Energy Technologies with a vision to promote education and research in environmentally clean methods of energy production, energy conservation & utilization. The center offers M. Tech in Green Energy Technology supported by South Asia Foundation (SAF). Promote research in the fields of all clean sources of energy conversion such as Solar Photovoltaic's, Bio-fuels, wind energy, Ocean energy, chemical energy etc., including applications of Nanotechnology for energy conversion. C-GET has well trained faculties in the specialized areas and aims to perform environmental protection by adopting the deployment of manpower development, consultancies on onsite clean energy projects and publications of the importance and advantages of clean energy utility. C-GET responsibly involves on the research up gradation on energy science and technology, conducts international core group discussions on emerging tools and products of the field and aims to support on policy guidelines on energy generation, conservation and utility. Establishment of MOU with various energy firms such as solar cell material, device and module processing industry, power plant engineering groups are in pipeline.

I. Major Areas of Research

- Photovoltaics,
- Energy Materials & Energy Devices,
- Fuel Cells,
- Green Chemistry,
- Bio Energy

- Technology development in the field of Solar Concentrators,
- Solar Thermal Devices and
- Hybrid Clean Energy Systems.

II. Major Research Facilities

State of art facilities and infrastructure are being established. Currently, the center possess the following laboratory facilities.

- Class AAA 10 x 10 cm2 Solar Sun simulator with I V characterization facility.
- Electrochemical cell and impedance analysis unit for electro-nanofabrication and battery characterization
- Optical Pyranometer for solar irradiation measurement and analysis
- BET surface area analyzer
- Microwave Synthesizer
- C-5000 Bomb calorimeter for fuel characterization and analysis
- Spin coating unit
- Electrolysis unit for H2 and O2 production
- PEM fuel cell
- Spray deposition system
- Tubular Diffusion furnace
- High temperature Oven

Faculty

H. Surya Prakash Rao, Ph.D. (IISe, Bangalore)


Readers

Periyasamy Thilakan, Ph.D. (Anna University, Chennai)

Specialization: Semiconductor epitaxial growth of nanostructures and devices such as solar cells, LED, LASER, SET, SPE, device
processing SPV module, power plant design and installation, Nanomaterials, nanostructures and device processing, MOCVD, MBE, PECVD and Mesoporous TiO2 super molecular nanocrystallites.

B. M. Jaffar Ali, Ph.D. (IISc, Bangalore)
Specialization: Biosolar cells, Biofuels and Wind-solar (thermal) hybrid energy systems, Biosciences.

Assistant Professors:

R. Arun Prasath, Ph.D. (Anna University, Chennai)
Specialization: Polymeric materials, Hybrid materials, Biomaterials, Green nanomaterials and Sustainable materials for applications that include: solar energy, bio-energy, fuel cells, sensors and sustainable development.

Prasanth Ravindran, Ph.D. (Eindhoven University of Technology, Netherlands)
Specialization: Nanophotovoltaics.

I. Major Areas of Research

• Food product development by using novel processing techniques,
• Development of gadgets/ machineries for the food processing,
• Isolation and characterization of Bioactive phytochemicals,
• Safety assurance of Food and Food products,
• Novel food products based on functional starter cultures,
• Fermented foods and starter culture and meat processing

II. Major Research Facilities

• Food texture profile analysis facility
• Food product development facility
• Modified atmosphere packaging facility
• Food safety and quality assurance facility
• Animal/Human cell culture facility

III. Major Sophisticated Equipment

• Amylograph,
• Food Texture Analyzer cum Extensograph,
• Spectrofluorimeter,
• Spray Drier, Tray Drier
• Vacuum Packaging Machine,
• Colorflex, and HPLC

Faculty

Readers

H. Prathap Kumar Shetty, Ph.D. (Mangalore University, Managlore)
Specialization: Food Safety, food biotechnology

S. John Don Bosco, Ph.D. (Tamil Nadu Agricultural University, Coimbatore)
Specialization: Agricultural Process Engineering

The Department of Food Science and Technology (Formerly Food Science and Nutrition) under the School of Life Sciences was established in the year 2007 offering post graduate course and Ph.D programme in Food Science and Nutrition and Food science and Technology (2009-2010 onwards). The major objective of the department is to implement education, research and outreach programs which are premeditated to provide a safe, nutritious, and affordable food supply that enhances human health. The faculty members in Food Science and technology come from diverse backgrounds and cover a wide range of specialties. We have experts in the areas of food chemistry, food microbiology and food safety, food processing, food engineering, food analysis, biotechnology and bio-processing, clinical nutrition, biochemical and molecular nutrition, community nutrition and dietetics.
Assistant Professors

Narayanasamy Sangeetha, Ph.D.  
(Avinashilignam University for Women, Coimbatore)
Specialization: Therapeutic nutrition, community nutrition, food product development

S. Haripriya, Ph.D. (Avinashilignam University for Women, Coimbatore)
Specialization: Nutritional epidemiology, Antioxidant and phytochemicals, Food Chemistry, food security, community nutrition

Sunooj K.V., M.Sc. (University of Mysore)
Specialization: Food science and technology, meat science and food engineering

Computer Science & Engineering

The Department aims at imparting quality education in Computer Science & Engineering and Information Technology through various post-graduate programmes. It also offers an atmosphere conducive for research scholars for pursuing research in various advanced areas of Computer Science, Engineering and Information Technology.

I. Major Areas of Research

• Extreme Programming,
• Object Oriented Systems,
• Software Architecture,
• Multilingual-Based Systems,
• Software Agents,
• Evolutionary Computing,
• Language Engineering,
• Software Testing,
• Software Metrics and
• Distributed Systems.

II. Major Research Facilities

• The Department has four well-equipped computer laboratories namely,
• Central lab,
• Multimedia Lab,
• Grid Computing Lab and
• Project Lab

These labs have about 120 state-of-art computer systems with latest configurations, all connected to various servers running Operating Systems like Windows NT, Linux Operating System, Sun Solaris and Mac OS. Grid Computing and Cluster Computing have also been facilitated in the servers. Intranet facility and Internet facility (32 Mbps link) are also available. An enhanced multimedia lab of the department is equipped with state of the art Apple machines.

Professors

S. Kuppuswami, Dr. Ing. (University of Rennes, France) (on Leave)
Specialization: Software Engineering, Software Architecture, Object Oriented Systems, Multilingual Based Systems, Network Management Systems

R. Subramanian, Ph.D. (IIT Delhi)

P. Dhavachelvan, Ph.D. (Anna University, Chennai)

G. Aghila, Ph.D. (Anna University, Chennai)

Readers

T. Chithralekha, Ph.D. (Pondicherry University)
Specialization: Information Security, Data Warehousing, Agent Technology.

**S. Siva Sathy, Ph.D.** (Pondicherry University, Puducherry)


**Assistant Professors**

**R. P. Seenivasan, M.C.A.** (Madras University, Chennai)

Specialization: Operating Systems

**K. Vijayanand, M.C.A.** (Bharathidasan University, Trichirapalli)

Specialization: Natural Language Processing

**S. K. V. Jayakumar, M.E.** (University of Madras, Chennai)


**T. Sivakumar, M.Tech.** (Pondicherry University, Puducherry)

Specialization: Database Management Systems, Computer Networks.

**R. Sunitha, M.Tech.** (Pondicherry University, Puducherry)

Specialization: Software Architecture, Semantic Web Technologies.

**Pothula Sujatha, M.Tech.** (Pondicherry University, Puducherry)

Specialization: Information Retrieval, Data Warehousing.

**K. Suresh Joseph, M.E.** (University of Madras, Chennai)

Specialization: Operating Systems

**M. Sathya, M.Tech.** (Pondicherry University, Puducherry)

Specialization: Software Engineering

**K.S. Kuppusamy, M.Sc.** (Madurai Kamaraj University, Madurai)

Specialization: Internet Technologies

**V. Uma, M.Tech.** (Pondicherry University, Puducherry)

Specialization: Data Mining

**P. Shanthi Bala, M.Tech.** (Pondicherry University, Puducherry)

Specialization: Distributed Computing Systems

**M. Nandhini, M.Phil.** (Alagappa University, Karaikudi)

Specialization: Software Engineering

**M.S. Saleem Basha, Ph.D.** (Pondicherry University)

Specialization: Web Services, Information Security

**T. Vengattaraman, Ph.D.** (Pondicherry University)

Specialization: Web Services, Software Engineering

**S. Ravi, Ph.D.** (M.S University, Thirunelveli)


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**Centre for Pollution Control and Environmental Engineering**

- Degree programmes
- M Tech: Environmental Engineering and Management
- M Phil: Environment Technology
- PhD: Environmental Technology

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**Anaerobic Digestor**
• Thrust areas of research
• Development of cleaner, greener, and global-warming ameliorating pollution control technologies
• Environmental impact of renewable energy sources
• Use of otherwise worthless plants (weeds) in nanoparticle synthesis
• Forecasting and control of process industry disasters
• Studies on global warming and its control
• Sustainable and remunerative management of solid waste
• Major laboratories and research units developed
• Pollution control studies laboratory
• Environmental monitoring laboratory
• Bioprocess technology unit
• Environmental nanotechnology unit
• Computational fluid dynamics studies unit
• Accident forecasting and process safety studies unit
• GIS and environmental impact assessment unit
• Pilot plants and prototypes
• Faculty with specialization

<table>
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<tr>
<th>No.</th>
<th>Name of the faculty</th>
<th>Designation</th>
<th>Educational Qualification</th>
<th>Specialization</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>Prof. S. A. Abbasi</td>
<td>Senior Professor &amp; Head</td>
<td>PhD, DSc, FIICHE, FIE</td>
<td>Environmental Engineering</td>
</tr>
<tr>
<td>2.</td>
<td>Dr. S. Gajalakshmi</td>
<td>Assistant Professor</td>
<td>MSc, MPhil, PhD</td>
<td>Environmental Science &amp; Engineering</td>
</tr>
<tr>
<td>3.</td>
<td>Dr. Tasneem Abbasi</td>
<td>Assistant Professor</td>
<td>BTech, MTech, MS, PhD</td>
<td>Environmental Engineering, Process safety</td>
</tr>
<tr>
<td>4.</td>
<td>Er. S. Sudalajothy</td>
<td>Assistant Professor</td>
<td>BTech, MTech</td>
<td>Environmental Engineering</td>
</tr>
</tbody>
</table>

Central Instrumentation Facility

Excellence in teaching and research by Science Schools need state-of-the-art sophisticated equipment, various workshops and support facilities. These equipment and facilities help the faculty, research scholar and students to carry out globally competitive R & D in basic and applied sciences. Since individual
researchers may not be able to generate huge research funds for these research instruments, a few years back Central Instrumentation Facility (CIF) was started in Pondicherry University with a mission to enrich the resources on a shared basis for promoting R and D with the following objectives.

- To strengthen technological infrastructure to carry out advanced research in various science disciplines under one roof and make their services available to academic departments and schools.
- To provide guidance in acquisition of data and train personnel in operation and maintenance of Sophisticated Instruments.
- To organize short-term courses/workshops on the use and application of various spectroscopic and analytical techniques for students, teachers and technical personnel from our University, affiliated institutions, universities in the region and industry.

- It is governed by the Management Advisory Committee consisting of Vice-Chancellor as Chairman, Deans Science Schools, Heads of Science Departments, Outside Experts and Centre Head as Member-Secretary.

**Major Sophisticated Equipments**

1) Vibrating sample Magnetometer Lakeshore, 7404 with High & low Temperature attachments
2) UV-VIS-NIR Spectrophotometer Varian, Cary 5000
3) Scanning Electron Microscope Hitachi – S3400N with EDX and Cathode-luminescence detector
4) Planetary Micromill, Fritsch, Pulverisette -7
5) Spectroflourimeter Horiba Jobin Yvon , SPEX –F111
6) FTIR Spectrometer Thermo, Nicolet, 6700
7) 400 MHz FT-NMR, Bruker
8) Wavelength Dispersive X-ray Fluorescence (XRF) Spectrometer Bruker, S4 Pioneer,
9) Thermal Analysis System (Waters) TA instruments, SDT600 - DTA/TGA and Q20 DSC
10) Gamma Ray Chamber, BRIT, India (Co-60 source)
11) Broad band Dielectric Spectrometer NOVOcontrol, Cocept-80
12) High Performance Liquid Chromatograph-Shimadzu, LA20
13) Particle Size Analyzer, Malvern, Nano Series Zetasizer
14) Surface Area Analyzer, Miromeritics, BET system
15) Electron Probe Micro Analyzer, Cameca, SX100

Faculty / Technical Officers

Dr. G. Govindaraj, M.Sc. Ph.D. Coordinator & Professor of Physics, Condensed Matter Physics (Experiment and Theory)

Er. S. Ramasamy, M.Tech., PGDDI
Technical Officer - I (SS) Electronics Design, Microcontroller based Instrumentation

Er. P. Thillaimani, M.E., DCPCI
Technical Officer - I (SS) General Electronics, Analytical Instrumentation"
THE GROWTH

Increase of University Faculty

Number of Students – On Roll

Ongoing Research Projects

Citations and h Index

Research Scholars’ Strength

Books & E-Journals

Built-up Area

Women Students’ Strength

*Approximately 3000 Sqm. is under construction