

Department of Electronics & Communication Engineering

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Areas of Specialization

- ▶ Analog and Digital Communication
- ▶ Electromagnetism
- ▶ Computer networks
- ▶ Wireless Mobile Communication
- ▶ Signal Processing
- ▶ Rough Set Based Pattern Classification

Teaching & Learning

- ▶ Incorporation of Innovative Tests and Assignments for Theory and Lab.
- ▶ Consistently positive feedback from the students.
- ▶ Teaching with perfect balance of using audio visual aids and conventional methods.
- ▶ Teaching Most of the Core Subjects to UG as well as PG Students
- ▶ Have been resource person for many STTP conducted at other institutions.
- ▶ So far had organized various workshops, seminars, Guest lectures and 1 or 2 week(s) courses under CEP for
 - ▶ Students (UG 07 Nos, PG-04 Nos)
 - ▶ Faculty (02 Nos)

Research

- ▶ Completed 01 M.Tech by Research
- ▶ Currently Guiding 6 PhD students on topics like,
 - Design of Intelligent Medical Decision Making System
 - Reconfigurable smart broadband antennas
 - Medical Image Segmentation
 - Rough Set based processor design
 - Intelligent Face recognition
 - 03 nearing completion

- Currently received a grant of Rs 5.00 Crores for Setting up CoE on “Combedded Systems: Hybridization of Communications and Embedded Systems” Under TEQIP Subcomponent 1.2.1. Currently acting as Co-Coordinator and principle investigator for it.
 - Previously submitted following proposals
 - ▶ TIFAC-CORE-(800 Lakhs)
 - ▶ FIST (384 Lakhs)

Publications till date

▶ International Journal:	05
▶ Book Chapters in international publications by Springer and AIP	02
▶ International Conference:	12
▶ National Conference:	04
▶	Total: 23

Publications

1. Ashwin Kothari, A.G.Keskar., **Rough Set Approach for Overall Performance Improvement of an Unsupervised ANN-Based Pattern Classifier**, Published in the Journal of Advanced Computational Intelligence and Intelligent Informatics (JACIII). Vol.13 No.4 (July 20, 2009).
2. Ashwin Kothari, Avinash Keskar, **UANN based Pattern Classifier Using Rough Set Approach**, International Journal of Pattern Recognition and Artificial Intelligence (IJPRAI), World Scientific, Singapore, ISSN- 0218-0014
3. Ashwin Kothari, Avinash Kekskar, **Unsupervised Neural Network Based Pattern Classifiers with Rough Set Approach**, Published as the book chapter in the international edited book series, Transactions on Engineering Technologies Volume II - Special Edition of the World Congress on Engineering and Computer Science 2008 published by **American Institute of Physics (AIP-USA)** for the WCECS 2008. ISBN: 978-0-7354-0663-6.
4. Ashwin Kothari, Avinash Keskar, **Rough Set Approaches to Unsupervised Neural Network based Pattern Classifier**, As the book chapters in the international edited book series, Lecture Notes in Electrical Engineering (LNEE), Advances in Machine Learning and Data Analysis, published by **Springer, USA** for the WCECS 2008. Vol. 48 Ao, Sio-Iong; Rieger, Burghard; Amouzegar, Mahyar (Eds.) ISBN: 978-90-481-3176-1,

Institutional Development & Administration

- ▶ Had discharged duties as member co-chairman or In-Charge of many institute level committees.
 - E.g III, PG admissions, Student Forums etc.
- ▶ Was In-Charge Telephone and EPABX for 4 years

- Have upgraded the system to avail Net facility in Staff quarters in cost effective manner.
- ▶ Have actively participated in activities like Student mentoring, NBA, Exams etc.

Future plans

- ▶ Setting up of NABL accredited Labs in the area of EMI-EMC testing so as to have revenue generation in the department,
- ▶ Strengthening M.Tech.(Communication System Engineering) course.
- ▶ Strengthening research collaboration with industry and other research and academic intitutions.
- ▶ Completion of book on Digital Circuit Design
- ▶ Filing 2 patents