DEAN, DIVISION OF EECs
RAJESH SUNDARESAN (ECE)

ELECTRICAL ENGINEERING (ESTD. 1911)
UGC-Centre for Advanced Study
CHAIR: UIDAYA KUMAR

ELECTRICAL COMMUNICATION ENGINEERING (ESTD. 1947)
UGC-Centre for Advanced Study
CHAIR: K.J.VINOY

COMPUTER SCIENCE AND AUTOMATION (ESTD. 1969)
UGC Centre for Advanced Study
CHAIR: CHIRANJIB BHATTACHARYYA

ELECTRONIC SYSTEMS ENGINEERING (ETSD. 1974)
CHAIR: L.UMANAND
Research Themes and Clusters

The faculty members and students of the Division are seeking fundamental advances in the following core areas of EECS:

- Information Theory
- Signal Processing
- Communications
- Networks
- Electromagnetics
- Devices & Microelectronics
- Theoretical Computer Science
- Computer Systems
- Machine Learning
- Control & Optimization
- Image Processing
- Computer Vision
- Power Systems
- High Voltage Engineering
- Power Electronics

A key feature of the Division’s R&D activities is its focus on fundamental research driven innovation in contemporary, interdisciplinary themes:

- Artificial Intelligence
- Security Research
- Brain, Computation, and Data
- Storage Systems
- Cyber-Physical Systems
- Visual Analytics
- Microelectronics and VLSI Design
- 5G Systems

EECS faculty members are actively involved in the following Institute-wide initiatives:
- ARTPARK (AI and Robotics Technology Park (https://www.artpark.in/)
- Quantum Technology Initiative (https://iqti.iisc.ac.in)
- Digital Healthcare Initiative

Please look up for more details: https://iisc.ac.in/thematic-research-clusters/
Teaching Programs

The Division offers seven M.Tech. Programs. Each program is of two years duration. These programs attract the brightest talent from all over the country. Three of these programs are jointly offered by pairs of departments. One of the programs (AI) is offered jointly by all the four Departments.

M.Tech. (COMMUNICATION AND NETWORKS)

M.Tech. (MICROELECTRONICS AND VLSI)

M.Tech. (SIGNAL PROCESSING)

M.Tech. (ELECTRONIC SYSTEMS ENGINEERING)

M.Tech. (ELECTRICAL ENGINEERING)

M.Tech. (COMPUTER SCIENCE & ENGINEERING)

M.Tech. (ARTIFICIAL INTELLIGENCE)

The Division is launching an M.Tech. [Online] program in Artificial Intelligence, commencing August 1, 2021. The Division will soon be launching a new M.Tech. Program in Electronic Product Design.
EECS in Numbers

FACULTY AS OF APRIL 30, 2021

87 Faculty (Academic Cadre)
13 Faculty (Scientific Cadre)
8 Associate Faculty
8 Adjunct Faculty
V. Chandrasekar, Colorado State University
Ramesh Hariharan, Strand Life Sciences
Ravi Kannan, Microsoft Research
Mahesh Mehendale, Texas Instruments
Venkat Padmanabhan, Microsoft Research
Shihab Shamma, University of Maryland
Kumar Sivarajan, Tejas Networks
Vikram Srinivasan, Target Corporation

14 Fellowships from IEEE, ACM, TWAS
18 Recognitions: Infosys Prize, Bhatnagar Prize,
   JC Bose Fellowships, ACCS-CDAC Prize,
   Vikram Sarabhai Research Award
40 Fellowships from
   INSA, IASc, INAE, NASI
43 Swarnajayanti/ Young Scientist/ Young Engineer Awards
22 Editors/Associate Editors of IEEE/ACM/
   International Journals

STUDENTS (AS OF OCT 1, 2020)

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GOOGLE SCHOLAR PROFILE OF THE EECS DIVISION (As of April 2021)

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National Programs

FUNDING FROM NATIONAL AGENCIES
DST, DEITY, MEITY, DBT, MHRD, UGC,
MINISTRY OF POWER, DRDO, ISRO,
ADA, CDAC, CDOT, BEL, SERB

Industry Projects

COLLABORATIVE PROJECTS
BOEING, XEROX RESEARCH, INFOSYS, AMD,
MICROSOFT, INTEL INDIA, MOZILLA, SHAKTI
FOUNDATION, BOSCH, NUCLEUS SOFTWARE,
QUALCOMM, VOLVO, WIPRO, TCS

CONSULTING PROJECTS
BEL, SHELL, AOL, NETAPP, SAP, MINDTREE,
WIPRO, EMC, EVIVE SOFTWARE ANALYTICS,
INTEL, LGSOFT, DRDO, ALTUM, NIMBIC,
TETCOS, CDOT, CDAC, L&T, TOSHIBA

Unrestricted Research Grants

Google, Yahoo!, IBM, Microsoft Research, Amazon, Flipkart, Adobe Labs, Intel Labs, Accenture,
NVIDIA, HP Labs, National Instruments, Nokia, Qualcomm

International Collaborations

Indo-US, Indo-UK, Indo-French, Indo-Israel, Indo-Swedish

Technion, Gavle, Glasgow, Southampton, CNRS, INRIA, KTH, TU-Delft,
MIT, Harvard, CMU, Ohio State, Cornell, USC
Distinguished Visiting Chairs

**PRATIKSHA TRUST CHAIRS IN NEUROCOMPUTING AND DATA SCIENCE**
(funded by Mr. Kris Gopalakrishnan and Mrs. Sudha Gopalakrishnan)

**SHRI. K. VAIDYANATHAN CHAIR**
Prof. Shihab Shamma, University of Maryland

**SMT. SUDHA MURTY CHAIR**
Prof. Vasant Honavar, Pennsylvania State University

**PRATIKSHA TRUST CHAIR**
Prof. Christos Papadimitriou, Columbia University

**SMT. RUKMINI GOPALAKRISHNACHAR CHAIR**
Prof. Mike Norman, University of California, San Diego
Prof. Rakesh Agrawal, Data Insights Laboratories
Prof. Sargur Srihari, State University of New York, Buffalo
Prof Babak Falsafi, EPFL, Switzerland
Prof. Pavol Hell, Simon Fraser University

**BEL CHAIR IN RADAR STUDIES**
Prof. Goutam Chattopadhyay, JPL and CalTech
Prof. D.V. Giri, Pro-Tech
Prof. V. Chandrasekar, Colorado State University
Prof. T. Kirubarajan, McMaster University, Canada

**CPRI CHAIR PROFESSOR**
Prof. Vijay Vittal, Arizona State University
Prof. T.S. Sudarshan, University of South Carolina
Prof. Balarko Chaudhuri, Imperial College, UK
Prof. Tarlochan Sidhu, University of Ontario, Canada
Some Recent Highlights

INDUSTRY/PUBLIC INITIATIVES

- WIRIN (Wipro-IISc Research Innovation Network) initiated in the area of AI and Autonomous Systems, 2018
- Collaborative initiative launched with Microsoft Research India in frontiers of Computer Science, 2018
- Endowment from Mindtree Limited for setting up an Associate Professor Chair in the Division
- Technical Anchorship for the Karnataka State Centre of Excellence in Cyber Security from January 2019 (https://cs-coe.iisc.ac.in/)
- Collaborative Innovation Initiative launched with NPCI (National Payments Corporation of India), April 2021
- M.Tech. (AI) program receives CSR funding from Mindtree, SBI Cards, Tata-Elxsi, GroupM, and Timken
- Cisco sets up the Centre for Networked Intelligence under a CSR Initiative, 2019
- Collaborative Research Program launched with British Telecom in Artificial Intelligence and 5G Technologies, 2019
- 5G Testbed Project (Multi-institutional project), Department of Telecommunication, Government of India, launched in 2019

RECENT ACADEMIC INITIATIVES

- M.Tech. in Artificial Intelligence, a Division-wide M.Tech. program, launched from Aug. 2019
- An Interdisciplinary Ph.D. Program in Brain and Artificial Intelligence, launched from August 2020
- A Post Graduate Level Advanced Certification Program in Deep Learning introduced for working professionals from April 2021
- M.Tech. [online] in Artificial Intelligence for working professionals being launched from Aug. 2021
- M.Tech. in Electronic Product Design being launched from Aug. 2021

FOR MORE INFORMATION

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