

EECS @ IISc

MAY 2021



DIVISION OF ELECTRICAL, ELECTRONICS,
AND COMPUTER SCIENCES

INDIAN INSTITUTE OF SCIENCE, BENGALURU



DEAN, DIVISION OF EECS
V NARAHARI (CSA)



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



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



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



ELECTRONIC SYSTEMS
ENGINEERING (ESTD. 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)



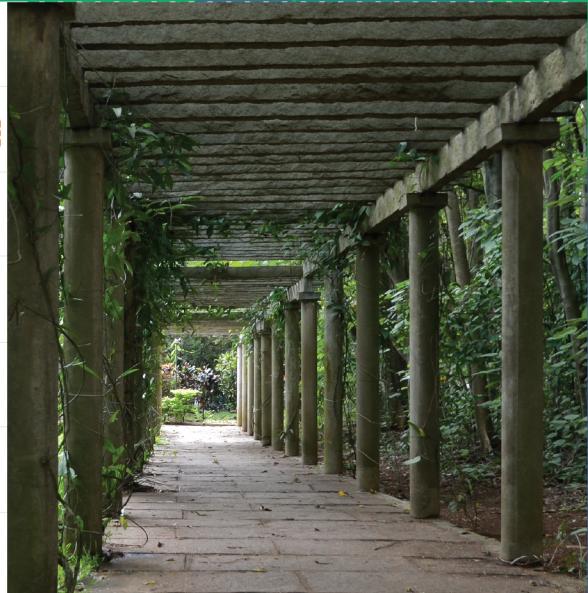
M.Tech. (ELECTRICAL ENGINEERING)



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)

PhD 371

MTech (Research) 102

MTech (course) 522

Total 995

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

Citations 204344

h-index 182

i-100 index 455

i-200 index 153

i-500 index 31

i-1000 index 8

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, ALTIUM, 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-Elxi, 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



EECS Division: office.divdeans@iisc.ac.in



Electrical Engineering
office.ee@iisc.ac.in



Electrical Communication Engineering
office.ece@iisc.ac.in



Computer Science and Automation
office.csa@iisc.ac.in



Electronic Systems Engineering
office.ese@iisc.ac.in