

EECS@IISc

MAY 2021



DIVISION OF ELECTRICAL, ELECTRONICS,
AND COMPUTER SCIENCES

INDIAN INSTITUTE OF SCIENCE, BENGALURU



DEAN, DIVISION OF EECS
RAJESH SUNDARESAN (ECE)



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.VINOY



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



ELECTRONIC SYSTEMS
ENGINEERING (ETSD. 1974)
CHAIR: L.UMANAND

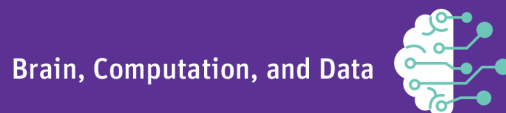


Research Themes and Clusters

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:



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)	14	Fellowships from IEEE, ACM, TWAS
13	Faculty (Scientific Cadre)	18	Recognitions: Infosys Prize, Bhatnagar Prize, JC Bose Fellowships, ACCS-CDAC Prize, Vikram Sarabhai Research Award
8	Associate Faculty		
8	Adjunct Faculty	40	Fellowships from INSA, IASc, INAE, NASI
	V. Chandrasekar, Colorado State University		
	Ramesh Hariharan, Strand Life Sciences	43	Swarnajayanti/ Young Scientist/ Young Engineer Awards
	Ravi Kannan, Microsoft Research		
	Mahesh Mehendale, Texas Instruments	22	Editors/Associate Editors of IEEE/ACM/ International Journals
	Venkat Padmanabhan, Microsoft Research		
	Shihab Shamma, University of Maryland		
	Kumar Sivarajan, Tejas Networks		
	Vikram Srinivasan, Target Corporation		

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-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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