

BITS AND BYTES

A half-yearly newsletter of the Department of Electronics and Communication Engineering
Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal



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Message from Department Chair



Hello everyone!

I wish the readers a happy new year. May the new year bring peace, prosperity and progress to all.

It is one year since the first issue of Bits & Bytes was released. "Time is free, but it is price-less. You cannot own it, but you can use it. You cannot keep it, but you can spend it. Once you have lost it you can never get it back" said Harvey MacKay. We, the faculty members and students of the Electronics and Communication Engineering Department, can say confidently that we have used and spent the last one year's time well. Our achievements presented in this as well as the previous issue of Bits and Bytes would vouch for this. I am sure that the team will keep up this good work in the coming years as well.

- Dr.M Sathish Kumar

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(Editorial Team of 2019-20)

Department Activities

Workshops

- **Machine Learning FDP:** The department organized a 4 day FDP on "Machine Learning with Python" during November 12th to 15th, 2019. Dr. Sudarsan N.S. Acharya, who is a graduate of Stanford University and an assistant professor at MSOIS was conducting the FDP. The aim of the FDP was to provide a platform for understanding machine learning with hands on training in python coding. It also helped to gain an understanding of the mathematical aspects of the classifiers like clustering techniques, SVM, SOFTMAX, Neural networks and Deep neural networks (CNN).



- **Demo and training on XILINX Interface kits:** A demonstration was organized by COREL Technologies for the department to help the professors understand how to use the Xilinx interface kits. This event was conducted on the 11th of November, 2019.

Academic Collaborations

- Agreement for academic cooperation with Academia Higher Education Colleges, Slovenia.
- Association with Curtin University, Perth.
- Academic interaction with the Trustees of The Steven Institute of Technology.
- Academic agreement with Universitat Politècnica De Catalunya, Spain.
- Tie up with National Technical and Research Organization (NTRO), New Delhi.

Department Activities

- Faculty members and students jointly have published 17 International Conference Publications.
- Faculty members and students jointly have published 27 journals.
- Dr. Subbanna Bhat conducted an academic audit for both UG and PG Programs.
- The Institution of Engineering and Technology (IET) accreditation process for the Department is in progress for both the UG and PG programmes.

NEW FACULTY

- Dr. Sudheesh P G has joined the ECE department of MIT in July 2019. He has received his Ph.D from NIT Trichy and Post Doctorate from LTU, Sweden.

Faculty Achievements

OUTSTANDING ACHIEVEMENTS

- Dr.M Sathish Kumar delivered a talk on "Surface Plasmon Polariton Based Wavelength Demultiplexer" SMIT, Sikkim.



- Dr. Tanweer Ali has been elevated to the grade of IEEE Senior member by the IEEE Admission and Advancement Committee.

- Dr. D.V.Kamath has been a resource person for the pre-conference tutorial on "Complex Gm -C filters for RF" at Dept. of ECE, Manipal Institute of Technology, Manipal on 10th August, 2019 as part of Pre-Conference Tutorial on "RF circuit design" for IEEE international conference DISCOVER 2019.

- Dr. Ujjwal Verma delivered an invited talk titled "Deep Learning in satellite image analysis: current status, trends, and challenges" at the 107th Session of Indian Science Congress Association held at the University of Agricultural Sciences, GKVK, Bangalore from 3rd to 7th January 2020.

PHD AWARDEE

- Dr. Aparna U was awarded Ph.D in "Optimization of Photonic crystal and surface Plasmon Polariton based nanophotonic devices" from MAHE, Manipal.
- Dr. Ananthakrishna T was awarded Ph.D in "Automatic Speech-to-Text Transcription for Kannada Language" from MAHE, Manipal.
- Dr. Shailendra Kumar Tiwari was awarded Ph.D in "Design & Optimization of capacitive Micromachined Ultrasonic Transducers (CMUTs) for Bio-Medical application" from MAHE, Manipal.
- Dr. Rajiv Mohan David was awarded Ph.D in "Broad Band Multirate Signal Processing for Spread Spectrum in Fading channels" from MAHE, Manipal.

RESEARCH COLLABORATIONS

- Dr. G.Subramaya Nayak has a collaboration with Biophysics department of MSOLS (Manipal School of Life Sciences) of MAHE.
- Dr. Anitha H has a collaboration with the Orthopedic Department KMC, MAHE.
- Dr. Sampath Kumar A.K has a collaboration with the Neurosurgery and Orthopedic Department, KMC, MAHE.

INTERNATIONAL CONFERENCES

- Dr. M. Sathish Kumar, Dr. G.Subramaya Nayak, Dr. Kanthi M, Dr. D V Kamath, Dr. Tanweer Ali and Dr. Ujjwal Verma from the department have chaired technical sessions at various international conferences.

Student Achievements

- Sukrita Panigrahi secured first place at DSI Karnataka State Championship, BITS Hyderabad Squash Tournament, Invictus '19 Squash Championship, and second place at the All-India inter-university squash tournament 2019.



- Sitanshu Sah organised a Su-do-ku workshop hosted by Karnataka ICSE Schools association. He also secured the 29th rank in the Indian Su-do-ku Championship 2019.



- Achintya Dutta, Akhil Bonagiri, Neha Harish, Sachinkumar K, Srikanth BS, Sukrita Panigrahi represented MAHE in various All India Inter University Tournaments

- Sitanshu Sah and Sagar A N Reddy were the official Photographers and Videographers for the 53rd Annual USICON 2019 hosted by the Urological Society of India at Lulu Bolgatty International Convention Center

- Achintya Dutta, Akhil Bonagiri, Neha Harish, Nikhil Peddishetty and Vamshi Krishna won the MIT Inter-Branch Badminton Tournament 2019.

CLUB ACTIVITIES

IE E&C

- 1) Cleanliness Drive
- 2) Management Committee recruitments
- 3) Working Committee recruitments
- 4) Python Workshop
- 5) Board Transfer
- 6) Placement Talk



ISTE

- 1) Working Committee recruitments
- 2) Board Transfer
- 3) Tech talk
- 4) Winter school
- 5) Version Control workshop