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SCEE NEWSLETTER

ELECTRON

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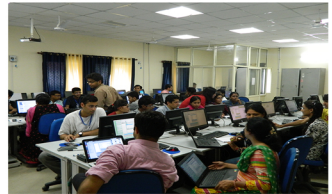
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NEWSContent

Message From The Editor

It gives me a lot of pleasure to introduce Vol. 01 No. 02 of our newsletter Electron Wave. The newsletter provides the updated information of the School of Computing and Electrical Engineering. Presently the school has grown reasonably in terms of the number of faculty members. Currently, the school has 32 faculty members working in the areas of Signal Processing, Communication, VLSI and Embedded Systems, Power Electronics and Drives, Theoretical Computer Science, Data Mining, Machine Learning, Human Computer Interaction and so on.

Sincerely,
Dr. Shubhajit Roy Chowdhury



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Awards & Recognitions

Dr. Tushar Jain received the Early Career Research Award from Science and Engineering Research Board, Govt. of India in the year 2016.

Dr. Tushar Jain chaired a session on “System Modeling, Control and Diagnosis for Energy Efficiency in Buildings” at the 14th International Conference on Control, Automation, Robotics and Vision (ICARCV 2016), Phuket, November 2016.

Dr. Tushar Jain has been appointed as the Lead Guest Editor for a special issue in Journal of Control Science and Engineering, Hindawi Publishing.

Dr. Shubhajit Roy Chowdhury received the VIFA Young Faculty Award from Venus International Foundation.

Dr. Shubhajit Roy Chowdhury received the Young Neurologist Award from World Stroke Organization.

Dr. Shubhajit Roy Chowdhury has been appointed as the Publications Chair of IEEE International Symposium on Nanoelectronic and Information Systems (INIS) 2016.

Dr. Shubhajit Roy Chowdhury has been upgraded as Senior Member, IEEE.

Recent Research Projects

“Optimizing economics of renewable energy using fault tolerant model predictive control” from SERB, Govt. of India – 23.77 lacs
(PI: **Dr. Tushar Jain**)

“A microfluidic based point of care testing device for measuring urine albumin using a novel organic dye” from MHRD, Govt. of India under the Project IMPRINT Scheme – 76.00 lacs
(PI: **Dr. Shubhajit Roy Chowdhury**)

“Efficient query and Visualization of Big Data” from Rx Data Science Inc, USA -USD \$9,701
(PI: **Dr. Varun Dutt**)

Face To Face With Prof. Banshi Dhar Chaudhary



Prof. Banshi Dhar Chaudhary is an Emeritus Professor in the School of Computing and Electrical Engineering, IIT Mandi. He has a long and profound teaching experience in academia specially in the area of Computer Science and Engineering and allied areas. The Electron Wave team has the pleasure of meeting him in person and getting to know of his thoughts, ideas and vision. Here are some of the excerpts of the interview with him.

Q: Who are you and what do you do ?

I am a teacher who teaches to learn. Learning is through the questions asked by my students which makes me aware of my ignorance and short comings of my presentations and prompts me to make efforts to learn. I am continuing to do the same even now. I do have additional administrative responsibilities of Dean(Academics) which includes management of on going programs, planning for new programs and improving the quality of learning teaching experience of faculty and students.

Q: You were a student at IIT Kanpur and now, you are handling students at IIT Mandi. Do you see any difference in students of those days as compare to student of today?

I was at IIT Kanpur in late sixties as a M.Tech student and the institute was almost of the same age as IIT Mandi is today. My view of IITK is as one of the student whereas view of IIT Mandi is as a faculty. Further, it is more than four decades and so many technical and societal changes have taken place, it is difficult to compare the students of those days with that of now. My experience is that natural characteristics of 17-20 years age group have not changed much. They continue to experiment with the things which they are advised not to do. However, the nature of interaction between teacher and student has changed. This change in mode and quality of interaction might have been due to social and technical changes. I have a feeling that nowadays students are more stressed compared to early days may be due to very high expectations.

Q: As the Dean Academics, What is your take in design of academics program and curriculum structure at IIT Mandi?

There has been very few experiments in engineering education in the context of societal and technical changes which has taken place during last few decades. As a consequence, higher education is losing their relevance in the context of present and future national needs. This is the institute which has taken a considered decision to not to follow older IITs in totality but to experiment both in curriculum structure and in teaching learning pedagogy. Design Practicum and ISTP courses put seeds of innovation process in the young mind of students. It creates mind space for innovation in young population. It has undertaken a long journey. Another distinctive feature is explicit emphasis on collaborative teaching and research. Faculty members are encouraged to undertake challenging problems which cannot be solved individually. Examples are Advanced Material Research Center (AMRC) and completion of INTEL project on time. I don't think any other IIT has been able to achieve such a milestone in their first few years of establishment.

Q: How do you see the growth of academics program here at IIT Mandi and growth of the Institute as a whole?

I see a very bright future for IIT Mandi. My enthusiasm and optimism is based on its beautiful location of the campus, young (aged between 30-40 years), bright, enthusiastic faculty, very bright students, and the growth trajectory for last several years. Both faculty and students are willing to experiment and to chart new trajectory of growth for the institute. To live in mountain with harmony with nature is a blissful experience. It teaches you things which you may not learn through books and lectures. This life experience will make this institute unique among community of institutions.

Q: You were served as Dean SRIC for sometimes. What is your opinion regarding current status of institute relationship with the industry?

At present, our relationship with industries is in its infancy. The institute is making efforts to reach out industries. It has organized interaction with industries through CII. Recently, a delegation of faculty has visited Baddi industrial area and had detailed interaction with some of the industries. I hope the relationship will grow.

Q: Please give a word of advice for student at IIT Mandi.

My advice to students will be same which Sri Ratan Tata gave to students at Symbiosis during convocation address. Life has much bigger canvass. Education is only one aspect of it. This institute is to facilitate you to learn the art of learning. The course contents taught in the class may not serve you for entire life whereas the art of learning will enable you to succeed in your life. Please do not make grade in a course as your objective, make learning as your objective.

Seminars & Workshops

Past Events

2nd Workshop on "Machine Learning for Medical Image Analysis" (WMLMIA 2016) during June 18-22, 2016.
Organizers: Dr. Renu M. Rameshan and Dr. Shubhajit Roy Chowdhury.

International Workshop on "Next Generation Active Distribution Networks to empower Future Low Carbon Indian Society" during August 12-14, 2016.
Organizers: Dr. Bharat Singh Rajpurohit and Dr. S.N. Singh (IIT Kanpur).



Distinguished Lectures

Prof. S. S. Chandel from NIT Hamirpur delivered IEEE lecture on "Solar Energy Research and Applications for Western Himalayan Region" on September 23, 2016.

Prof. Joachim Holtz from Wuppertal University, Germany delivered IEEE IES Distinguished Lecture on "Energy Efficiency of Medium Voltage Drives" on October 14, 2016.

Prof. Narendra Karmarkar, Distinguished Adjunct Professor from IIT Mandi delivered a lecture on "Creating IIT Mandi teams to participate in international competitions in algorithms" on November 04, 2016.

Dr. Rajan Kapur from Colorado, USA delivered IEEE PES-IAS Lecture on "Renewable Energy and Cooling" on November 19, 2016.

Introduction to M.Tech in Electrical Engineering (Specialization in VLSI and Embedded Systems)

The School of Computing and Electrical Engineering is happy to announce the start of its first M.Tech programme in Electrical Engineering with specialization in VLSI Design and Embedded Systems. After undergoing this program, the students will acquire both theoretical knowledge and practical skills in Electrical Engineering with specialization of VLSI and chip designing. The first semester of the course curriculum focuses on the Electrical Engineering core courses which can be supported to learn advance courses of VLSI specialization in preceding semesters. During M. Tech. theses, the students will use VLSI design, testing and fabrication laboratories. For a better insight of the specialization, the core laboratories for VLSI design and fabrication have been designed with considering experimental understanding of the Specialization Core courses. The laboratory experiments will build the basic concepts and the advanced concepts for chip designing. The VLSI laboratories will be the part of VLSI center of IIT Mandi. Moreover, these VLSI laboratories will be further useful for undergraduate students of IIT Mandi, in advance learning of B. Tech. with VLSI as minor area. The UG students will also use the VLSI center facility to execute their major technical project. It is envisaged that adjunct faculty from industry such as SCL (Mohali), STMicroelectronics, Texas instruments, Analog Devices, NXP, Synopsis, Cadence, Mentor Graphics etc. will be engaged to provide industrial experiences to M. Tech students.

New Members Of Our Faculty

The following new faculty members joined in the School of Computing and Electrical Engineering:

Dr. Ankush Bag (Specialisation: Semiconductor Devices, Epitaxy and Compound Semiconductors)

Dr. Narsa Reddy Tummuru (Specialisation: Hybrid Energy Storage Applications in Future Microgrids, Efficient Power Electronic Interfaces in Renewable Energy Applications and Smartgrid Communication Networks)

Dr. Siddhartha Sarma (Specialisation: Resource allocation in Wireless Networks, Wireless Energy Harvesting and Crowd sensing)

Dr. Rahul Shrestha (Specialisation: VLSI Design and Circuits & Systems for Signal Processing and Wireless Communication)

Dr. Gopi Shrikant Reddy (Specialisation: Communications: Antennas and Wave Propagation, RF and Microwave Passive component Design)

The following professors joined as Distinguished Professors in the School of Computing and Electrical Engineering:

Prof. Deepak Khemani (Specialisation: Artificial Intelligence)

Prof. Narendra Karmarkar (Specialization: Algorithms for optimization, Computationally intensive problems, algorithms for supercomputing)

Publications & Patents

Journals: **05**

Conferences: **14**

Books/book chapters: **02**

Patents filed: **03**

Statistics Of Students

No. of current M.S. students: **11**

No. of M.S. students graduated: **02**

No. of current Ph.D students: **52**



An algorithm must be seen to be believed

~ Donald Ervin Knuth

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