



**SCEE**  
**NEWSLETTER**

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# ÉLECTRON

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## NEWS Content:

### ❖ MESSAGE from the Editor:

It gives me immense pleasure to introduce Vol. 2 No. 1 of the SCEE newsletter "Electron Wave". Our school has also grown quite a bit over the past few months and has a current faculty strength of 36 members. Dr. Bharat Singh Rajpurohit has kindly taken over as Chairperson of SCEE. The contributions of the previous Chairperson Dr. Anil Kumar Sao are highly appreciated and placed on records.

In this newsletter we are having the interview of Prof. Kailash N. Srivastava who is visiting IIT Mandi from ABB, Sweden.



### ❖ What's INSIDE

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## ❖ AWARDS AND RECOGNITIONS:

- Dr. Rahul Shrehstha and Dr. Shubhajit Roy Chowdhury's paper got awarded as the best poster award in INDICON 2016 which was held in December 2016 at IISc, Bangalore.
- Dr. Varun Dutt is elected as a senior member of IEEE.
- Dr. Varun Dutt's project titled 'A low-cost Landslide and Earthquake Monitoring and Warning System' by a student team led by Pratik Chaturvedi (Ph.D. student) and mentored by Dr. Varun Dutt and Dr. Venkat Uday Kala was shortlisted among top-20 projects in Manufacturing and Technology category in India for the Dr. APJ Abdul Kalam Innovation Ecosystems Award .
- Dr. Varun Dutt became a Committee Member for the creation of Centre for Landslide Research, Studies and Management (CLRSM), 2017 under National Disaster Management Authority.
- Dr. Varun Dutt became the Special Topics Editor, Frontiers in Cognitive Science, 2017.
- Dr. Varun Dutt served in the Program Committee of IEEE 2017 International Symposium on Computational and Business Intelligence (ISCBI 2017).
- Dr. Varun Dutt served in the Program Committee of IEEE Cyber Incident 2017: International Conference on Cyber Incident Response, Coordination, Containment & Control 2017.
- Dr. Varun Dutt served in the Program Committee of IEEE Social Media 2017: International Conference on Social Media, Wearable and Web Analytics 2017.
- Dr. Varun Dutt achieved the first runner up position along with Dr. S. McCauley, Dr. Ingrid Shockey and Dr. R. Padmanabhan for student's project titled Improving Healthcare Coordination in the Mandi District.

## ❖ Seminars and Workshops:

- 4th Workshop on Machine Learning for Medical Image Analysis (WMLMIA) during June 17-21, 2017. Organizers: Dr. Anil K. Sao and Dr. R Padmanabhan.
- A National Workshop on 'A Multi-Dimensional Smart Energy Grids Analysis for Indian Scenario' during Jun 8-10, 2018.
- National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), 16th - 19th December 2017.



- A 10 days innovation workshop at IIT Mandi in collaboration with IIT Delhi and MIT from June 23- July 04, 2017 with support from MHRD through Design and Innovation Center.



### ❖ Distinguished LECTURES

- Dr. Ankush Bag gave a talk on 'Wide Bandgap Semiconductors' on 20th April, 2017 in the SCEE seminar.
- Dr. Aditya Nigam Delivered an expert lecture for 'Symposium on Research Trends in Machine Learning' on 5-November-2016 at Center of Information Technology University of Petroleum and Energy Studies Dehradun (INDIA).
- Dr. Shubhajit Roy Chowdhury gave a talk on 'A low cost point of care testing hardware for stroke diagnoses at the TCS Innovation Labs sponsored Indian stroke Workshop, Bangalore on April 14-15, 2017.



### ❖ PUBLICATIONS:

- Journals: 06
- Conferences: 25
- Books/ book chapters: 1
- Patents Filled: 5

## ❖ Ongoing PROJECTS:

- “Characterization of the Entropy Regions for Three and Four Random Variables and Their applications” from Extra Mural Research Fund, SERB, DST – 33.27 lacs (PI: Dr. Satyajit Thakur).
- “Development and Evaluation of Landslide Risk Communication Solutions in Mandi District of Himachal Pradesh” from Himachal Pradesh State council for Science, Technology & Environment (SCSTE) – 5.13 lacs (PI: Dr. Varun Dutt).
- “Design and Development of a Smart Seat-Belt Monitoring System” from Hubert Ebner India Pvt Ltd -11 lacs (PI: Dr. Varun Dutt).
- “Earlier Carrier Research Grant - Study and design of Broad-band Frequency Selective Surfaces (FSS) structures for various RF and Microwave applications” from SERB- Dept. of Science and Technology (DST) Govt. of India – 50 lacs (PI: Dr. Gopi Srikanth Reddy).
- “Gallium Oxide based next generation power and sensor devices ” from SERB (DST, Govt. of India) – 54 lacs (PI: Dr. Ankush Bag)
- “A microfluidic based point of care testing device for measuring urine albumin using a novel organic dye, jointly funded by Ministry of Human Resource Development, Govt. of India and India Council of Medical Research, Govt. of India(2017-2020)- 73.2 lacs (PI- Dr. Shubhajit Roy Chowdhury)

## FACE TO FACE WITH

## PROF. KAILASH SRIVASTAVA



Prof. Kailash Srivastava is a power system professional with well-rounded experience across various sectors around globe viz multinational company, government (Indian Engineering Services), consulting organization, research and educational institutions. He is currently a Visiting Professor at IIT Mandi and Adjunct Professor at IIT Kanpur. In the past, he has been Adjunct Professor at Lulea Technical University in Sweden. He holds several patents and publications to his credit. He is a senior member of IEEE and an individual member of CIGRE.

**Q. Who are you and what do you do?**

**Ans:** I am a power system engineer with a PhD degree. I have spent more than 32 years in electrical industry around globe. Spent last 20+ years at ABB Corporate Research in Sweden. My task has been to ideate and probe deeply new ideas within power systems, and create high ROI solutions to increase business value.

**Q. You have taken an industry-academia mixed career path. What are your observations regarding such a career path?**

**Ans:** Taking such a career path has been satisfying as it is a unique experience. Industry and academia, they work in tandem in many cultures and in many countries. Nobody can claim that they have all the knowledge, either in academia or in the industry but the partnership between industry and academia is needed for the best results.

**Q. You taught in Sweden and now you are teaching in India. What are the differences that you observe in engineering education in Sweden versus engineering education in India?**

**Ans:** Partnership between industry and academia is very strong in Sweden.

**Q. What are the prospects of acquiring higher education in the field of power electronics and systems?**

**Ans:** In my opinion, it is very much needed. Today, 70% of the power is passing through semiconductors, at least once and in future it is expected to be 100%. So, power electronics is a fast-growing field and higher education in power electronics is very much needed.

**Q. How do you think we can strengthen the industry academia interaction at IIT Mandi?**

**Ans:** IIT Mandi should find out the pain points of the industry and approach them with appropriate solutions. This is the way to build sustainable long-term partnership.

**Q. After graduation students get confused with whether to take an industry, or academia or entrepreneurial route in their career. What is your suggestion on this?**

**Ans:** They should pursue their interests. I, myself have changed the carrier number of times. I worked in public sector and then for Govt of India, in Engineering Services. I also worked for multinational companies. I have lived here and abroad. I always try to do different things and try to do my best whatever I am doing. The confusion is okay, but they have the ability to come out of it.

**Q. Please give a word of advice to the students of IIT Mandi.**

**Ans:** Have a goal, and the strategy to achieve it. Understand importance of time and be on time in the class.

### ❖ **M.S. and Ph.D. students:**

No. of current M.S. students: 16

No. of M.S. students graduated: 09

No. of current Ph.D students: 54

### ❖ **STATISTICS of SCEE faculty members:**

Total no. of regular faculty members: 26

Total no. of visiting faculty members: 05

Total no. of mentor professors: 04

### ❖ **NEW Members of our Faculty:**

The following faculty members joined the school of SCEE.

- Dr. Srikant Srinivasan (Area of Specialization: Big-Data acquisition and analysis, Nanoelectronics, Spintronics)
- Dr. Rajinikumar Ramalingam (Area of specialization: Sensor, Cryo Instrumentation and measurements, Characterization of Superconductors and electronic devices at cryogenic temperatures, Fiber optic sensing, Optical cooling methods)
- Prof. Kailash N. Srivastava (Area of Specialization: Power systems)
- Dr. Pooja Vyavahare (Area of Specialization: Distributed Computation, Network Analysis, Algorithm Design)

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