

**Annual Report 2019**  
IEEE Joint CSS-IMS Kolkata Chapter  
Kolkata Section, CS23/IM09 (CH10673)

**Event 1:**

**Distinguished Lecturer (DL) Program of Instrumentation & Measurement Society, IEEE, USA.**

Date: 01 Mar 2019

Time: 02:00 PM to 05:00 PM

Venue: Seminar Hall, Electrical Engineering Department, IEST, Shibpur.

Lecture title: "High Reporting Rate Measurements for Smart(er) Grids".

Speaker: Professor Mihaela M. Albu, Department of Electrical Engineering, Politehnica University of Bucharest, Romania.

The Program started with the Welcome Address by Prof. Chanda. Prof. Rajarshi Gupta, Vice Chair of the chapter then appraised the house regarding different activities of the chapters. Then Dean(A), IEST, Shibpur addressed the audience and mentioned that several collaborative work may be done with different departments of the institute in the relevant area. It was followed by a brief introduction of the distinguished speaker by Prof. Sengupta.

Before going to the formal session of the lecture, Prof. Albu was felicitated with a memento by Prof. Amitava Chatterjee, Prof. of Electrical Engineering, Jadavpur University.

Then Prof. Albu started her deliberation focusing on i) The measurement paradigm in power systems ii) Measurement channel quality and models for energy transfer etc. The lecture was very lucid, illuminating and thought provoking. It was followed by very cordial interaction between the speaker and the audience. Finally, vote of thanks was given by Prof. Kaushik Das Sharma, Secretary, CSS-IMS chapter. About 80 participants with students, research scholars and faculty members attended the session.



Fig: Prof. Albu delivering lectures during DL program at IEST, Shibpur

## **Event 2:**

### **One-day International Seminar on “Trends in Signal Processing”**

Date: 02 Mar 2019

Time: 10:00 AM to 05:00 PM

Venue: Meghnad Saha Auditorium, University of Calcutta, Kolkata, India.

Lecture 1: “High Reporting Rate Measurements for Smart(er) Grids”.

Speaker: Professor Mihaela Albu, Electrical Engineering Department Politehnica University of Bucharest, Romania.

Lecture 2: “Sparse and Collaborative Representation Based Approach for Biometric Systems”.

Speaker: Professor Amitava Chatterjee, Electrical Engineering Department, Jadavpur University, India.

Department of Applied Physics, CU, had, jointly with IEEE CSS-IMS Kolkata chapter, organized a one-day international seminar on ‘Trends in Signal Processing’ on 2<sup>nd</sup> March 2019. That was a day-long technical talk programme about the application of signal processing in various fields. In this regard, the program was arranged with two lectures from different application domains.

The first half of the programme was started at 10 a.m., with welcoming the guests on the dais, among them were Professor Mihaela Albu, Prof. Amlan Chakraborty, Dean, FET, CU, and Dr. Rajarshi Gupta, Associate Professor, Department of Applied Physics.

After felicitated the international speaker Prof. Albu by Prof. Amlan Chakraborty, welcome address was given by department’s faculty member Dr. Rajarshi Gupta. During his talk, he also gave an overview of the heritage, activities of the Department. Then, Prof. Chakraborty also gave a small speech about the Institution and on the seminar.

The technical session starts with delivering a lecture by Prof. Albu at 11 a.m. and it’s mainly focus on the application of measurements and hence processing the signals to make the electrical power grid make smarter. This talk ended at 1 p.m. after a small discussion between Prof Albu and audience on that topic.

After the lunch break, the second half of the programme was continued with another auspicious talk by Professor Amitava Chatterjee. The topic was also concentrated on the recent advancement of technology and the importance of signal processing.

Both talks were accomplished with active participation from various classes of audience. Due to wide applicability of the topic of the seminar, the participated audiences were from undergraduate, graduate, postgraduate, research scholar, industrial area.



(a)



(b)



(c)

Fig.: The glimpse during the one-day seminar at Department of Applied Physics, CU, (a) inaugural session (b) delivering a lecture by Prof. Albu (c) delivering a lecture by Prof. Chatterjee.

### Event 3:

#### Workshop on Smart Grid

Date: 02 Mar 2019

Time: 02:00 PM to 06:00 PM

Venue: B. P. Poddar Institute of Management of Technology, 137 V.I.P. Road, Kolkata, West Bengal, India 700052

Building: Electrical Engineering Department

Department of Electrical Engineering got the privilege of hosting an interactive session with Professor (Dr.) Mihaela Albu Distinguished Lecturer of IEEE Instrumentation & Measurement Society Politehnica University of Bucharest, Romania. It was preceded by a lecture session by Prof. Arindam Kumar Sil from Department of Electrical Engineering Jadavpur University on Smart Grid on 2<sup>nd</sup> March 2019.

The program started with watering of sapling by senior professors of the Department and inaugural speech by Dr. Nandita Sanyal, Head of the Department. Afterwards Dr. Sudipta Chakraborty introduced Prof. Sil who delivered lecture on Modern Power System Planning and how that would incorporate the concept of smart grid. The session was very much interactive and informative. Prof. Sil was felicitated by Dr. Sutapa Mukherjee.

After that Dr. Sudipta Chakraborty introduced Prof. Albu. She continued her interactive session on “Application and challenges of worldwide measurement solution of smart grid deployment”. She also highlighted some activities of Instrumentation & Measurement Society of IEEE worldwide for the benefit of students.

At the end of this session Prof. Albu was felicitated by Dr. Nandita Sanyal and Dr. Sudipta Chakraborty.

The Chairperson IEEE Joint CSS IMS Chapter Kolkata, Dr. Anindita Sengupta addressed the audience and was felicitated by Ms. Chandrani Das.

The programme concluded by the vote of thanks by Dr. Nandita Sanyal.

85 students from 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year participated in the programme.



Fig: An interactive session with Prof Albu during at BPPIMT, Kolkata

#### **Event 4:**

#### **National Seminar on Computational Intelligence in Signal, Power and Control (CISPC'19)**

Start time: 28 Mar 2019 10:00 AM

End time: 29 Mar 2019 05:30 PM

Organizer: Department of Electrical Engineering, Future Institute of Engineering and Management Kolkata -700150, West Bengal, India

The Department of Electrical Engineering, Future Institute of Engineering and Management, had, jointly with IEEE CSS-IMS Kolkata chapter, organized a two-day national seminar on "Computational Intelligence in Signal, Power, and Control". That was a two-day-long technical talk program about the application of emerging computational intelligence tools to process the data in Signal, Power, and Control fields. In this regard, the program was arranged with lectures from different application domains. The speakers and the title of their topics are,

1. Prof. Ranjit Kumar Barai, Dept. of Electrical Engg. Jadavpur University: "Advanced Control Techniques of Robotic System".
2. Dr. Abhinandan De, Dept. of Electrical Engg. IEST, Sibpur: "Application of AI in Power System".
3. Dr. Rajarshi Gupta, Dept. of Applied Physics, University of Calcutta: "Improving Reliability in Cardiovascular Measurements using Computational Intelligence".
4. Dr. Kaushik Das Sharma, Dept. of Applied Physics, University of Calcutta: "Intelligent Control Techniques".

28th 2019

09.00 am – 10.00 am Registration

10.00am – 10.30am Inauguration, Lamp Lighting Ceremony

10.45am – 12.45pm Advanced Control Techniques of Robotic System.

Speaker: Prof. Ranjit Kumar Barai, JU.

02.00 pm – 03.30 pm Applications of AI in Power System

Speaker: Prof. Abhinandan De, IEST, Shibpur

Friday, March 29, 2019

11.00 am – 01.00 pm Improving Reliability in Cardiovascular Measurements using Computational Intelligence Prof. Rajarshi Gupta, CU.

02.00 pm – 03.30 pm Cyber Resilient Image Transmission Techniques – An Overview

Speaker: Prof. Kaushik Das Sharma, CU.

03.45 pm – 04.00 pm Valedictory Session.

04.00 pm – 05.30 pm Prize Giving Ceremony and Certificate distribution.



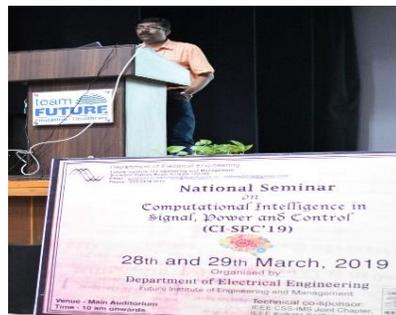
(a)



(b)



(c)



(d)



(e)

Fig: Lecture deliver by (a) Prof. Ranjit Kumar Barai (b) Prof. Abhinandan De, (c) Prof. Rajarshi Gupta and (d) Prof. Kaushik Das Sharma in the seminar during various session; (e) audience during the seminar.

## Event 5:

### Lecture Meeting on "Kalman Filter: Theory and Practice"

Date: 15 Nov 2019

Time: 02:00 PM to 05:30 PM

IEEE CSS-IMS Kolkata chapter, in collaboration with the Department of Applied Physics University of Calcutta, was organized a technical lecture meeting on "Kalman Filter: Theory and Practice". The event was taken place at the seminar room of Department of Applied Physics on 15th November 2019.

After a brief introduction delivered by the chapter chair, Prof. Anindita Sengupta, explaining the purpose of organizing such lecture session, Prof. Rajarshi Gupta, Department of Applied Physics, CU, extended a very cordial welcome to the Speaker, Prof. Amitava Chatterjee, Jadavpur University, participants from different institution, organizers on behalf of CSS-IMS Chapters and other delegates present over there.

Finally, after a short introduction of the speaker by Prof Kaushik Das Sharma, the technical session was formally started. This lecture was about the Kalman filter and its application in the various engineering fields. Prof A. Chatterjee had delivered the lecture on this topic with in-depth

discussion and it was constructed as a classroom study so that the participants can have a better understanding and be able to apply their own field of work/research.

Then the Secretary, Prof. Kaushik das Sharma presented the chapter organization and several activities to the audience for further exposure to the budding engineers.



(a)



(b)

Fig: The glimpse of lecture meeting (a) the inaugural session, (b) Prof A. Sengupta, chapter chair, CSS-IMS, IEEE Kolkata, presenting a gift to Prof A. Chatterjee.