Annual Report 2021

IEEE Joint CSS-IMS Kolkata Chapter

Kolkata Section, CS23/IM09 (CH10673)

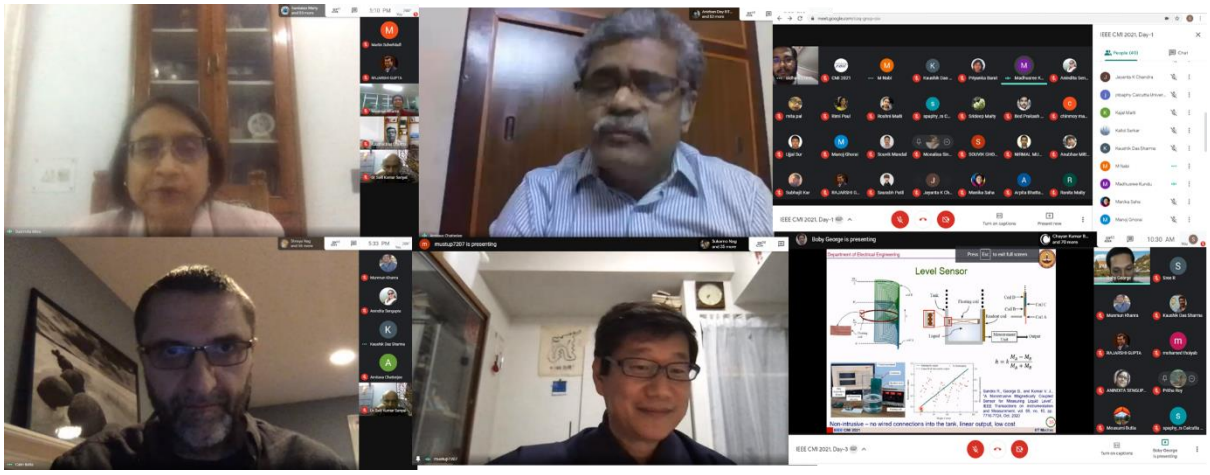
Event 1:

Event Name: 2021 IEEE Second International Conference on Control, Measurement and Instrumentation (CMI)—*Virtual*

Date: January 8-10, 2021

Venue: Google Meet, Virtual Platform

IEEE Joint CSS-IMS Kolkata chapter, India, organized the second version of its flagship event, 2021 IEEE Second International Conference on Control, Measurement and Instrumentation (CMI), during January 8-10, 2021. The conference was technically co-sponsored by IEEE Instrumentation and Measurement Society (IMS), USA. IEEE CMI2021 was intended to showcase the latest developments in the core and multidisciplinary areas of control, measurement, and instrumentation. This time, the conference was a fully virtual event using the Google Meet platform. The conference consists of one keynote speech delivered by Calin Belta, Boston University, USA, two plenary lectures delivered by Xiaoqing Wen, Kyushu Institute of Technology, Japan, and Boby George, Indian Institute of Technology, Madras, India, as well as the regular technical sessions. 41 papers were presented throughout three days, divided into 7 tracks. Total participants for the conference were 210.



The details of plenary sessions as follows,

Keynote Session

Title of Talk: "Optimization-based formal synthesis of control strategies for dynamical systems"

Keynote Speaker: Calin Belta, Boston University, USA

Chair: Amitava Chatterjee, Jadavpur University, India

Date: January 8, 2021

Time: 5:45 pm IST

Plenary Session 1

Title of Talk: "LSI Testing: A Core Technology to a Successful Semiconductor Industry"

Plenary Speaker: Xiaoqing Wen, Kyushu Institute of Technology, Japan

Chair: Amlan Chakrabarti, University of Calcutta, India

Date: January 9, 2021

Time: 3:45 pm IST

Plenary Session 2

Title of Talk: "Recent advances in non-intrusive sensing based on magnetically or capacitively coupled schemes and related applications"

Plenary Speaker: Boby George, Indian Institute of Technology, Madras, India

Chair: Sreeraman Rajan, Carleton University, Canada

Date: January 10, 2021

Time: 10 am IST

Attendance / Audience breakup:

IEEE members	Non-IEEE members
84	126

Event 2:

Event Name: Webinar on "5G Cellular Networks"

Date: 12 June 2021

Venue: Google Meet, Virtual Platform

Lecture tittle: " 5G Cellular Networks "

Speaker: Dr. Lillykutty Jacob, Professor, NIT Calicut.

Organized by: Membership Development Committee, IEEE Kolkata Section, Joint IEEE CSS-IMS Kolkata Chapter and IEEE EDS Kolkata Chapter

IEEE Membership Development Committee (MDC), Kolkata section in association with IEEE EDS and IEEE Joint CSS-IMS Chapter Kolkata was organized a talk with the title "5G Cellular Networks" delivered by Dr. Lillykutty Jacob, Professor, National Institute of Technology Calicut on June 12, 2021, at 5:30 pm IST.
The program started with the welcome address by Dr. Mousiki Kar, Chair of IEEE Electron Device Society, Kolkata Chapter. She also briefly discussed the objectives, benefits, and features of IEEE. Then Dr. Rajarshi Gupta, Chair of IEEE Joint CSS-IMS Kolkata Chapter, introduced the speaker to the audience.

This talk mainly focused on the following topics,

- Brief of wireless communication
- 5G network architecture
- Impact of 5G in environment
- Future of 5G networks

The lecture was ended with small interaction between the speaker and audience.

Attendance / Audience breakup:

IEEE members	Non-IEEE members
49	10

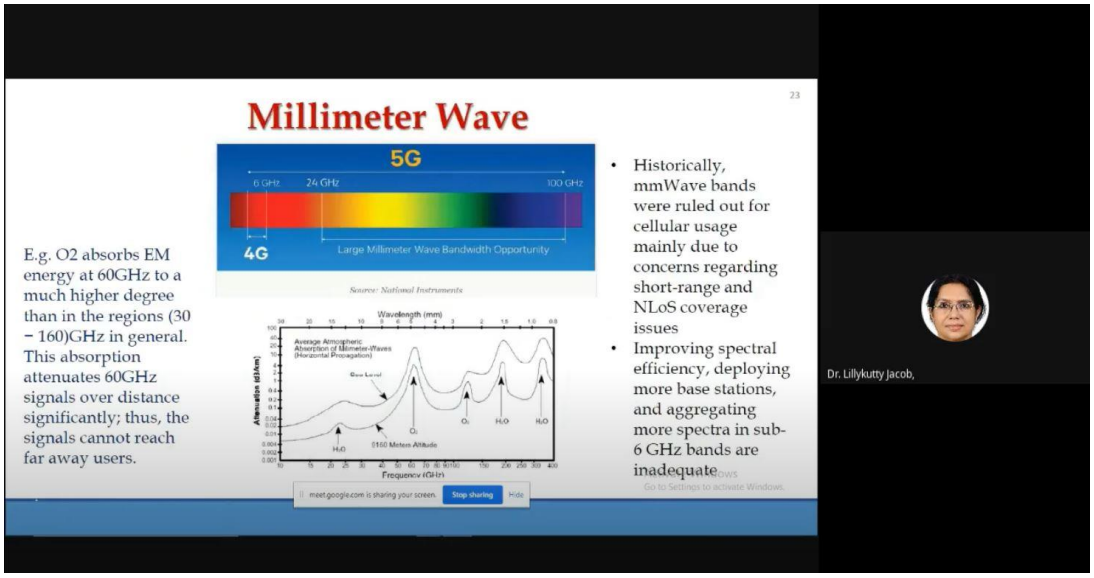


Fig : During the lecture by Dr. Jacob

Event 3:

Event Name: Webinar on “Soft Wearable Robotic Exosuit for Upper Arm Augmentation: Modeling and Control Design”

Date: 25 August 2021

Venue: Google Meet, Virtual Platform

Lecture tittle: " Soft Wearable Robotic Exosuit for Upper Arm Augmentation: Modeling and Control Design "

Speaker: Dr. Shubhendu Bhasin, Associate Professor, Electrical Engineering, Indian Institute of Technology Delhi.

Organized by: Joint IEEE CSS-IMS Kolkata Chapter

IEEE Joint CSS-IMS Chapter Kolkata was organized a talk with the title " Soft Wearable Robotic Exosuit for Upper Arm Augmentation: Modeling and Control Design” delivered by Dr. Shubhendu Bhasin, Associate Professor, Electrical Engineering, Indian Institute of Technology Delhi on August 25, 2021, at 6:00 pm IST. The program started with the welcome address by Dr. Rajarshi Gupta, Joint IEEE CSS-IMS Kolkata Chapter. Then Dr. Anindita Sengupta, Professor, Electrical Engineering Department, IIEST, introduced the speaker to the audience.

This talk mainly focused on the following topics,

- Brief of wearable assistive robotics
- Vision for a wearable exosuit
- Model of wearable exosuit
- Controller design for the wearable exosuit

The lecture was ended with small interaction between the speaker and audience.

Fig : Prof Bhasin was delivering the lecture

Attendance / Audience breakup:

IEEE members	Non-IEEE members
11	83

Event 4:

Event Name: Webinar on "(in)Secure IoT"

Date: 10 December 2021

Time: 6 pm IST

Venue: Google Meet, Virtual Platform

Lecture tittle: "(in)Secure IoT"

Speaker: Dr. Soumya Maity, Sr. Principal Engineer, Dell Technologies, Product & Application Security

Organized by: Joint IEEE CSS-IMS Kolkata Chapter

IEEE Joint CSS-IMS Chapter Kolkata was organized a talk with the title "(in)Secure IoT" delivered by Dr. Soumya Maity, Sr. Principal Engineer, Dell Technologies, Product & Application Security, on December 10, 2021, at 6:00 pm IST. The program started with the welcome address by Dr. Kaushik DasSharma, Vice-Chair, Joint IEEE CSS-IMS Kolkata Chapter.

The lecture started after introducing the speaker to the audience by Dr. Rajarshi Gupta, Chair of IEEE Joint CSS-IMS Kolkata Chapter. The lecture was on IoT and cyber-physical systems and its evolution. The prime discussion focuses on the threats to those devices and security measures. This talk explored some of the attack surfaces, their root cause, and why traditional cyber-security does not work well in such cases. The speaker also discussed the gaps in implementing the security countermeasures and some promising research areas related to it. The lecture was ended with small interaction between the speaker and audience. In the end, Kaushik DasSharma presented a token of appreciation to the speaker virtually.

Attendance / Audience breakup:

IEEE members	Non-IEEE members
16	98