

KOLKATA SECTION

Geo code R0 01 37

2020

PART A - SECTION SUMMARY

A.1 Executive Summary

- The **6th IEEE Kolkata Section's flagship conference CALCON -2020** was held at Hotel Senses, Salt Lake, Sector –V, Kolkata-91.
Date: 28th to 29th February 2020; **Number of Participants:** 230
Description: The focus of CALCON -2020 was the students and young professionals from academics and industry to engage themselves in good research and engineering for the benefit of the society. CALCON-2020 opened up good opportunities for the young professionals and students to learn from the eminent academicians from ISI Kolkata, IIT Bombay and IIT KGP who delivered keynote speeches in three different tracks on first day of the conference.
- IEEE Kolkata Section organized "**Sir C V Raman Milestone Lecture**"
Date: **7th November 2020 at 06:00 PM (IST).**
Description: The title of the lecture was "**From Sundials to Atomic Clocks - a glimpse into the amazing journey**". Speaker was Dr. Amitava Sen Gupta. Dr. Sen Gupta is a Fellow of the National Academy of Sciences, India, Fellow of the Institution of Electronic and Telecom Engineers (IETE), India, Fellow and former President of the Metrology Society of India, General Secretary of the Indian Radio Science Society and a Senior Member of the IEEE, USA. He was awarded the prestigious O. P. Bhasin Foundation award for Science and Technology for the year 2002 for outstanding contributions in the field of Electronics and Information Technology.
- IEEE Kolkata Section in association with Dept. of Electrical Engg., St. Thomas College of Engg & Tech., Kolkata, Organized a one-day Webinar on "**Trends in Future Power Systems and its Relevance in the Indian Scenario**".
Date: on Saturday 29th August 2020.
Description: The seminar (Webinar) was organized which included interactive session for students and faculties with experts from renowned institutes. Everyone had a good exposure on future trends in power system.
1st Speaker: Prof. Praveen Kumar, IIT Guwahati
Title: "E-mobility V and the Grid: Indian Scenario"
2nd Speaker: Prof. Debaprasad Kastha, IIT Kharagpur
Title: "Wind Power Generation, Past, Present & Future"
3rd Speaker: Prof. Bijaya Ketan Panigrahi, IIT Delhi
Title: "Cyber-security in Power System "
4th Speaker: Prof. Kishore Chatterjee, IIT Bombay
Title: "Power Evacuation Strategies from Solar Photo Voltaic Systems ".
- IEEE Kolkata Section in collaboration with NSEC and CII Organized a webinar titled "**Design Thinking in Entrepreneurship**".
Date – 6th April,2020; **Number of attendees** – 306
Description: Lecture was delivered by Mr. Kaushik Bhattacharya, Business Growth, Sales and Strategy leader.
- IEEE Kolkata Section in collaboration with Netaji Subhash Engineering College and CMA organized a webinar titled **Innovation and Branding**.
Date – 9th April,2020; **Number of attendees** – 436
Description: Lecture was delivered by Mr. TVS Shenoy Chief-New materials division, TATA STEEL.
- IEEE Kolkata Section in collaboration with Netaji Subhash Engineering College and CII organized a webinar titled **"IPR and Innovation"**.
Date – 23rd April,2020; **Number of attendees** – 586
Description: Lecture was delivered by Prof.(Dr.)Manas Kumar Sanyal, (HOD-HRM)IIEEST, Kolkata .
- IEEE Kolkata Section in collaboration with Netaji Subhash Engineering College and CII organized a webinar titled **Build your professional branding through digital platform** .
Date – 25th April,2020; **Number of attendees** – 235

- Description:** It was delivered by Mrs. Leena Das Ghosh, Director(HR) at HITA Technology Pvt Ltd .
- IEEE Kolkata Section in collaboration with Netaji Subhash Engineering College and CII organized a webinar titled **“Building a successful startup! Need of investor to grow your business”**.
Date – 29th April, 2020; **Number of attendees** – 412
 - Description:** It was delivered by Mr. Arijit Bhattacharya, Serial Entrepreneur, Angel Investor, Public .
 - IEEE Kolkata Section in collaboration with Netaji Subhash Engineering College and CII organized a webinar titled **Disruption is the new normal-Ways to cope post lockdown** .
Date – 13th May, 2020; **Number of attendees** – 325
 - Description:** Lecture was delivered by Col. Prabir Sengupta.
 - **Prof. Sivaji Chakravorti** has been elected **Vice-President of Indian National Academy of Engineering** with effect from 1st January, 2021.
 - **Prof Debatosh Guha** has been elected **Fellow of Indian Academy of Sciences (IASc)**, Bangalore with effect from 1st January, 2021.
 - **Dr. Raghendra Kumar Chaudhary is an Assistant Professor of the Department of Electronics Engineering, Indian Institute of Technology (ISM) Dhanbad, India** has been conferred with the prestigious **INAE Young Engineer Award 2020** in the INAE ANNUAL CONVENTION 2020. The award, instituted by the INAE (an autonomous institute of the DST, Govt. of India), recognizes the excellence in engineering research contributions in form of this national award, which is given every year to young scientists for their outstanding contributions in the field of engineering research and technology development in India.
 - **Prof. Sushmita Mitra** was selected as the **IEEE Author of the Month** for the month of September, 2020
 - **Prof. Sushmita Mitra** was selected as IEEE CIS Distinguished Lecturer for the period 2020-2023
 - **Prof. Sanghamitra Bandyopadhyay** has received the **INAE Women Engineer of the Year 2020** award
 - **Prof Salil K Sanyal** has become a member of the Editorial Board of IEEE CIRCUITS AND SYSTEMS MAGAZINE (IEEE CAS-M) for the year 2021
 - IEEE Rourkela Subsection under the aegis of Kolkata Section shall formally start functioning from 2nd January. 2021 onward.
 - IEEE Kolkata Section/Bhubaneswar Sub-section Power Electronics Society Joint Section Chapter is formed
 - Approval obtained to form the **IEEE Nanotechnology Council Chapter** of IEEE Kolkata Section.
 - Four Members of IEEE Kolkata Section has been appointed in R10 as follows:
 - Mr. Sanjay Kar Chowdhury in the post of Chair IRC
 - Mr. Pallab Ganguly in the post of IRC Coordinator
 - Prof. Sudipta Chatterjee in the post of R 10 WIE Committee Member
 - Dr. Tridibesh Nag in the post of Newsletter Coordinator.
 - **Mr. Sanjay Kar Chowdhury** has been selected to serve as Vice Chair, Operations, Outreach and Strategy Planning, IEEE India Council for 2021.
 - IEEE Kolkata Section received **USD 3,500** from IEEE R10 as incentive grants for the submitted Sections/ Council reports, which have been evaluated by R10 Awards & Recognitions Committee and R10 Operations Committee.
 - This year IEEE Kolkata Section recognizes contribution of its illustrious members in the following categories:
 - 1) **'Lifetime Achievement' Awardees for 2020:**
 - Prof. Dipak Kumar Basu
 - Prof. Nirmalendu Chatterjee
 - 2) **'Outstanding Volunteer(s)' of Kolkata Section for 2020:**
 - Brojo Kishore Mishra (Senior Member #92107685)
 - Saptarshi Chatterjee (Member #93634671)
 - Susanta Ray (Member #93326544)
 - 3) **'Outstanding Student Volunteer(s)' of Kolkata Section for 2020:**
 - Ardhendu Kundu (Graduate Student Member #92866405)
 - Rakesh Sarkar (Graduate Student Member #95449229)
 - Tanmoy Kundu (Graduate Student Member #95190452)

A.2 List of Section Officer and Executive Committee Members

1	Sanjay Kar Chowdhury	Chair
2	Sushmita Mitra	Chair-Elect
3	Iti Saha Misra	Vice-Chair
4	Debangshu Dey	Secretary
5	Atanu Kundu	Treasurer

Members		Elected Officials	
1	Mita Nasipuri	1	Chair AP-MTTS Chapter
2	Arijit Basu Ray	2	Chair CAS Chapter
3	Sovan Dalai	3	Chair CIS Chapter
4	Suparna Kar Chowdhury	4	Chair Computer Chapter
5	Bhaskar Gupta	5	Chair COMSOC Chapter
6	Nibaran Das	6	Chair DEIS Chapter
7	Tridibesh Nag	7	Chair EDS Chapter
8	Raghvendra Kumar Chaudhary	8	Chair GRSS Chapter
9	Koushik Dutta	9	Chair IAS Chapter
10	Chandreyee Sarkar	10	Chair PES Chapter
11	Sayan Chatterjee	11	Chair Photonics Chapter
12	Susanta Ray	12	Chair YP Affinity Group
13	Sarmistha Neogy	13	Chair WIE Affinity Group
		14	Chair SIGHT Affinity Group
		15	Chair CSS-IMS Chapter
		16	Chair SSC Chapter
		17	Chair Signal Processing Chapter
		18	Chair Patna Sub-section
		19	Chair Bhubaneswar Sub-section

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Details

Section Membership (Excluding subsections)	IEEE Grades	Associate Member	28
		Fellow	9
		Graduate Student Member	537
		Life Fellow	2
		Life Member	8
		Life Senior	26
		Member	1,046
		Senior Member	297
		Student Member	528
	Other Grades	Affiliate	13
Total		2,494	
Bhubaneswar Subsection	IEEE Grades	Associate Member	2
		Graduate Student Member	132
		Life Senior	1
		Member	286
		Senior Member	64
		Student Member	114
	Other Grades	Affiliate	3
Total		602	
Patna Subsection	IEEE Grades	Associate Member	2
		Graduate Student Member	23
		Member	45
		Senior Member	21
		Student Member	45
Total		136	
Rourkela Subsection	IEEE Grades	Graduate Student Member	28
		Member	54
		Senior Member	20
		Student Member	1
Total		103	
Total		3,335	

B.2. Chapter

Total Active Chapters: 16

India Council Chapter: 02

- **Chapter wise Activity Summary: Activities (Detailed reports of individual chapters are given in Annexure I)**
- IEEE Signal Processing Society, Kolkata Chapter has organized the 2nd IEEE Conference on **Applied Signal Processing (ASPCON 2020)** at Jadavpur University, Kolkata, India.
Date: 7th to 9th October 2020; **Number of Attendees:** 120
Description: This is the flagship event of Kolkata chapter, which was in line with the present-day requirements in the global scenario. It was a fully Virtual Conference due to the COVID 19 pandemic

and it was organized using the ZOOM software platform. Researchers from all over the world, specially from various parts of India participated in the conference. Total 183 papers were submitted and after initial screening 152 papers were considered in single blind review process. 75 papers were accepted for oral presentation. There were also keynote speeches on various aspects of applied signal processing by leading academicians of India and abroad.

- **“A Five-Day Workshop On “Application Of Python In Big Data, Natural Language Processing (Nlp), and Social Network Analysis (SNA)”**at Department of Computer and System Sciences, Visva Bharati University ,Santiniketan, West Bengal, India 731235.

Date: 12th to 16th February 2020,

Number of Attendees: 82

Description: This was organized by Department of Computer and System Sciences, Visva-Bharati in technical collaboration with IEEE Computational Intelligence Society, Kolkata Chapter. The participants were faculty members, researchers, and students from science and engineering background. The resource persons include - Dr. Koushik Mondal from IIT(ISM), Dhanbad, Dr. Sarbani Roy and Dr. Sudip Naskar, both from Jadavpur University, Dr. Jija Das Gupta, Mr. Sheikh Rafiul Islam, Mr. Ananda Guha all from AILabs, DCG DATA-CORE SYSTEMS PVT. LTD.

- National Webinar On "Applications of AI And Machine Learning: The Opportunities And Challenges"
Date: 28th July 2020 ;

Number of attendees: 600+

Description: The one day event was organized by IEEE Computational Intelligence Society, Kolkata Chapter hosted by the Department of Computer Science and BCA of Belda College, West Bengal under their initiative "Emerging Trends in Computer Science and Application - 2020".

- One-Day Lecture Meeting On "Smart Grid, AMI And Smart Metering"was organized by CSS-IMS Kolkata Chapter in collaboration with Department of Applied Physics at University of Calcutta .

Date: 3rd February 2020 ;

Number of attendees: 60

Description: The talk aimed at developing and deploying deep learning applications on Smart Grid, AMI & Smart Metering. Speaker was Mr. Subhadip Pal, Head of Application Engineering Team of Landis + Gyr, India .

- IEEE Computational Intelligence Society Distinguished Lecture Program.

Date: 17th September , 2020;

Number of attendees: 120

Description: Speaker was Prof. Pau-Choo Chung (Julia) (2019-2021) of the Department of Electrical Engineering, National Cheng Kung University, Tainan, Taiwan ROC.The event was hosted by the Department of Computer Science of Gourbanga University, Malda, West Bengal. Topic of the talk was Convolutional Networks for Medical Image Analysis: Its Past, Future, and Issues

- National Seminar On “Weather Dependent Prediction Of Renewable Energy Generation For Grid Management”was organized by CSS-IMS Kolkata Chapter as technically co-sponsored event at Meghnad Saha Auditorium, University of Calcutta.

Date: 12th March 2020;

Number of attendees: 150

Description: The speakers were Parthasarathi Mukhopadhyay, (Scientist-E, Indian Institute of Tropical Meteorology, Pune), Ms. Anasuya Gangopadhyay, IISc, Bangalore, Sri Sushant Kumar, (Project Scientist – C, National Centre for Medium Range Weather Forecasting, Noida), Rajib Das, (Dy GM, Planning, CESC Limited, India) and Sri Surajit Banarjee, DGM. HOD, Eastern Regional Load Despatch Centre, Tollygaunge, Kolkata).

- IEEE PES Chapter Kolkata Section in association with Netaji Subhash Engineering College organized International Conference in Convergence of Engineering, ICCE-2020 through virtual Platform AIRMEET.

Date: 5th-6th September 2020;

Number of attendees: 548

Description: In ICCE-2020 there was excellent deliberations by leading academicians, scientists, researchers and Industry stalwarts from all over the globe. A total 52 sessions include 7 Key-note addresses, 12 Plenary sessions, 8 Special sessions, 6 workshops & Tutorial sessions, 2 Industry Panel Discussions, 1 Students’ Panel Discussion and 16 Interactive technical sessions were organized concurrently in six virtual auditoriums.

- A Technical Lecture Meeting was organized by IEEE IAS Kolkata Chapter at the Seminar Hall of the Department of Electrical Engineering at Indian Institute of Engineering Science and Technology, Shibpur, on the topic “PLC and its Application in Industry.”

Date: 6th November, 2019;

Number of attendees: 18.

Description: The talk was presented by Mr. Rupankar Chakrabarti, ex-DGM, SAIL. The talk focused on the PLC applications in industry.

- A Technical Lecture Meeting was organized by IEEE IAS Kolkata Chapter at the Seminar Hall of the Department of Electrical Engineering at Indian Institute of Engineering Science and Technology, Shibpur, on the topic “Recent Development On Solid State Transformer (SST) & Inverters For Renewable Energy Applications.”

Dates of the event: 17th December, 2019;

Number of attendees: 27

Description: The talk was delivered by Dr. Avik Bhattacharya, Assistant Professor, Department of Electrical Engineering, IIT Roorkee. In this presentation, recent emerging technological advancements,

designing and modelling studies on SST and Inverter Topologies for Renewable Energy applications was discussed.

- A Technical Lecture Meeting was organized by IEEE IAS Kolkata Chapter through the online platform Google-Meet, on the topic “Automation of CTC Tea Manufacturing Process”.
Dates of the event: 24 th September, 2020; Number of attendees: 12
Description: The talk was delivered by Mr. Amit Banerjee, Director, M/s Intellixa Pvt. Ltd., Kolkata. The talk discussed the various aspects and problems of 'Crush, Tear and Curl (CTC)' tea-manufacturing process.
- A Technical Lecture Meeting was organized by IEEE IAS Kolkata Chapter through the online platform Google-Meet, on the topic “Control of Power Electronic Converters for Different Applications.”
Dates of the event: 28th September, 2020; Number of attendees: 30
Description: The talk was delivered by Dr. Tapas Kumar Saha, Professor, Department of Electrical Engineering, NIT Durgapur. The talk deals with the applications of Power Electronic Converters in the field of machine control, vector controlled drives and energy systems.
- COMSOC Kolkata Chapter in association with Netaji Subhash Engineering College organized an Industry Panel Discussion in ICCE-2020 . Topic of the discussion was “In this global pandemic situation of COVID 19, AI & ML: Miracle or Menace.”
Dates of the event: 5th September 2020; Number of attendees: 85
Description: COMSOC Chair Mr.Pallab Ganguly, chaired the session and was moderated by Mr. Subhamoy Chakraborti , CIO, ABP Pvt Ltd. The other panelist were Mr. Sanjay Das, Jt.Secretary, Ministry of IT & Electronics, Govt.of West Bengal, Mr.Sanjay Prasad, CIO,CESC Ltd., Mr. Partha Sengupta, Senior VP ,ITC Infotech, Mr. Sourav Das, CIO, Essel Mining & Industries, Aditya Birla Group and Ms. Soma Ghosh, Senior Security Analyst, CERNER Corporations. It was a very thoughtful and informative discussion and the audience enjoyed it thoroughly.
- IEEE PES Kolkata Chapter organized a Distinguished Lecturer Program Webinar on “Energy Efficiency In Smart Buildings Through Iot Sensor”.
Dates of the event: 4th August 2020; Number of attendees: 125
Description: Speaker was Prof. Saifur Rahman Joseph R. Loring professor of electrical and computer engineering at Virginia Tech, USA through Cisco Webex.
- IEEE PES Kolkata Chapter organized a Distinguished Lecturer Program Webinar on “Dynamic Estimation And Control Of Power System” .
Dates: 20th August 2020; Number of attendees: 106
Description: Speaker was Prof. Bikash C Pal Professor , Department of Electrical and Electronic Engineering, Imperial College London, London, U.K. through Cisco Webex.
- DEIS Kolkata Chapter organized a Webinar on “Remote Monitoring of High Voltage Insulators”.
Dates of the event: 25th July, 2020; Number of attendees: 128
Description: Speaker was Prof. Sivaji Chakravorti, Director, NIT Calicut. A large number of interested Students and Researchers, Professionals from Academics and R&D Institutes, Professionals from Industries took part in this online lecture. Online Platform used was Cisco Webex .
- DEIS Kolkata Chapter organized a Webinar on “Smart Grid in the 21st Century”.
Dates of the event: 29th July 2020; Number of attendees: 103
Description: Speaker was Prof. Akhtar Kalam, Victoria University, Australia. Online Platform used: Cisco Webex
- International Seminar cum Research Colloquium on “MEMS based Sensors and Smart Nanostructured Devices” was held at Jadavpur University.
Date: 30th September 2019; Number of attendees: 200
Description: Program was sponsored by RUSA 2.0, IC Design & Fabrication Center, Dept. of ETCE and technically co-sponsored by IEEE EDS Kolkata Chapter.
- International Webinar On "Natural Language Processing – Basics To Open Research Domains."
Date: 3rd October 2020; Number of attendees: 142
Description: The Department of Computer Science and Engineering, Meghnad Saha Institute of Technology, organized an International Webinar on "Natural Language Processing - Basics to Open Research Domains" . The webinar was hosted in technical collaboration with IEEE Computational Intelligence Society, Kolkata Chapter.
The resource person for the event was Dr. Mohammed Hasanuzzaman, Lecturer at the Department of Computer Science, Cork Institute of Technology (Munster Technological University), Ireland. He is also a Funded Investigator of the ADAPT Centre – Ireland's Global Centre of Excellence for Digital Content and Media Innovation, and Funded Investigator of Science Foundation of Ireland, Ireland. The Chairperson of IEEE Computational Intelligence Society, Kolkata Chapter, inaugurated the webinar as the Chief Guest for the event. The complete webinar was held using the Google Meet platform and was also hosted live on the Departmental page of facebook.
- Webinar On "How To Manage Paper Reviews Effectively?"

A webinar on "How to Manage Paper Reviews Effectively?" was organized by CSS-IMS Kolkata Chapter. The speaker was Prof Narasimhan Sundararajan. This talk mainly focused on writing research papers, understanding the review process, and answering the reviewer's questions appropriately.

Date: 30th July 2020; Number of attendees – 60.

- Webinar On: Assistive Humanitarian Devices: Measurement, Instrumentation And Control Perspective
A webinar on "Assistive Humanitarian Devices: Measurement, Instrumentation and Control Perspective" was organized organized by CSS-IMS Kolkata Chapter.

Date: 19th September 2020; Number of attendees – 26

Description: The speaker was Prof Celia Shahnaz, Chair, IEEE Bangladesh Section. The talk mainly focus on assistive humanitarian devices where measurement, instrumentation, and control mechanisms are used to perform intelligent tasks, even applicable and usable by disabled communities.

- The 3rd edition of IEEE Indian Conference on Antennas and Propagation, InCAP 2020, supported by the IEEE AP/MTT-S Kolkata Chapter was organized in a virtual mode under the leadership of Prof. Debatosh Guha, University of Calcutta as the General Chair. Previously it was supposed to be held at Hyatt Regency Kolkata, but due to the worldwide pandemic, the event was rescheduled as a virtual one.

Date: 17-20 December 2020; Number of attendees – 500+

Description: The event was inaugurated by IEEE AP-S president elect Prof. Yahia Antar from RMC Canada. The technical program comprised of a package of tutorials, plenary talks and special sessions by leading experts across the globe from both academia and industry, among whom was present Prof. Makoto Ando, from Tokyo, Japan President URSI and former President of IEEE AP-Society. The section of contributory papers has been withdrawn for this year and the participants could register on a zero payment basis. The closing ceremony was graced by the AP-S President Prof. Mahta Moghaddam, from the University of Southern California. Dr. Sujoy Biswas, Chair-AP-MTTs Kolkata Chapter and a group of volunteers from IEEE AP-MTT Kolkata Chapter conducted the proceedings online.

- A technical webinar was organized by the IEEE AP/MTT Joint Chapter Kolkata.

Date: 24th June, 2020; Number of attendees – 50

Description: The distinguished speaker for the program was Prof. Chow-Yen -Desmond Sim, Distinguished Professor and Head of Dept. of Electrical Engineering, Feng Chia University, Taiwan. Prof. Sim delivered his talk on "*Recent Development in MIMO Antenna Designs at Sub-6GHz and mmWave for 5G Smartphones Applications*".

- The IEEE AP/MTT Joint Chapter Kolkata in association with Jyoti Electronics organized a 2-day technical workshop on the topic of "Antenna Design & Simulation using CST Studio".

Date: 29th – 30th June, 2020; Number of attendees – 140

Description: Mr. Deepesh Kumar Singh presented to the participants on the topic with hands on sessions. The workshop was highly beneficial for all the participants.

- A one-day workshop on "*Antenna Engineering*" was organized by the IEEE AP/MTT Joint Chapter in association with IEEE ICCE 2020.

Date: 4th September, 2020; Number of attendees – 50+

- A 5-day online short-term course on "*Antenna and Microwave Fundamentals, Theory, Modeling, Test and applications for Space, Air and Ground Systems*" was organized at the National Institute of Technology Rourkela (NITR), India in association with the IEEE AP/MTT Kolkata Chapter .

Date: 26th -30th September,2020; Number of attendees – 150

- A two-day webinar series on "*Recent Trends in Antenna Technology for Modern-Day Communications*" was organized jointly by the IEEE AP/MTT Kolkata Chapter and the KIIT University.

Date: on 3rd and 4th October, 2020; Number of attendees – 165

- A technical webinar was organized by the Computer Chapter of The IEEE Kolkata Section at Department of Computer Science and Engineering, Aliah University, Kolkata.

Date: 10th January, 2020; Number of attendees – 90

Description: The distinguished speaker for the program was By Dr. Jacek Sroka, University of Warsaw, Poland. Topic of the talk was "*Computational Methods for Experimental Data Driven Inference of Spatial Genome Conformation*".

- A technical webinar was organized by the Computer Chapter of The IEEE Kolkata Section at Department of Computer Science and Engineering, Aliah University, Kolkata.

Date: 10th January, 2020; Number of attendees – 90

Description: The distinguished speaker for the program was Prof. Dariusz Plewczyński, University of Warsaw, Poland. Topic of the talk was "*Comparative Study of Clustering Algorithms: A Big Data Perspective*".

- A technical webinar was organized by the Computer Chapter of The IEEE Kolkata Section at Computer Science & Engineering Dept. Jadavpur University.

Date: 14 February 2020; Number of attendees – 20

Description: The distinguished speaker for the program was Christian Kollmann, Assistant Professor, Center for Medical Physics & Biomedical Engineering, Medical University of Vienna. Topic of the talk was “*Ultrasound Images*”.

- A Three Day Faculty Development program on “Important Aspects of Electrical Power and Energy” was organized by IEEE PES Kolkata Chapter in association with IEEE Kolkata Section and MSIT using Zoom Platform.

Date – 30th September to 2nd October 2020;

Number of attendees – 31

Description: There was various technical lectures from eminent scholars and the program ended with a hands on session on “Application of embedded systems in Power and Energy.

- IEEE IES Kolkata Chapter and IEEE Bhubaneswar Subsection in association with KIIT organized IEEE Talk in observance of IEEE Day on “**Harmonics, VA r and Power Factor in Power System with Static Converters.**”

Date: 3rd October 2020;

Number of attendees - 120

Description: The talk was delivered by Prof. Sujit Kumar Biswas, Vice Chair Technical Activities, IEEE India Council.

- St. Thomas College of Engineering and Technology in association with IEEE Kolkata Section organized a webinar on “Trends in Future Power Systems and its Relevance in the Indian Scenario.”

Date: 29th August 2020;

Number of attendees - 132

Description: Four distinguished speakers delivered lectures in this workshop and the details are as follows:

1st Speaker: E-mobility and the grid: Indian Scenario by Prof.Praveen Kumar, IIT Guwahati.

2nd Speaker: Wind Power Generation, Past,Present and Future by Prof.Debaprasad Kastha, IIT Kaharagpur.

3rd Speaker: Cyber-Security in Power System by Prof. Bijaya Ketan Panigrahi, IIT Delhi.

4th Speaker: Power Evacuation Strategies from solar photo voltaic systems by Prof. Kishore Chatterjee, IIT Bombay.

- IEEE Day Celebration by Women In Engineering(WIE) in association with IEEE Bhubaneswar Subsection
Date: 5th October,2020

Number of attendees – 100+

Description: Topic of the lecture was ‘Intelligent analysis of brain images’. Speaker was Prof. Sushmita Mitra, Fellow IEEE, Fellow INSA, Fellow IAPR, Fellow INAE and NASA India.

- 6th IEEE international Women in Engineering (WIE) Conference on Electrical and Computer Engineering 2020 (IEEE WIECON-ECE 2020) was organized by IEEE Bhubaneswar Subsection and IEEE WIE AG Bhubaneswar SubSection in collaboration with IEEE Bangladesh Section and IEEE WIE AG Bangladesh Section.

Date: 26th & 27th December 2020

Number of attendees – 200+

Description: Due to COVID 19 Pandemic situation, this year’s IEEE WIECON-ECE 2020 was held as a virtual conference. The conference aimed to bring together leading academic researchers and research scholars to exchange and share their experiences and research results on all aspects of Electrical Engineering and Computer Science. It also provided an interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered, and solutions adopted in the fields of Electrical and Computer Engineering.

- **International Virtual School on Application of Machine Learning and IoT in Remote Sensing(CHAPNET 2020)** was organized by **IEEE GRSS Chapter Kolkata Section .**

Date: **4th-5th December 2020 ;**

Total Number of participants were 90.

Description: In the 2020 Chapnet program, six chapters with two chapters from outside India participated . These Chapters are from Singapore Section, Washington DC and Northern VA Chapter. From India, Kolkata, Bombay, Delhi and Hyderabad Section participated . There were six speakers, who delivered their lectures during these two days. Dr. SrijaChakrabarty from NASA has delivered a talk about “Feature extraction from VIIRS observations for monitoring the earth at night” while DrYee Hui Lee of NTU Singapore talked about “Machine learning for GPS remote sensing application”. In addition to that Prof. Ashishghosh (ISI, Kolkata), Dr. Avik Bhattacharya (IIT, Mumbai), Dr. P. K. Champati Roy (ISRO,India) and Dr. Debadatta Swain (IIT, Bhubaneswar) delivered lectures about various aspect of Remote sensing using Machine Learning techniques.

B.3 Formation of New Student Branch

Newly formed Student Branches (SB) / Student Branch Chapters (SBC) 2020

Sl No.	Unit Name	Geo-code	Formation date
1	Calcutta Univ Of-Univ C of Tech Photonics Society Student Branch Chapter	SBC28561D	January 29, 2020
2	Indian Instt of Engg Science & Tech-SHIBPUR Microwave Theory and Techniques Society Student Branch Chapter	SBC20125D	March 2, 2020
3	GIET University Signal Processing Society Student Branch Chapter	SBC11514	March 12, 2020
4	GIET University Power & Energy Society Student Branch Chapter	SBC11514A	March 16, 2020
5	Indian Institute of Information Technology Ranchi Student Branch	STB98725	August 27, 2020

B.4 Affinity Group Activities

Total Affinity Groups: 03

WIE

- **Sponsoring Awards in the International Conference on Computers and Devices for Communication (CODEC 2019)**

Date: 19/12/2019 to 20/12/2019

Venue: Hotel Taj Gateway, Kolkata

IEEE WIE, Kolkata Section, handed over Cash Awards and Certificates of Appreciation at “International Conference on Computers and Devices for Communication (CODEC 2019)” held at Hotel Taj Gateway, Kolkata, during 19/12/2019 to 20/12/2019 to motivate young researchers, especially students and research scholars. The awards were dedicated for the Poster Session which was held on December 20, 2019. IEEE WIE Kolkata Section handed over the following Cash Awards and Certificates: 1 WIE Best Student/Research Scholar Paper Award: (Rs.2000/- Cash Prize and Certificate of Appreciation) Title of the Paper: Numerical Investigation of Gate Field Plate AlGaIn/GaN HEMT with Multi-Recessed Buffer Recipient: Neha, Deen Dayal Upadhyay College, University of Delhi 2 WIE Student/Research Scholar Paper Award: (Rs.1000/- Cash Prize and Certificate of Appreciation) Title of the Paper: Design of 8-stage RF to DC Converter for Energy Harvesting Applications Recipient: Qudisia Masood, Muffakham Jah College of Eng. And Tech., Hyderabad

- **Sponsoring Award in the The Third International Workshop On Networking Women In Distributed Computing And Networks (NWDCN 2020)**

Date: 04/01/2020

Venue: Hotel Hindustan International, Kolkata

IEEE WIE, Kolkata Section, handed over Cash Award and Certificate of Appreciation at “International Workshop On Networking Women In Distributed Computing And Networks (NWDCN 2020)” held in conjunction with the “International Conference On Distributed Computing And Networks (ICDCN 2020)” held at Hotel Hindustan International, Kolkata, on 04/01/2020 to motivate young researchers, especially students and research scholars.

- **Playing the Role of one of the Panelists by Sudeshna Choudhury (Vice-Chair of WIE, Kolkata) in International Covid 19 Congress (ICC 2020)-Challenges and Opportunities for WIE in COVID 19**

Organization: WIE, IEEE Bangladesh Section

Date: 09/08/2020

Attendee - 50+

Description:

Panelist in the WIE track for International Covid 19 Congress (ICC 2020) on 9th August. Exploring Challenges, Opportunities and Solutions for Women in Engineering during COVID -19 was the topic for the track. Women Leaders across the world shared their views and experience on the same. The single message which came out prominently is how much collaboration is key to all that is emerging as opportunities in this space. Sudeshna Choudhury provided her views on how in today's world, the redefinition and re-imagination of workplace has become relevant in Utilities industry, how data and diversity can be the key behind the success of effective implementation of remote workforce solutions not only in terms of execution but also in decision making and enabling the ecosystem to be more diversity inclusive.

- **Seminar on Mental Health of Students**

Date: 20/08/2020

WIE, Kolkata Section organised an online Interactive Session on 20th August 2020, 4 Pm onwards with a psychologist and also with a career counselor to address the needs of the students to speak to a counselor in this distressing times as well as to provide a platform to them to discuss their career related questions. The event was targeted towards the students of class XI, XII and first year undergraduate students. The number of participants were kept limited to 100. The online event saw participation from Kolkata and its adjoining districts. Students from Bethune college, Auxilium Convent, Techno India Group public School Hooghly, to name a few had participated in the event.

A. Event with Psychologist

Topic Name: "Pandemic Effect on Teenagers: How to deal with it" by Dr. Aratrika Sen

Date and Time: 20th August 2020 at 4 pm

Mode: On-line

Mental Health of students during lockdown due to COVID -19 is a serious issue in today's perspective. So IEEE WIE Kolkata chapter organised an online interactive discussion program with the students to counsel them in this hours of crisis. Dr. Aratrika Sen, Psychiatrist discussed with the attendees the need to stay positive at this hour. She also stressed on not keeping pent up feelings but to discuss with parents, peers, teachers or even psychologists. Dr. Sen graciously shared her contact details for the students to connect with her in this hour of duress. The one hour long session spilled over and the speaker happily answered the queries of the participants ranging from high school students to senior Faculty members.

B.5 Student Activity: (Detailed report is attached in Annexure II)

- The Department of Electronics and Instrumentation Engineering (EIE), IEEE CAS Student Branch Chapter, ECE Department, Narula Institute of Technology in collaboration with IEEE CAS Chapter, Kolkata Network has jointly organized a webinar on "IEEE Student Membership Drive" followed by Technical Invited Talk on "IoT with Industry4.0" on 8th May 2020 from 4 PM to 6:30PM. Some of the Faculties of other states like Tamil Nadu etc. attended the talk. The students of EIE department of all years have attended the event. In addition to this faculty member of the college and outside state college participation was also there.

Prof. Dr. Joyanta Kumar Roy, Chair CAS Chapter was the keynote speaker of the session. He has given a technical talk on "Future Reconnects IoT with Industry4.0". The Students were highly motivated by the talk, as the speaker has shown the Virtual visit of the Mongal Pander Water Treatment plant in Barrackpore.

Professor Salil Kumar Sanyal, Ex-Professor, Jadavpur University and some dignitaries also attended the session which boosted up the confidence of the students.

Total Number of Students attended the event: 77

Faculty members: 18

- The IEEE Seminar on **Inauguration of Narula Institute of Technology, IEEE GRSS Student Branch Chapter under the aegis of ECE Department, followed by Technical Lecture program** was organised by IEEE GRSS Chapter, Narula Institute of technology, on 26th February, 2020.

In the Official Inauguration of IEEE GRSS Student Branch Chapter Plague, ECE Department, Narula Institute of Technology. Prof. (Dr.) B.Uma Shankar, Professor, ISI, Kolkata, Vice Chair, IEEE GRSS Kolkata Section and Prof. (Dr.) Ashish Ghosh, Professor, ISI, Kolkata, Former Chair, IEEE GRSS Kolkata Section handed over the plague to Prof. (Dr.) M.R. Kanjilal, Principal, Narula Institute of Technology and Dr. S. Panda, HOD, ECE, Narula Institute of Technology. All the delegates delivered their speech in the Inauguration.

The Speaker of the Technical Talk was **Prof. (Dr.) Ashish Ghosh** Professor, ISI, Kolkata, Former Chair, IEEE GRSS Kolkata Section. The technical lecture topic was on Data Science. He delivered his lecture on the implementations of IOT in various fields. He illustrated the very basic of data science, after collecting the data via sensors. The session motivated the students of 2nd and 3rd year present there.

- The first face to face meeting of IEEE CS SYP team was conducted as a part of TechX in Mandarmani on 28th February 2020. The members who couldn't physically be present joined in on the online meeting. The meeting was conducted to discuss this term plan. Various initiatives and ideas were discussed by various Initiative leads (student and young professional). The meeting ended with discussing the timeline of the Mandelman two flagship events of IEEE Computer Society, Computer society India Symposium (CSIS) and All India Computer society Students and Young Professional Congress (AICSSYC)
- IEEE day, as is widely known, is the day when engineers, tech geeks gather worldwide to celebrate the anniversary of the first time when IEEE members assembled in Philadelphia to share their technical ideas in 1884. To commemorate the day and its rich legacy, IEEE SB NIT Durgapur hosted a virtual gathering on 6th October 2020. The celebrations were held under the theme of “Leveraging Technology for a better tomorrow”. The event started with the first speaker Dr. Aniruddha Chandra, associate professor of the ECE department at NIT Durgapur and Marie Curie fellow at the Brno University who gave a talk titled ‘IEEE for me?’ on the benefits of IEEE and how IEEE has helped in his 2 decade long academic journey. He also discussed about the intricacies of writing a good research paper and talked about molecular communication and wireless power transfer. The first session concluded with a round of Q&A session where our executive members and other enthusiastic students of colleges asked various questions from diverse topics.
The second speaker for the day was Mr. Aniq Ur Rahman, researcher at the Communication Theory lab and former summer research intern at CERN. He is also an Ex-Chair of IEEE NITD SB and one of the founding members of our SB. Mr. Aniq held a talk about his association with IEEE and how it helped him in shaping his research journey. He also talked about the benefits of IEEE membership, how networking helps in getting access to job opportunities and honing leadership skills. Overall, the event was a grand success where more than 100 students virtually participated. The event concluded with a vote of thanks.
- IEEE TECH X CONGRESS 2020: TechX Congress 2020, the Eastern Indian Techno-Management Leadership Summit hosted by the IEEE Computer Society SYP MGAB technically co-sponsored by IEEE Kolkata Section, was officially inaugurated on the 28th of February, 2020 at the splendid Sun City Resort at Mandarmani. The event was co-hosted by student branches of NIT Durgapur and Jadavpur University. The purpose of this event was to promote IEEE activities within the section as well as serve as a platform where participants can augment their technical awareness and network with like-minded people. The event kick-started with an opening ceremony address by Ms. Soumya Kashyap, Secretary, IEEE CS SYP R-10. Day 1 witnessed several tracks including session on intersection of Technology and Management by Mr. Siddharth Rajhans, a Harvard educated technology entrepreneur who is currently working as a principal policy officer with the United Nations and Emotional Intelligence Track led by Miss Megha Ben .Day 2 marked a hub of several interesting competitions and workshops like Drone building workshop, PCB design workshop ,Talent development workshop and important sessions on 5G technology and Internet of things. The last day saw TechX coming to a great finale with its final two seminars, first being Applications of Machine learning by Mr. Shivam Abhilash. he delved into applications of Machine Learning

like recommendation systems and in the field of pharmaceuticals. This was followed by a hands-on session where the delegates were assigned problem statements which they had to brainstorm and find the solutions to using the concepts they learnt. The second session was Internship Boot Camp conducted by Ms. Ishani Nag and Ms. Prateek Chatterjee of IEEE NIT Durgapur where they laid out the roadmap on how to secure great internships. Both the days saw exciting Social Nights which left everyone grooving on their feet. The closing ceremony was marked by the night sky starred by sky-lit lanterns commemorating the enormous success of TechX. The feedback given by participants justified the hard work behind making the summit happen. It gave the participants a platform to network and learn, opening them to a plethora of opportunities to explore and grow.

- **ElevateX** was organized by IEEE Jadavpur University Industry and Applications Society Student Chapter

ElevateX was an all-in-one mentorship program organized by the IEEE Jadavpur University Student Branch. Be it research or industry, be it competitive coding, electronics or soft skill development, it had tracks tailor-made for students' needs, complete with doubt-clearing, quick contests, real-world problems and webinars by field experts. While everyone was stuck in the middle of a pandemic, locked up at home, this was a way of helping them to engage themselves in something productive.

- 2020 IEEE VLSI Device, Circuit and System Conference (VLSI-DCS) has been organized by the IEEE ED MSIT SBC on 18th-19th July, 2020. The conference was dedicated to provide an international forum for researchers and participants to report up-to-the minute innovation and development and exchange ideas and advances in all aspects of VLSI device, circuits and systems. The response to the conference's call for papers has been outstanding. **Total 236 papers were submitted to our conference out of which 104 papers have been registered for presentation, after being peer-reviewed.** Total 104 reviewers have been selected to provide a broad range of expertise, to balance junior and senior members, and to represent a variety of geographical locations. The reviewers have worked diligently to select papers and speakers that met the criteria of high quality and relevance to our various fields of interest. It takes time and a great amount of effort to review a paper carefully, and every member of the Technical Program Committee is to be commended for his or her contribution to the success of this conference. **Total 20 Plenary and Keynote speakers deliver their talks and 32 distinguished Professors chaired 16 parallel technical sessions. Total more than 150 attendees were present in the program out of which 73 were the IEEE members.** All the papers have been included in IEEE Explorer. Dr. Manash Chanda, Vice Chair, IEEE EDS Kolkata Chapter acted as General Chair under the patronage of Techno India Group.
- A technical lecture on **“Revolution in Society through Satellite”** by Dr. Parameswar Banerjee, Former Scientist G and Deputy director of National Physics Laboratory, India and presently associated with Amity University, was organized by NSEC IEEE GRSS SBC and Dr. Banerjee delivered his lecture on various aspects of communication satellite. He discussed about various mode of propagation and their applications in the field of space, aviation, and agriculture and disaster relief. He also discussed about various aspect of satellite communication in remote sensing.

- The AP-S Student Branch Chapter University of Calcutta has received the First Prize for SBC Activities in 2019 IEEE Indian Conference on Antennas and Propagations.
- On the occasion of IEEE DAY, THE IEEE VSSUT BURLA STUDENT BRANCH organised a webinar on " IEEE - Beyond the Sphere " on 5th October 2020 at 5:30 PM. The webinar was chaired by Dr.S.R Samantaray , Associate Professor, IIT Bhubaneswar and Secretary, IEEE, Bhubaneswar Sub-Section. The event started with the dignified words by Dr. Harish Kumar Sahoo, Branch Counsellor of the Student Branch. The event had around 40 participants. It threw insight on the advantages of IEEE, its reaches to regions, sections, sub- sections and branches, the authorship details, recognition through various awards & medals and different IEEE events organised throughout the year. As a whole this webinar was quite important in understanding the whole spectrum of IEEE. This was followed by a query resolution round. The whole event was streaming live in You Tube.
- NITS ComSoc SBC has organized Hacks 3.0 Hackathon. It was organised at the National Institute of Technology Silchar on the 1st February 2020. Hackathon is a blend of the words "hack" and "marathon" where developers had to use their sense of exploratory programming skills to complete an assigned task. The outcome of such hackathons is disruptive innovations that create a new niche for themselves and eventually displace current products.
- The event consisted of three modules, a coding competition, a software hackathon, and a hardware hackathon. A plethora of events, ranging from competitive programming and algorithms to developing software applications on real-time issues like digitization of immunization process, NGO monitoring, etc. and hardware applications on Road Condition Analysis/Monitoring system were conducted.
- A Technical talk by Dr. Raghvendra Kumar Chaudhary, IIT(ISM) Dhanbad has been organized by IEEE APS Student Branch Chapter, University of Calcutta in association with IEEE AP/MTT Kolkata Chapter on 29th November, 2020 in a virtual mode Platform (Google meet). Participants joined all over from India and many renowned personalities of Antenna and Microwave domain were present in the audience seat. It was started with an inaugural talk by Dr. Sujoy Biswas, AP/MTT Kolkata Chapter Chair and followed by a short inspiring talk about our speaker by Professor Debatosh Guha, University of Calcutta. The program was started on 3.00p.m. (IST) with almost 100 attendees and run smoothly with lots of technical throughputs by our eminent speaker till 4.30p.m. (IST).

PART C - OTHERS

C.1 Relationship with National Societies

- The relationship with National Societies like The Institution of Engineers (India), The Institute of Electronics & Telecommunication Engineers India, Computer Society of India is cordial.

C.3 Problems to be Anticipated

- ✓ Involvement of members in section activities not as per expectation
- ✓ Limited participation of section volunteers in national and international committees
- ✓ Limited Funding for attending conference
- ✓ Number of members from industry is low
- ✓ Student member retention is low and some student branches become inactive - explore possibility of re-opening of student branch through incentive schemes . However new student branches are formed and new members are added every year

C.4 Best Practices of your Section

- ✓ Active student branches
- ✓ Active participation of local students in IEEE activities

PART D – GOALS AND PLANS

D.1 Goals

- Retention of existing members through membership development Programs like elevation to Senior Member grade, recognizing the efforts of active members by awarding them citations or personalized plaques.
- Increasing activities of section by arranging more lecture meetings, not necessarily technical but also on public affairs, professional activities, educational trips for students to nearby industries.
- To spread the message of IEEE within Kolkata Section jurisdiction.

D.2 Implementation Plans

- To organize one-day Program involving all Branch Counsellors from all student branches.
- To organize meeting with other out stationed chapters and Subsections
- To organize some special memorial lecture in each year.

Annexure I: Chapter wise Detailed Report

AP-MTT

➤ **Lecture meeting on March 12th, 2020**

Lecture Meeting Program was organized by the IEEE AP/MTT Joint Chapter in association with IEEE AP-S Student Branch Chapter IEST on 12th March, 2020 at IEST. The distinguished speaker Dr. Somak Bhattacharyya, had delivered his lecture on “*Recent Advances of Metasurface Applications in High Frequency*”. The speaker highlighted on the recent applications of the metasurfaces and it was a highly enriching experience for the attendees. The event was attended by faculty members, research scholars and graduate students. The program was attended by 65 attendees.

➤ **Technical Webinar on 24th June, 2020**

A technical webinar was organized by the IEEE AP/MTT Joint Chapter Kolkata on 24th June. The distinguished speaker for the program was Prof. Chow-Yen -Desmond Sim, Distinguished Professor and Head of Dept. of Electrical Engineering, Feng Chia University, Taiwan. Prof. Sim delivered his talk on “*Recent Development in MIMO Antenna Designs at Sub-6GHz and mmWave for 5G Smartphones Applications*”. The event was attended by various faculty members, research scholars and students. 50 participants attended the webinar.

➤ **2-day Technical Workshop 29th – 30th June, 2020**

The IEEE AP/MTT Joint Chapter Kolkata in association with Jyoti Electronics on the topic of “*Antenna Design & Simulation using CST Studio*” organized a 2-day technical workshop. Mr. Deepesh Kumar Singh presented to the participants on the topic with hands on sessions. One hundred and forty participants including faculty members, researchers and students attended the event. The workshop was highly beneficial for all the participants.

➤ **One-Day Workshop on 4th September, 2020**

A one-day workshop on “*Antenna Engineering*” was organized by the IEEE AP/MTT Joint Chapter in association with IEEE ICCE 2020 on 4th September, 2020. Three distinguished speakers delivered lectures in this workshop and the details are as follows:

Lecture 1: Fundamentals of Antenna

Dr. Satyajit Chakrabarty, SAMEER Kolkata

Lecture 2: Low-profile Antenna Designs and Insights

Dr. Chandreyee Sarkar, IRPE, CU

Lecture 3: Multifunctional MIMO Antenna for 5G Communications

Prof. Raghendra Kumar Chaudhary, IIT (ISM) Dhanbad

More than 50 participants attended the event.

➤ **Five-day online short term course during 26th – 30th September, 2020**

A 5-day online short-term course on “*Antenna and Microwave Fundamentals, Theory, Modeling, Test and applications for Space, Air and Ground Systems*” was organized at the National Institute of Technology Rourkela (NITR), India in association with the IEEE AP/MTT Kolkata Chapter during September 26th -30th, 2020. Renowned speaker’s academia and the industry from around the globe delivered their lectures in this course. The list of distinguished speakers are as follows:

Dr. Sudhakar Rao (Northrop Grumman Space Systems, USA)

Dr. C.J. Reddy (Altair, USA), Dr. Nacer Chahat (NASA/JPL USA),

Prof. Animesh Biswas (NIT Rourkela)

Mr. Rajeev Jyoti (SAC, ISRO, Ahmedabad)

Prof. S. Raghavan (NIT Trichy)

Prof. Amalendu Patnaik (IIT Roorkee)

Dr. N N S R K Prasad (ADA, Bangalore)

Dr. Vamsi Krishna Veldi (URSC, ISRO)

Prof. Debabrati Sen (IIT Kharagpur)

Mr. B Pavan Kumar (URSC, ISRO)

Prof. Debolina Ghosh (IIT Bhubaneswar)

Prof. Eva Rajo Iglesias (Carlos III University, Madrid, Spain)

Dr. Beenamole K S. (LRDE, DRDO)

Dr. Venkata Vanukuru (GLOBALFOUNDRIES)

Dr. Gaurangi Gupta (IIT Kanpur).

The short-term course had more than 150 registration and 150 participants throughout the course from different parts of the globe, the majority of whom were research scholars, students and practicing professionals from industry and academia. The course provided a good balanced insight in the academic research, industrial development and upcoming areas of research in Microwaves and Antennas.

The course concluded with a Valedictory function with almost all the speakers and participants. With a vote of thanks to all the speakers for their precious time and support for the event.

➤ **Two-day Webinar Series on 3rd and 4th October, 2020**

A two-day webinar series on “Recent Trends in Antenna Technology for Modern-Day Communications” was organized jointly by the IEEE AP/MTT Kolkata Chapter and the KIIT University on 3rd and 4th October, 2020. The details of the distinguished speakers and the topics covered in the webinars is as follows:

Lecture 1: Concepts of high frequency(RF/Microwave) Circuits.

Prof. K. P. Ray,

Professor, Defence Institute of Advanced Technology (DIAT), Pune.

Lecture 2: Dielectric Resonator based MIMO Antennas System.

Dr. Ravi Kumar Gangwar,

Department of Electronics Engineering,
Indian Institute of Technology (ISM),
Dhanbad.

Lecture 3: Role of Antennas in Modern-Day Communications.

Dr. Sudhakar Rao,

Northrop Grumman Aerospace
Systems, USA.

Lecture 4: How Antennas radiate? Fundamental.

Prof. K. P. Ray,

Professor, Defence Institute of Advanced Technology, (DIAT), Pune.

➤ **Technical Webinar held on 29th November, 2020**

A webinar has been organized by IEEE APS Student Branch Chapter, Calcutta University in association with IEEE AP/MTT Kolkata Chapter on 29th November, 2020. Participants all over from India attended the program. Many renowned personalities were also present. It was started with an inaugural talk by Dr. S. Biswas, Chapter Chair and then followed by Professor D. Guha. The program was organized and hosted by Ms. Debi Dutta, SBC Chair. 90 attendees were present in the program and highly benefited by the talk.

➤ **IEEE Indian Conference on Antennas and Propagation (InCAP 2020), 17-20 December 2020, Kolkata**

The 3rd edition of IEEE Indian Conference on Antennas and Propagation, InCAP 2020, supported by the IEEE AP/MTT-S Kolkata Chapter was organised in a virtual mode during Dec 17-20, 2020 under the leadership of Prof. Debatosh Guha, University of Calcutta as the General Chair. Previously it was supposed to be held at Hyatt Regency Kolkata, but due to the worldwide pandemic, the event was rescheduled as a virtual one.

The event was inaugurated by IEEE AP-S president elect Prof. Yahia Antar from RMC Canada. The technical program comprised of a package of tutorials, plenary talks and special sessions by leading experts across the globe from both academia and industry, among whom was present Prof. Makoto Ando, from Tokyo, Japan President URSI and former President of IEEE AP-Society. The section of contributory papers has been withdrawn for this year and the participants could register on a zero payment basis. The closing ceremony was graced by the AP-S President Prof. Mahta Moghaddam, from the University of Southern California. Dr. Sujoy Biswas, Chair-AP-MTTs Kolkata Chapter and a group of volunteers from IEEE AP-MTT Kolkata Chapter conducted the proceedings online.

The event had a fabulous gathering of more than 500 delegates over 25+ hours of the online sessions. It has been highly appreciated by eminent scientist and attendees across the globe.

COMSOC

Technical Lectures and Seminars:

➤ **Hult Prize Campus Program organised by Netaji Subhas Engineering College in collaboration with IEEE COMSOC, Kolkata Section: 25th Jan, 2020**

The Hult Prize is the leader in creating and launching disruptive companies in the impact sector amongst youth worldwide. They have created sectors, built momentum, and most importantly - unlocked infinite possibilities for the world's next generation of entrepreneurs. The Hult Prize is considered the "Nobel Prize for Students."

Pallab Ganguly, The Chair, IEEE COMSOC, Kolkata Section was invited by the NSEC Entrepreneurship Development Cell (EDC) to act as a jury in the Netaji Subhash Engineering College On Campus Program Selection Committee of the Hult Prize 2020 on 25th Jan, 2020. This program was technically sponsored by IEEE COMSOC, Kolkata Section in order to promote student orientation. The role as a judge was to watch, score and rank teams to determine which idea start-up enterprise has developed the most compelling solution and will earn a spot at one of the 25+ Regional Finals taking place all over the world, and the chance to pitch for the grand prize of \$1 million USD at the United Nations HQ.

➤ **IEEE COMSOC, National Conference on Emerging Trends in Sustainable Engineering and Application: 7th – 8th Feb, 2020**

On Feb 7-8, 2020 the **National Conference on Emerging Trends in Sustainable Engineering and Application** was held with the technical sponsorship of IEEE ComSoc organized by B.C.Roy Engineering College, Durgapur. Prof. ItiSaha Misra, the immediate past Chair of IEEE ComSoc, Kolkata Chapter has delivered an invited keynote on the very relevant engineering topic of sustainable engineering application. She spoke on the topic of IoT based Heart Sound Detection and Analysis for awareness generation on post inaugural session, 7 Feb 2020. More than 150 participants were present in the session.

➤ **IEEE COMSOC, Industry/Academia Panel discussion “Entrepreneurship & Skill development opportunities”: 8th Feb,2020**

The session on “**Entrepreneurship & Skill development opportunities**” was co-sponsored by Sister Nivedita University and IEEE COMOSC, Kolkata Section and was held on 8th Feb,2020 between 4 – 6 pm. Mr.Pallab Ganguly, The Chair, IEEE COMSOC, Kolkata Section participated in this session as an esteemed panellist. Other participants included Dr Atanu Raha (Director, SNU) and Mr Sanjay Ghosh (MD, SIMOCO). The session was moderated by Moupia Nandi from the news channel Zee 24 Ghanta. The program was attended by many Industry delegates, IEEE members and students. The program focussed on the Entrepreneurship and skill development opportunities for fresh Engineers in today’s digital world. Around 50 students attended the program.

➤ **IEEE National Conference: CALCON 2020: 28th – 29th Feb, 2020**

IEEE Kolkata Section's flagship conference **CALCON -2020 was held during 28-29 Feb, 2020** at Hotel Senses, Salt Lake, Sector -V, Kolkata -91. The conference was chaired by Prof Iti Saha Misra, the immediate past Chair of IEEE ComSoc, Kolkata Chapter. The industry chair was Mr Pallab Ganguly, Chair, IEEE ComSoc Kolkata Chapter. The inaugural session was held on 28 th Feb at 9.30 am. A very vibrant student panel discussions in IEEE CALCON-2020 was arranged by IEEE ComSoc Kolkata Chapter. Also an Industry Panel discussion involving speakers from Ericsson, Govt of West Bengal, Checkpoint, NTT Group, Palo Alto etc. Many IEEE Members, researchers, Industry delegates and Students were present.

➤ **IEEE Tech X Congress: 28th Feb – 1st Mar, 2020**

The IEEE TechX Congress (www.ieee-techx.com), hosted by NIT , DGP alongwith IEEE COMSOC, Kolkata Section and joint student branch initiative namely Jadavpur University SB, NIT Durgapur SB and IIT Kharagpur SB envisioned to create awareness about the technological advancement in the world along with creating a technological and cultural exchange of ideologies. The event was attended by 130+ students along with industry professionals. The 3 day congress included multiple track and was held near the sea beach of Mandarmani, West Bengal. The initiative was technically supported by IEEE ComSoc, Kolkata Chapter. Mr Subhamoy Chakraborti, Secretary, IEEE ComSoc, Kolkata Chapter was present on Day 2 and delivered a lecture to the students on how students, academicians and industry are closely working together towards building an ecosystem of innovation as per IEEE ComSoc mandate. Mr Chakraborti was also present in the 5G & IOT workshop being held by Mr Subodh Gajare, Sr Solution Architect, Cisco, and helped the team in deciding the winner amongst the student groups.

IEEE COMSOC Industry Panel discussion on BCP: 13th May, 2020

A panel discussion was organized on “Importance of a secure business continuity plan (BCP) in organization during Covid-19 and need to build Business resilience” on 13thMay, 2020. This session was organized by Techplus Media and CXOTV.news channel supported by IEEE COMSOC, Kolkata Section. Pallab Ganguly, The Chair, IEEE COMSOC, Kolkata Section participated in this panel discussion along with other IT leaders from the industry. They deliberated on the need of Business Continuity Plan in view of the pandemic and the security considerations.

IEEE COMSOC International Webinar related to 'Data Science and Artificial Intelligence': 22nd Aug,2020

The Neotia University alongwith IEEE COMSOC, Kolkata Section organized International webinar on “Data Science and Artificial Intelligence: Revolutions for Present and Future”. IEEE COMSOC Kolkata Chapter was the technical sponsor this. This was held on 22nd Aug, from 2 - 5:30 p.m. Mr. Pallab Ganguly, Chair, IEEE COMSOC Kolkata Chapter, India was one of the speakers in the session. Mr Ganguly delivered a lecture titled on “A Brief about IEEE ComSoc Kolkata Chapter and Cyber Security” between 4:30 pm – 5:00 pm making the student communities aware of the latest developments in cyber security. Many IEEE Members, Student members, students, Industry delegates attended the Webinar.

IEEE International Conference for Convergence in Engineering (ICCE 2020).Industry panel discussion: 5th – 6th Sep, 2020

IEEE COMSOC Kolkata Chapter was the Technical sponsor for the industry panel session in the 1st International Conference for Convergence in Engineering (ICCE 2020). This was organized by Netaji Subhash Engineering College. ICCE 2020 aims to bring together leading academicians, scientists, and researchers and Industry experts from around the world to exchange and share their research experiences, to provide a premier interdisciplinary forum for scientists, engineers, and practitioners.

The conference consisted of invited lectures by the experts from academia & industry, tutorials, interactive sessions for high-quality contributory papers through oral and poster presentations. The Secretary, IEEE COMSOC Kolkata Chapter Mr. Subhamoy Chakraborti moderated the industry panel session. The topic of the session was "In this global pandemic situation of Covid-19, AI & ML: Miracle or Menace". The panelists included Mr. Sanjay Kumar Das (Joint secretary, Ministry of IT & Electronics, Govt of West Bengal), Mr. Sanjay Prasad (CIO, CESC Ltd), Mr. Partha Sengupta (Sr. Vice President- ITC Infotech), Mr. Sourav Das (CIO, Essel Mining & Industries, Aditya Birla group), and Mrs. Soma Ghosh (Senior Security Analyst, CERNER Corporations). The discussion centered around Application of AI /ML in the respective industries, implementation case studies from the panelists, change in AI/ML space since March as experienced by the panelists and the pitfalls/security concerns around this technology which may turn the benefits into a menace.

➤ **IEEE COMSOC Student Orientation Program on Smart Grid: 14th Oct, 2020**

Mr. Pallab Ganguly, Chair, IEEE ComSoc Kolkata Chapter gave a captivating lecture to the students on Smart Grid on 14th October, 2020. The topic was "Challenges of the Existing Security Measures Deployed in the Smart Grid Framework". Mr. Ganguly mentioned about the challenges as well as the possible solutions and how Smart Grid sits at the intersection of Energy, IT & Telecommunication Technologies. Mr. Ganguly talked about the security challenges in smart grid, possible attack variants, operational challenges, architecture of advanced metering techniques, global security standards and path forward. The IEEE Student Members along with the students participated and it was a very interesting interactive session. Around 60 Students including student members attended the program.

➤ **IEEE COMSOC Kolkata Chapter participated in the International 5G Summit held at IIT, ISM Dhanbad on 8th Feb 2020**. Prof. Iti Saha Misra was one of the Keynote speaker on the Summit. She spoke on the topic "Is 5G Ready for India? Seeking some application prospect

➤ **IEEE COMSOC, Short term course & VDL: 7th – 11th Nov, 2020**

A one-week short term CEP course on "Futuristic Wireless Communication and IoT-5G and Beyond" was organized by NIT Rourkela, technical co-sponsored by IEEE ComSoc Kolkata Chapter between 7th to 11th November 2020. 5G is the next generation wireless communication and network that enables innovation and supports progressive change across all verticals of industries and society at large. The forecast for future 10 years' traffic demand illustrates an increase in 1000 scales and more than 100 billion connections of Internet of Things. This foists a big challenge for future mobile communication technology beyond year 2020. 5G & beyond have the potential to enable fundamentally new applications, industries, and business models and dramatically improve quality of life around the world via unprecedented use of high data-rate instantaneous communications, low latency, and massive connectivity for new applications such as eHealth, intelligent transportation, autonomous vehicles, smart cities, smart homes, Industrial IoT, smart grid, terahertz communication etc. With growing IoT needs, networking should be ubiquitous, energy and spectrum efficient, ensure quality of service (QoS) and adequately secured. Further, the congregation of 5G and artificial intelligence (AI) is expected to accelerate the adoption of Industry 4.0.

Prof Iti Saha Misra, the immediate past chair of IEEE ComSoc Kolkata Chapter delivered her lecture on day 4 on "Cognitive Radio and 5G communication". Dr. Ashutosh Datta and Prof. Sudip Misra delivered the Distinguished Lecture Tour program (virtual) on behalf of IEEE ComSoc Kolkata Chapter.

A) VDL name: Professor Ashutosh Dutta (Johns Hopkins University) USA

Topic: Security in SDN/NFV and 5G Networks-Opportunities and Challenges

Date: 7th Nov, 2020

Prof. Ashutosh Dutta is Fellow IEEE, IEEE Communications Society Distinguished Lecturer, Founding Co-Chair for IEEE 5G Initiative, USA, Johns Hopkins University, USA. Prof. Dutta spoke about from wireless evolution upto 5G and then describing the key feature of 5G, highlighting 5G security taxonomy, some use cases and then explaining the current industry standards activities going on, including testbed experimentations. Finally, he spoke about the IEEE initiative taken for Future Networks. There were about 60 participants including IEEE members. Prof Susmita Das (dean-fw@nitrkl.ac.in) was the host of the event.

B) VDL name: Professor Sudip Misra (Indian Institute of Technology Kharagpur)

Topic: UAV Networks: Architectures, Opportunities, Challenges, and Future

Date: 8th Nov, 2020

Prof. Sudip Misra is the Humboldt Fellow (Germany), INAE Fellow (India), NASI Fellow (India), Indian Institute of Technology Kharagpur. Prof. Sudip Misra delivered on basics of UAV, various types depending on usages, UAV features elaborating topology, deployment scenarios, adaptive routing, coverage areas and reconfigurability. He then spoke about the challenges related to UAV such as Fast changing topology, Frequent change in relative position, Malfunctioning UAVs, Finding suitable routing algorithm, Weather conditions, Stability, Link failure, power consumption, environmental condition etc. Finally he pointed out some advantages of UAV such as easy deployment, survivability, reliability and reconfigurability. Prof Susmita Das (dean-fw@nitrkl.ac.in) was the host of the event.

CSS-IMS

- **Technical Program**

- **ONE-DAY LECTURE MEETING ON "SMART GRID, AMI AND SMART METERING"**

A lecture meeting with title "Smart Grid, AMI & Smart Metering" was organized on Feb 03, 2020 in collaboration with Department of Applied Physics at University of Calcutta with Mr. Subhadip Pal, Head of Application Engineering Team of Landis + Gyr, India as the speaker. Total 60 participants attended the meeting (students 42, faculty 18).

- **NATIONAL SEMINAR ON "WEATHER DEPENDENT PREDICTION OF RENEWABLE ENERGY GENERATION FOR GRID MANAGEMENT"**

A one-day international seminar on 'Weather Dependent Prediction of Renewable Energy Generation for Grid Management' was organized as technically co-sponsored event on March 12, 2020, at Meghnad Saha Auditorium, University of Calcutta. The speakers were Parthasarathi Mukhopadhyay, (Scientist-E, Indian Institute of Tropical Meteorology, Pune), Ms. Anasuya Gangopadhyay, IISc, Bangalore, Sri Sushant Kumar, (Project Scientist – C, National Centre for Medium Range Weather Forecasting, Noida), Rajib Das, (Dy GM, Planning, CESC Limited, India) and Sri Surajit Banarjee, DGM. HOD, Eastern Regional Load Despatch Centre, Tollygaunge, Kolkata). A total of 150 participants attended the seminar.

- **WEBINAR ON "HOW TO MANAGE PAPER REVIEWS EFFECTIVELY?"**

A webinar on "How to Manage Paper Reviews Effectively?" was organized on July 30, 2020. The speaker was Prof Narasimhan Sundararajan. This talk mainly focused on writing research papers, understanding the review process, and answering the reviewer's questions appropriately. A total of 60 participants attended the meeting.

- **WEBINAR ON "ALGORITHMS AND ARCHITECTURES FOR REMOTE HEALTH MONITORING USING WEARABLE SENSORS"**

A webinar on "Algorithms and Architectures for Remote Health Monitoring using Wearable Sensors" was organized on March 12, 2020. The speaker was Dr. Dwaipayan Biswas, a Researcher in Digital IC Design for Biomedical Applications, IMEC, Belgium. Total 25 participants attended the webinar.

- **WEBINAR ON "ASSISTIVE HUMANITARIAN DEVICES: MEASUREMENT, INSTRUMENTATION AND CONTROL PERSPECTIVE"**

A webinar on "Assistive Humanitarian Devices: Measurement, Instrumentation and Control Perspective" was organized on September 19, 2020. The speaker was Prof Celia Shahnaz, Chair, IEEE Bangladesh Section. The talk mainly focus on assistive humanitarian devices where measurement, instrumentation, and control mechanisms are used to perform intelligent tasks, even applicable and usable by disabled communities. Total 26 participants attended the webinar.

- **Faculty Development Program on Energy Storage for Sustainable Development**

NIT Silchar organized a five-day-long faculty development program on 'Energy Storage for Sustainable Development'. This program was technically co-sponsored by IEEE joint CSS-IMS Kolkata chapter. The objective of this faculty development program was to promote basic and advanced research related to energy storage in application to sustainable developments. The selection of the speakers and the topics of discussion was made to encompass the whole theme of energy storage for sustainable development.

The program was started with an inauguration session at 9.00 am on September 26, 2020 and ended with valedictory sessions, scheduled between 4.30 pm – 5.10 am on September 30 2020.

A total of 245 participants, including 172 faculty members for the FDP, were confirmed for participation in the event. Approximately 210 participants attended one or more sessions/days, and more than 150 participants had attended 80% or more.

EDS:

- **Event 1. Date: 17th January, 2020**

Speaker: Dr. Ajit Kumar Panda, Professor and Dean, National Institute of Science and Technology, Berhampore

Topic: GaN-HEMT based front end transceiver for 5G communication technology

Attendees: 35

Venue: the Seminar Hall, Dept. of ECE, NSEC

Organizing Institute: IEEE ED NSEC SBC

Description: ED Netaji Subhash Engineering College Student Branch Chapter in association with the Department of Electronics and Communication Engineering organized an IEEE EDS "Distinguished lecture on GaN-HEMT based front end transceiver for 5G communication technology on 17th January, 2020 at the Seminar Hall, Dept. of ECE, NSEC. 35 students, including IEEE EDS SBC members, along with other students of both ECE and EE Departments attended the seminar. 5 Faculty members and Head of Department of ECE also attended this one day seminar. The IEEE EDS Distinguished Lecturer for the session was Dr. Ajit Kumar Panda, Professor and Dean, National Institute of Science and Technology, Berhampore. His lecture included the advancements in communication technology and introduction about 5G technology .His talk also included GaN HEMT technology, suitable for millimeter-wave 5G applications, for which a case study was presented in his talk. The students as well as the faculty members were highly benefited from this lecture. The participants were given food packets at the end of the session.

➤ **Event 2. Date: 27th January, 2020**

Speaker: Prof. Amlan Chakrabarti, Professor and Director, A.K. Chowdhury School of Information Technology, University of Calcutta

Topic: Machine Learning for IoT Analytics

Attendees: 40

Venue: ECE Seminar hall, NSEC

Organizing Institute: IEEE ED NSEC SBC

Description: ED Netaji Subhash Engineering College Student Branch Chapter in association with the Department of Electronics and Communication Engineering organized an IEEE EDS one-day seminar on "Machine Learning for IoT Analytics" on 27th January 2020 at the Seminar Hall, Dept. of ECE, NSEC. The guest speaker for this seminar was Prof. Amlan Chakrabarti, Professor and Director, A.K. Chowdhury School of Information Technology, University of Calcutta. The members of IEEE EDS SBC attended the seminar with other students from departments like EE, ECE and AEIE. 4 of the faculty members of the ECE Department also attended the seminar. This session included basics of IoT Analytics and Prof. Chakrabarti started his lecture for the beginners interested in this field. The lecture also included the factors which paved the way for rapid developments in hardware and software, communication advancements, and the need for IoT these days. The seminar thus cleared the way for the interested students to take up IoT as their field of interest. 40 students participated in this seminar and were greatly satisfied with his lecture.

➤ **Event 3. Date: 19th February, 2020**

Speaker: Dr. Imon Mondal, Asst. Professor, Dept. of Electrical Engineering, IIT Kanpur

Topic: Wideband Tunable True-Time-Delay Architecture Using a Variable Order All-Pass Filter and its Applications to Continuous-Time Pulse Processing

Attendees: 110

Venue: Language Lab of Kalyani Govt. Engg. College

Organizing Institute: IEEE ED KGEC SBC

Description: IEEE Kalyani Govt. Engg. College Student Branch Chapter organized a Technical Lecture Program on 19th February 2020 by Dr. Imon Mondal, Asst. Professor, Dept. of Electrical Engineering, and IIT Kanpur on "Wideband Tunable True-Time-Delay Architecture Using a Variable Order All-Pass Filter and its Applications to Continuous-Time Pulse Processing" in Language Lab of Kalyani Govt. Engg. College. Almost 110 UG, PG students attended this activity.

➤ **Event 4. Date: 14th March 2020**

Speaker: Dr. Subhankar Majumdar, Assistant Professor, Department of Electronics and Communication Engineering, NIT Meghalaya

Topic: IoT Devices and Low power Applications

Attendees: 85

Venue: Online

Organizing Institute: IEEE ED MSIT SBC

Description: One day technical talk on "IoT Devices and Low power Applications" organized by The ED MSIT Student Branch Chapter and MSIT Student Branch, in association with the Department of ECE, MSIT on 14th March 2020. Lecture was delivered by Dr. Subhankar Majumdar, Assistant Professor, Department of Electronics and Communication Engineering, NIT Meghalaya. Almost 85 students attended the event. Out of the 85, almost 31 IEEE student members attended the talk.

➤ **Event 5. Date: 29th June 2020**

Speaker: Dr. Soumya Pandit, Asst. Professor, Inst. Of Radio Physics & Electronics, University of Calcutta

Topic: Integrated Circuit Amplifier

Attendees: 57

Venue: Online

Organizing Institute: IEEE ED KGEC SBC

Description: IEEE ED Kalyani Govt. Engg. College Student Branch Chapter organized a Technical Lecture Program on 29th June 2020 by Dr. Soumya Pandit, Asst. Professor, Inst. Of Radio Physics & Electronics, University of Calcutta on "Integrated Circuit Amplifier" in online mode using WebEx Platform. A total of 57 participants attended this activity.

➤ **Event 6. Date: 30th June 2020**

Speaker: Dr. Bhaskar Gupta, Professor, Jadavpur University, Kolkata

Topic: An Introduction to RF-MEMS Technology

Attendees: 72

Venue: Online

Organizing Institute: IEEE ED KGEC SBC

Description: IEEE ED Kalyani Govt. Engg. College Student Branch Chapter organized a Technical Lecture Program on 30th June 2020 by Dr. Bhaskar Gupta, Professor, Jadavpur University, Kolkata on "An Introduction to RF-MEMS Technology" in online mode using WebEx Platform. A total of 72 participants attended this activity.

➤ **Event 7. Date: 16th July 2020**

Speaker: Paul R. Berger, Ohio State University, Department of Electrical and Computer Engineering, Columbus, Ohio, USA

Topic: Fully Printable and Autonomously Powered Electronic Nodes for the Internet of Everything

Attendees: 70

Venue: Online

Organizing Institute: IEEE ED KGEC SBC

Description: IEEE ED Kalyani Govt. Engg. College Student Branch Chapter organized a DL Program on 16th July 2020 by Prof. (Dr.) Paul R. Berger, Ohio State University, Department of Electrical and Computer Engineering, Columbus, Ohio, USA on "Fully Printable and Autonomously Powered Electronic Nodes for the Internet of Everything" in online mode using WebEx Platform. A total of 70 participants attended this activity. The talk was very much interactive and useful for all the participants.

➤ **Event 8. Date: 22nd August, 2020**

Speaker: Prof. Sudeb Dasgupta, IIT Roorkee

Attendees: 96

Venue: Online

Organizing Institute: IEEE ED MSIT SBC

Description: Prof. Sudeb Dasgupta has delivered an illuminating talk on low power design in a technical talk program organized by IEEE ED MSIT SBC in association with Department of ECE, MSIT at 6:00 pm on 22nd August, 2020. The duration of the talk was about 90mins. Prof. (Dr.) Ankur Ganguly, the Principal of MSIT gave the introductory speech which was followed by a speech given by Dr. Swapnadip

De, branch counselor of IEEE ED MSIT SB. Dr. Manash Chanda, the chapter advisor of IEEE ED MSIT SBC coordinated the session. About 96 participants attended the session. Dr. Chandi Pani gave the vote of thanks at the end. We are extremely thankful to Prof. Dasgupta for this immensely benefiting talk. We look forward to have more such sessions with him. Almost 54 IEEE members and 65 non IEEE members attended the talk and immensely benefitted from the talk.

➤ **Event 9. Date: 15th September 2020**

Speaker: Mr. Sankalp Jain, SoC Implementation Engineer, Apple, Austin, USA

Attendees: 105

Venue: Online

Organizing Institute: IEEE ED MSIT SBC

Description: IEEE ED MSIT SBC in association with Department of ECE, MSIT, Kolkata has organised IEEE EDS Technical Talk Program by Mr. Sankalp Jain, SoC Implementation Engineer, Apple, Austin, USA on 15th September, 2020. Prof (Dr.) Ankur Ganguly gave the introductory speech, which was followed by a speech of Dr. Swapnadip De, HOD, Dept. of ECE, MSIT and Branch Counselor, IEEE MSIT SB. Dr. Manash Chanda, Chapter Advisor, IEEE ED MSIT SBC coordinated the session. About 105 participants were present, out of which 35 were IEEE members. It was an engaging talk and the students were highly benefited. We look forward to more such sessions.

➤ **Event 10. Date: 26.09.2020 – 27.09.2020**

Speaker: Dr. Ashutosh Dutta, IEEE fellow, senior scientist and 5G Chief Strategist at Johns Hopkins University, USA

Topic: 4G and 5G Security-Opportunities and Challenges

Attendees: 60

Venue: online

Organizing Institute: IEEE ED NSEC SBC

Description: ED Netaji Subhash Engineering College Student Branch Chapter and the Department of Electronics and Communication Engineering, in association with IEEE EDS Kolkata Chapter, organized a two-day webinar on “4G and 5G Security-Opportunities and Challenges” on 26th and 27th September, 2020 by Dr. Ashutosh Dutta, who is an IEEE fellow, a senior scientist and 5G Chief Strategist at Johns Hopkins University, USA. The online platform chosen for these two sessions was Google Meet. The session started from 7:00pm on both the days. Both the sessions had about 60 participants, where besides IEEE EDS members, there were other students from 1st to 4th year of the department of ECE, Faculty members and the Head of the Department of ECE, NSEC. The first session of Dr. Dutta on 26th September, 2020, was regarding 4G technology, security, advantages and scopes. The session was of one and a half hour and was concluded by our HOD, ECE. The second session on 27th September, 2020, was of about 2 hours. In this session, the speaker gave an insight of the 5G technology, the opportunities and challenges related to this. He gave a full overview of the advancements, utilities and probable hazards associated with the 5G world. At the end of the session, there was an interactive session, where along with the students, our HOD Sir also took part. Finally, he concluded the session. These two sessions were very beneficial for all the participants, who were interested in this field. Dr. Dutta has answered all their doubts and has shown a path to go further into the field of 5G technology. The entire event, consisting of these two sessions, was indeed successful with the presence and keen interest of all the participants.

➤ **Event 11. Date: 16th October, 2020**

Speaker: Subham Sahay, Assistant Professor, Dept. of Electronics and Communication Engineering, IIT Kanpur

Topic: Neuromorphic Computing

Attendees: 35

Venue: Online

Organizing Institute: IEEE ED MSIT SBC

Description: Subham Sahay, Assistant Professor, Dept. of Electronics and Communication Engineering, IIT Kanpur delivered a IEEE EDS technical Talk on “Neuromorphic Computing” on 16th October, 2020. The IEEE EDS Technical Talk program has been organized by the IEEE EDS MSIT SBC, in association with

the Dept. of ECE. Almost thirty five students attended the event. Out of which, twenty six IEEE EDS student members also attended.

➤ **Event 12. Date: 18.10.2020**

Speaker: Mr. Saptarshi Chatterjee, Visvesvaraya PhD fellow, Electrical Engineering Department, Jadavpur University

Topic: Signal Processing Tools for Condition Monitoring of Biomedical Systems

Attendees: 35

Venue: online

Organizing Institute: IEEE ED NSEC SBC

Description: ED Netaji Subhash Engineering College Student Branch Chapter in association with the GnZ Student Cell, Department of Electronics and Communication Engineering organized a one day webinar on "Signal Processing Tools for Condition Monitoring of Biomedical Systems" on 18th October, 2020 by Mr. Saptarshi Chatterjee, Visvesvaraya PhD fellow, Electrical Engineering Department, Jadavpur University. The online session started at 5pm IST and continued for one and half hours on Google meet platform. About 35 participants, including IEEE EDS members, B.Tech students of various departments and faculty members participated in the webinar. The session highlighted Development of Computer Aided Diagnosis (CAD) Systems as an emerging research trend in recent years, as well as, the challenges in this field. At the end of his presentation, there was an interactive session, where many enthusiastic students and faculties took part to discuss possible research in this field. The entire session was very informative and beneficial for the interested participants. Our speaker cleared all the doubts of the attendees and has encouraged them to pursue further research in this emerging domain of Signal Processing Tools implementation for biomedical applications thereby indicating the success and impact of the webinar.

➤ **Event 13. Date: 14.01.2020**

Speaker: Prof. Durga Mishra

Topic: Nanoelectronics to Nanotechnology: More Moore and More than Moore

Attendees: 140

Venue: S.V. Auditorium. Heritage Institute of Technology

Organizing Institute: IEEE ED HITK SBC, Heritage Institute of Technology

A Distinguished Lecture Program was organized by the IEEE ED Heritage Institute of Technology SBC on January 14, 2020 with Dr. Durga Mishra from New Jersey Institute of Technology, Newark as the speaker. His lecture topic was 'Nanoelectronics to Nanotechnology: More Moore and More than Moore'. His candid and in depth account of the evolution of nanotechnology was extremely enjoyed by all the attendees. The lecture session was attended by 140 participants.

➤ **Event 14. Date: 25.01.2020**

Speaker: Prof. Anil D. Sahasrabudhe (The Chairman of All India Council for Technical Education)

Attendees: 60

Venue: IEEE EDS Center of Excellence, ICT003, Heritage Institute of Technology

Organizing Institute: IEEE ED HITK SBC, Heritage Institute of Technology

The Chairman of All India Council for Technical Education (AICTE) Prof. Anil D. Sahasrabudhe, visited the IEEE ED HIT Student Branch Chapter and the IEEE EDS Center of Excellence on 25.01.2020. His address to the students and faculty members motivated them to engage in innovative ventures in the engineering domain. He highlighted that the AICTE shall be happy to incubate entrepreneurial ventures as well.

➤ **Event 15. Date: 26.07.2020**

Speaker: Dr. Meyya Meyyappan

Topic: Printed and Flexible Electronics

Attendees: 88

Venue: Online

Organizing Institute: IEEE ED HITK SBC, Heritage Institute of Technology

The Department of Electronics & Communication Engineering, Heritage Institute of Technology in collaboration with IEEE Electron Devices HIT Student Branch Chapter, IEEE EDS Center of Excellence and IEEE EDS Kolkata Chapter organized a Distinguished Lecture Program (Webinar) on July 26, 2020.

We had Dr. Meyya Meyyappan, Chief Scientist, NASA Ames Research Center, as our speaker. Dr. Meyyappan is an IEEE EDS Distinguished Lecturer and President of IEEE EDS. He delivered a lecture on 'Printed and Flexible Electronics'.

The lecture was held on the WEBEX platform and was attended by 88 participants from 24 Institutions from across the globe.

➤ **Event 16. Date: 09.08.2020**

Speaker: Prof. Samar Saha,

Topic: Physics of Microelectronic Device Models for VLSI Circuit Design

Attendees: 92

Venue: Online

Organizing Institute: IEEE ED HITK SBC, Heritage Institute of Technology

The Department of Electronics & Communication Engineering, Heritage Institute of Technology in collaboration with IEEE Electron Devices HIT Student Branch Chapter, IEEE EDS Center of Excellence and IEEE EDS Kolkata Chapter organized a Distinguished Lecture Program (Webinar) on August 09, 2020.

It was our proud privilege to have Prof. Samar Saha, 2016-2017 President of IEEE Electron Devices Society (EDS) and currently, serving as the Sr. past President of the Society, as the speaker. Prof. Samar Saha, is an IEEE EDS Distinguished Lecturer, Chief Scientist at Prospicient Devices and an Adjunct Professor in the Electrical Engineering (EE) department, Santa Clara University, USA. He delivered a lecture on 'Physics of Microelectronic Device Models for VLSI Circuit Design'.

The lecture was held on the GOOGLE MEET platform and was attended by 92 participants from 29 Institutions from across the world.

➤ **Event 17. Date: 10.10.2020**

Speaker: Prof. Sushmita Mitra

Topic: From Learning To Deep Learning

Attendees: 36

Venue: Online

Organizing Institute: IEEE ED HITK SBC, Heritage Institute of Technology

The Department of Electronics & Communication Engineering, Heritage Institute of Technology in collaboration with IEEE Electron Devices HIT Student Branch Chapter, IEEE EDS Center of Excellence and IEEE EDS Kolkata Chapter organized a Lecture Program (Webinar) on October 10, 2020.

It was an honour to have Prof. Sushmita Mitra, Fellow IEEE and INAE Chair Professor and Fulbright-Nehru Senior Researcher, Machine Intelligence Unit (MIU), Indian Statistical Institute, Kolkata. She delivered a lecture on the topic 'From Learning To Deep Learning'.

The lecture was held on the GOOGLE MEET platform at 6 p.m. on Saturday, October 10, 2020.

➤ **Event 18 Student Paper Contest**

1. Date: 26th June, 2020

Domain: VLSI device and circuits

Attendees: 65

Venue: online

Organizing Institute: IEEE ED MSIT SBC

Description: A student paper contest has been organized by the IEEE EDS MSIT SBC in association with the Dept. of ECE, MSIT on 26th June, 2020. Almost 31 papers have been presented in this event. Total 65 students participated out of which total 24 were the IEEE members. Total 26 IEEE EDS student members attended the paper contest. The contest has been organized to motivate the students towards the research of the VLSI device and circuits.

➤ **Event 19. Date: 15.09.2020**

Topic: Celebration of 'Engineers Day 2020'

Attendees:

Venue: online

Organizing Institute: Techno International Batanagar

Type of sponsorship: Technically co-sponsored

Brief Description: Techno International Batanagar organized technical event through students' activities to observe the Engineers' Day 2020 on virtual platform on 15th September, 2020. The event was technically sponsored by IEEE EDS Kolkata Chapter. Students demonstrated innovative project ideas and almost more than hundred fifty students participated in technical quiz competition. IEEE EDS Chair delivered motivating speech to encourage students.

➤ **Event 20. Date: 27th July, 2020**

Theme: Spread the awareness of IEEE membership

Attendees: 42

Venue: online

Organizing Institute: IEEE ED MSIT SBC

Description: A workshop has been organized for the 1st year students on 27th July, 2020 to spread the awareness of IEEE membership and also to involve them in the research of VLSI Device and circuit design and modelling. Dr. Manash Chanda, Chapter Advisor, IEEE ED MSIT SBC and Dr. Swapnadip De, Counsellor, Student Branch were the key person of this event. Total 42 students from the first year have taken the membership of IEEE EDS after the event. Other students were also immensely benefitted and motivated by the talk of the Advisor and counsellor.

➤ **Event 21 International Conferences**

1. Date: 18th-19th July, 2020

Event Name: International Conference IEEE VLSI DCS 2020

Attendees: 150

Venue: online

Organizing Institute: IEEE ED MSIT SBC

Description: 2020 IEEE VLSI Device, Circuit and System Conference (VLSI-DCS) has been organized by the IEEE ED MSIT SBC on 18th-19th July, 2020. The conference was dedicated to provide an international forum for researchers and participants to report up-to-the minute innovation and development and exchange ideas and advances in all aspects of VLSI device, circuits and systems. The response to the conference's call for papers has been outstanding. Total 236 papers were submitted to our conference out of which 104 papers have been registered for presentation, after being peer-reviewed. Total 104 reviewers have been selected to provide a broad range of expertise, to balance junior and senior members, and to represent a variety of geographical locations. The reviewers have worked diligently to select papers and speakers that met the criteria of high quality and relevance to our various fields of interest. It takes time and a great amount of effort to review a paper carefully, and every member of the Technical Program Committee is to be commended for his or her contribution to the success of this conference. Total 20 Plenary and Keynote speakers deliver their talks and 32 distinguished Professors chaired 16 parallel technical sessions. More than 150 attendee were present in the program out of which 73 were the IEEE members. All the papers have been included in IEEE Explorer. Dr. Manash Chanda, Vice Chairman, IEEE EDS Kolkata Chapter acted as General Chair under the patronage of Techno India Group.

2. Date: 25th - 26th September 2020

Event Name: Advances in Medical Physics and Healthcare Engineering

Attendees: 118

Venue: online

Organizing Institute: Adamas University

Type of sponsorship: Technically co-sponsored

url: <http://science.adamasuniversity.ac.in/amphe2020/>

3. Date: 8th - 9th October 2020

Event Name: International Conference on Emerging Wireless Communication Technologies and Information Security

Attendees: 350

Venue: online

Organizing Institute: Amity University Jharkhand

Type of sponsorship: Technically co-sponsored

url: <http://ewcis.in/>

Description: The Proceeding of the conference is published as a book series in Springer Lecture Notes in Electrical Engineering (ISI Proceedings, EI-Compendex, SCOPUS, MetaPress, Web of Science), Title of the book "Trends in Wireless Communication & Information Security". Keynote speakers are Hiroshi Inokawa (Professor, Research Institute of Electronics, Shizuoka University, Japan), Ajith Abraham (Director, Machine Intelligence Research Labs, USA), Amit Banerjee (Department of ECE, National University of Singapore, Singapore), Arun K. Majumdar (Research Scientist, San Diego, California, USA), Celia Shahnaz (Professor, Dept. of EEE, BUET, Dhaka, Bangladesh Chair, IEEE Bangladesh Section), Jemal H. Abawajy (Professor at Faculty of Science, Deakin University, Australia), Lalit Garg (Faculty of Computer & Information Systems, University of Malta), Vijay Chatterjee (Scientist, CSIR, CEERI, Ministry of Science & Technology, Govt. of India). 82 articles are received, from which 42 are accepted. 3 technical sessions are organized, and best paper awards are given in each session.

GRSS

International Virtual School on Application of Machine Learning and IoT in Remote Sensing(CHAPNET 2020).

Date of the event: 4th-5th December 2020

Number of attendees: 90

Online Platform: Google Meet

In the 2020 Chapnet program, six chapters with two chapters from outside India participated in this program. These Chapters are from Singapore Section, Washington DC and Northern VA Chapter. From India, Kolkata, Bombay, Delhi and Hyderabad Section participated in this program. Under Chapnet program a virtual International School on Application of Machine Learning and IoT in Remote Sensing was organized on Google meet platform during 4th-5th December 2020 due to the COVID-19 pandemic situation. Around 90 participants from different parts of India registered and participated in this school. There were six speakers, who delivered their lectures during these two days. Dr. SrijitaChakrabarty from NASA has delivered a talk about "Feature extraction from VIIRS observations for monitoring the earth at night" while DrYee Hui Lee of NTU Singapore talked about "Machine learning for GPS remote sensing application". In addition to that Prof. Ashishghosh (ISI, Kolkata), Dr. Avik Bhattacharya (IIT, Mumbai), Dr. P. K. Champati Roy (ISRO,India) and Dr. Debadatta Swain (IIT, Bhubaneswar) delivered lectures about various aspect of Remote sensing using Machine Learning techniques.

IAS

• **Technical Program**

The IEEE Industry Applications (IAS) Chapter Kolkata has organized **five** technical lecture programmes in **2020** (till the date of generation of this report), all in association with the Department of Electrical Engineering, IEST Shibpur. Details of the above activities are presented in the following paragraphs. The report for the sixth lecture (scheduled to be held on 30.12.2020) will be added to this report immediately after the lecture-date.

- **The first Technical Lecture Meeting** was organized on **24th September, 2020**, through the online platform Google-Meet (meeting link: meet.google.com/phw-nvgz-srv), on the topic "Automation of

CTC Tea Manufacturing Process”. The talk was delivered by Mr. Amit Banerjee, Director, M/s Intellixa Pvt. Ltd., Kolkata. The talk discussed the various aspects and problems of 'Crush, Tear and Curl (CTC)' tea-manufacturing process. A detailed discussion on the major steps of the above process was discussed with illustrative diagrams and figures of practical set-ups from tea-processing plants. It also highlighted the current state of the Indian Tea Industry and the problems faced by this industry. The talk was attended by **12 participants, including three IEEE members.**

- **The Second Technical Lecture Meeting** was organized on **28th September, 2020**, through the online platform Google-Meet (meeting link: meet.google.com/aoh-jbgn-fcu), on the topic “Control of Power Electronic Converters for Different Applications.” The talk was delivered by Dr. Tapas Kumar Saha, Professor, Department of Electrical Engineering, NIT Durgapur. The talk dealt with the applications of Power Electronic Converters in the field of machine control, vector controlled drives and energy systems. The talk was **attended by 30 participants, including three IEEE members.**
- **The Third Technical Lecture Meeting** was organized on **3rd December, 2020** through the online platform Google-Meet (meeting link: meet.google.com/hna-jqxt-rot), on the topic “Single-Phase Average Power Measurement Using Instantaneous Power Theory in a Fixed Point Processor.” The talk was delivered by Prof. Dipankar Chatterjee, Assistant Professor, Department of Electrical Engineering, Ram Krishna Mahato Government Engineering College, Purulia. The talk dealt with a technique of average power measurement in a single phase AC circuit using instantaneous power theory. The technique employs a simple algorithm using instantaneous power concept in α - β reference frame. It is applicable for sinusoidal and non-sinusoidal periodic waveforms. The talk was **attended by 5 participants, including two IEEE members.**
- **The Fourth Technical Lecture Meeting** was organized on **8th December, 2020** through the online platform Google-Meet (meeting link: meet.google.com/ahx-usmv-fhj), on the topic “Power flow revisited - in power electronic converter based systems.” The talk was delivered by Dr. Kaushik Mukherjee, Associate Professor, Department of Electrical Engineering, Indian Institute of Engineering Science and Technology, Shibpur. The talk gave a brief revisit of power flow concepts of classical electrical engineering. Ultimately, power flow issues for some interesting power electronic converter systems was taken up to show where the age-old classical concepts still prevail and where the concepts have to be re-tuned. The talk was **attended by 24 participants, including three IEEE Members.**
- **The Fifth Technical Lecture Meeting** was organized on **10th December, 2020**, in association with the Departments of Electrical Engineering at Indian Institute of Engineering Science and Technology, Shibpur and Gargi Memorial Institute of Technology, through the online platform Google-Meet (meeting link: meet.google.com/yfe-yhjo-hfx), on the topic “Elements of PWM Strategies for DC-DC Converters.” The talk was delivered by Dr. Suvarun Dalapati, Assistant Professor, Department of Electrical Engineering, Indian Institute of Engineering Science and Technology, Shibpur. The talk focussed on some such popular PWM techniques, which are generally used for controlling DC-DC Converters. It began with an introduction to the essence of PWM-control and followed it up with the major variants of PWM techniques for DC-DC converters with examples for each such technique. It concluded with a brief discussion on the implementation-aspects of such PWM-controllers using the popular analogue ICs or digital controllers, as offered by some of the IC manufacturers. The talk was **attended by 39 participants, including three IEEE Members.**
- **The Sixth Technical Lecture Meeting** was organized on **30th December, 2020**, in association with the Department of Electrical Engineering at Indian Institute of Engineering Science and Technology, Shibpur through the online platform Google-Meet (meeting link: meet.google.com/rjj-mfkg-ccq), on the topic “Sizing and Selection of AC Motors and Drives for Hot Strip Mill.” The talk was delivered by Mr. Atanu Dey, Vice-President, Sales and Marketing – Electrics and Automation, SMS Group. The talk dealt with the issue of selection of motor and corresponding drives for different applications of Hot Strip Mills. This would typically describe the process (material flow) in a Hot Strip Mill, the duties which different motors see (cycle time, overload etc.) and how to select a motor and a drive for that. The underlying

premise is that in an industrial environment, the motors and drives are selected from available standard motors and drives rather than 'design' the same. **The talk was attended by 40 participants, including three IEEE Members.**

CASS

➤ **Event 1: Robotics & Circuit design Contest under KRITANJ 2020**

The IEEE CAS Chapter of Kolkata Section and IEEE CAS Student Branch of Dept. of Electronics and Communication Engineering, Narula Institute of Technology have jointly organized a Robotics & Circuit design Contest under KRITANJ 2020 during 4- 5th March, 2020. Total number of participants was 124.

➤ **Event 2: A one-day IEEE Outreach Workshop on Circuits and Systems in Industry Practice**

A one-day IEEE Outreach Workshop named “Circuits and Systems in Industry Practice” was organised by the Department of Electrical Engineering & Applied Electronics and Instrumentation Engineering, Asansol Engineering College on 6th March 2020. The resource person was Prof. Dr. Joyanta Kumar Roy, Chair IEEE CAS Chapter, Kolkata Section and Prof. Dr. A.K. Mukhopadhyay, Vice Chair, IEEE CAS, Chapter, Kolkata Section. It had two theoretical sessions. The aim of this workshop is to enhance the theoretical as well as practical knowledge of the students about Circuits and Systems. A total number of 113 students and faculty members participated in this event.

➤ **Event 3: Webinar on A VIEW TO INTERNET OF THINGS & EMBEDDED PROCESSORS**

The IEEE CAS Chapter, Kolkata Section & Dept. of Electronics and Communication Engineering, Narula Institute of Technology have jointly organized a webinar on “A VIEW TO INTERNET OF THINGS & EMBEDDED PROCESSORS” on 13th April, 2020. Prof. Dr. J K Roy, Chair IEEE CAS Chapter was the keynote speaker of the session. Total number of participants was 85.

➤ **Event 4: IEEE Student Membership Drive followed by a technical lecture on Future Reconnects IoT with Industry 4.0**

The Department of Electronics and Instrumentation Engineering (EIE) in collaboration with IEEE CAS Chapter, Kolkata Network has jointly organized a webinar on “IEEE Student Membership Drive” followed by Technical Invited Talk on “IoT with Industry4.0” on 8th May 2020 from 4 PM to 6:30PM. Some of the Faculties of other states like Tamil Nadu etc. attended the talk. The students of EIE department of all years have attended the event. In addition to this faculty member of the college and outside state college participation was also there.

Prof. Dr. Joyanta Kumar Roy, Chairman CAS Chapter was the keynote speaker of the session. He has given a technical talk on "Future Reconnects IoT with Industry4.0". The Students were highly motivated by the talk, as the speaker has shown the Virtual visit of the Mongal Pander Water Treatment plant in Barrackpore.

Professor Salil Kumar Sanyal, Ex-Professor, Jadavpur University and some dignitaries also attended the session which boosted up the confidence of the students.

Total Number of Students attended the event: 77 Faculty members: 18

➤ **Event 5: IEEE Student Membership Drive followed by a technical lecture On Industrial Internet of Things and Industry 4.0**

National Webinar on “Industrial Internet of Things and Industry 4.0 & IEEE CAS Membership Drive” was delivered by Prof. J.K. Roy, Chair IEEE CAS Chapter, Kolkata Section at Cambridge Institute of Technology, Ranchi, Jharkhand, India on 5th June ,2020. Total number of registered participants was 396

➤ **Event 6: Webinar on Industrial Internet of Things in the perspective - Industry 4.0**

Prof. J.K. Roy, Chair IEEE CAS Chapter, Kolkata Section, delivered a talk on “Industrial Internet of Things in the perspective of Industry 4.0” on 24th August, 2020 at the Electrical Engineering Dept., Narula Institute of Technology. Total number of participants was 100.

- **Event 1:** An invited talk was organized on January 10, 2020 on Computational Methods for Experimental Data Driven Inference of Spatial Genome Conformation by **Prof. Dariusz Plewczyński**, University of Warsaw, Poland at Department of Computer Science and Engineering, Aliah University, Kolkata. Total number of attendees was 85, among them 5 were IEEE Members.
- **Event 2:** An invited talk was organized on January 10, 2020 on Comparative Study of Clustering Algorithms: A Big Data Perspective by **Dr. Jacek Sroka**, University of Warsaw, Poland at Department of Computer Science and Engineering, Aliah University, Kolkata. Total number of attendees was 85, among them 5 were IEEE Members.
- **Event 3:** A Tutorial at COMSYS-2020 Conference was organized on January 13, 2020 on Deep Learning Enhanced Computer Vision by **Prof. Ananda Shankar Chowdhury**, Jadavpur University, India at Jalpaiguri Government Engineering College, West Bengal, India. Total number of attendees was 80, among them 12 were IEEE Members.
- **Event 4:** A Tutorial at COMSYS-2020 Conference was organized on January 13, 2020 on Introduction to processing of Large Datasets in Apache Spark, By **Dr. Jacek Sroka**, University of Warsaw, Poland at Jalpaiguri Government Engineering College, West Bengal, India. Total number of attendees was 110, among them 15 were IEEE Members.
- **Event 5:** A Tutorial at COMSYS-2020 Conference was organized on January 14, 2020 on Three dimensional genome computational modelling using genomics and imaging data at the population scale, By **Prof. Dariusz Plewczynski**, University of Warsaw, Poland at Jalpaiguri Government Engineering College, West Bengal, India. Total number of attendees was 120, among them 15 were IEEE Members.
- **Event 6:** A Tutorial at COMSYS-2020 Conference was organized on January 14, 2020 on Osteoporosis, Bone Micro-architecture, and Imaging – Recent Developments and Translational Studies, **By Prof. Punam K Saha**, Professor, University of Iowa, United States at Jalpaiguri Government Engineering College, West Bengal, India. Total number of attendees was 90, among them 12 were IEEE Members.
- **Event 7:** A lecture was organized titled "**Ultrasound Images**" by **Christian Kollmann**, Assistant Professor, Center for Medical Physics & Biomedical Engineering, Medical University of Vienna at the Computer Science & Engineering Dept. Jadavpur University on 14 February 2020. Total number of attendees was 15, among them 5 were IEEE Members.

**IEEE CAS STUDENT BRANCH CHAPTER, ECE DEPT, NARULA
INSTITUTE OF TECHNOLOGY, KOLKATA**

The IEEE CAS STUDENT BRANCH CHAPTER, ECE DEPT, NARULA INSTITUTE OF TECHNOLOGY, Kolkata executed following 4(four) Technical events successfully. The spectrum of events was colorful and significant attendees indicate the success of the events. This success is only following due to the active participation of all IEEE CASS members of ECE Dept, Narula Institute of Technology and IEEE CAS Members of Kolkata Section.

TECHNICAL EVENTS:

Event 1: Robotics & Circuit design Contest under KRITANJ 2020

Date: 4-5th March, 2020

Number of Participants: 124

Description:

The IEEE CAS Chapter of Kolkata Section and IEEE CAS Student Branch Chapter of Dept. of Electronics and Communication Engineering, Narula Institute of Technology have jointly organized a Robotics & Circuit design Contest under KRITANJ 2020 during 4-5th March, 2020. Total number of participants was 124.

Event 2: Webinar

Topic: A VIEW TO INTERNET OF THINGS & EMBEDDED PROCESSORS

Date: 13th April, 2020

Number of Participant: 85

Description:

The IEEE CAS Chapter, Kolkata Section & Dept. of Electronics and Communication Engineering, Narula Institute of Technology have jointly organized a webinar on “A VIEW TO INTERNET OF THINGS & EMBEDDED PROCESSORS” on 13th April, 2020. Prof. Dr. J K Roy, Chair IEEE CAS, Kolkata Section was the keynote speaker of the session. Total number of participants was 85.

Event 3: IEEE Student Membership Drive followed by a technical lecture

Topic: Future Reconnects IoT with Industry 4.0

Date: 8th May, 2020

Number of Participants: 95

Description:

The Department of Electronics and Instrumentation Engineering (EIE), IEEE CAS Student Branch Chapter, ECE Department, Narula Institute of Technology in collaboration with IEEE CAS Chapter, Kolkata Network has jointly organized a webinar on “IEEE Student Membership Drive” followed by

Technical Invited Talk on “IoT with Industry4.0” on 8th May 2020 from 4 PM to 6:30PM. Some of the Faculties of other states like Tamil Nadu etc. attended the talk. The students of EIE department of all years have attended the event. In addition to this faculty member of the college and outside state college participation was also there.

Prof. Dr. Joyanta Kumar Roy, Chair CAS Chapter was the keynote speaker of the session. He has given a technical talk on "Future Reconnects IoT with Industry4.0". The Students were highly motivated by the talk, as the speaker has shown the Virtual visit of the Mongal Pander Water Treatment plant in Barrackpore.

Professor Salil Kumar Sanyal, Ex-Professor, Jadavpur University and some dignitaries also attended the session which boosted up the confidence of the students.

Total Number of Students attended the event: 77

Faculty members: 18

Event 4: Webinar

Topic: Rajeshwari Chatterjee-Pioneering Woman Engineer

Date: 12th Dec, 2020

Number of Participants: 50

Description:

IETE Student Forum & IEEE CAS Student Branch Chapter , Electronics and Communication Department of Narula Institute of Technology organized a webinar Online Program - “Rajeshwari Chatterjee-Pioneering Woman Engineer” at 7 p.m on 12th December 2020, through the Zoom Application. The topic was webinar on- “Rajeshwari Chatterjee-Pioneering Woman Engineer”.

IEEE GRSS STUDENT BRANCH CHAPTER INAUGURATION
FOLLOWED BY TECHNICAL LECTURE PROGRAM, ECE DEPT,
NARULA INSTITUTE OF TECHNOLOGY, KOLKATA

Dates of the events: 26th February, 2020

Number of attendees:100

Very short and precise description:

The IEEE Seminar on **Inauguration of Narula Institute of Technology, IEEE GRSS Student Branch Chapter under the aegis of ECE Department, followed by Technical Lecture program** was organised by IEEE GRSS Chapter, Narula Institute of technology, on 26th February, 2020.

In the Official Inauguration of IEEE GRSS Student Branch Chapter Plague, ECE Department, Narula Institute of Technology. Prof. (Dr.) B.Uma Shankar, Professor, ISI, Kolkata, Vice Chair, IEEE GRSS Kolkata Section and Prof. (Dr.) Ashish Ghosh, Professor, ISI, Kolkata, Former Chair, IEEE GRSS Kolkata Section handed over the plague to Prof. (Dr.) M.R. Kanjilal, Principal, Narula Institute of Technology and Dr. S. Panda, HOD, ECE, Narula Institute of Technology. All the delegates delivered their speech in the Inauguration.

The Speaker of the Technical Talk was **Prof. (Dr.) Ashish Ghosh** Professor, ISI, Kolkata, Former Chair, IEEE GRSS Kolkata Section. The technical lecture topic was on Data Science.He delivered his lecture on the implementations of IOT in various fields. He illustrated the very basic of data science, after collecting the data via sensors. The session motivated the students of 2nd and 3rd year present there.

WEBINAR ON “GENERAL OVERVIEW OF THE ACTIVITY OF SEMICONDUCTOR DIVISION, BEL-BG” IEEE GRSS STUDENT CHAPTER AND DEPARTMENT OF ECE
NARULA INSTITUTE OF TECHNOLOGY

Dates of the events: 26th February, 2020

Number of attendees: 80

Very short and precise description:

The webinar on “**General Overview of the Activity of Semiconductor Division, BEL-Bg**” was organised by IEEE GRSS Student Chapter and Department of ECE, Narula Institute of Technology, on 3rd September, 2020. **The Speaker of the Webinar was Mr. Arijit Das, Sr. Engineer at Bharat Electronics Ltd.**

The webinar was attended by around 80 participants. The speaker has described the System and components of Business Verticals- BEL Bg Cx. He told us about 3 types of power devices, several types of hybrid micro circuit, different MEMS. He also told us about the Clean Room Specifications like Diffusion Operations, Lithography Operations, and Assembly Operations. He told us a brief about Clean-room classifications and human body as a source of contamination, procedure of working under

Laminar flow benches in clean- room, Photoresist coater, Chemical Wet Bench with Laminar Flow station.

IEEE STUDENT BRANCH, NIT DURGAPUR

A. Administrative

A1. AGM 2019

IEEE Student Branch NIT Durgapur conducted its Annual Grand Body Meeting, AGM 2019 on 7th April 2019. This meeting was conducted so as to present the annual report summarizing the work and the progress of the student branch in the last academic session of 2018-19. The highlight of the evening being the Chief Guest of Honor- respected Director NIT Durgapur Dr. Anupam Basu who graced us with his presence and valuable guidance. Additionally, IEEE SB, NIT Durgapur counselor Prof. Nirmal K. Roy (Dept. Of electrical engineering) and faculty advisors Dr. Chiranjib Koley (Dept. Of electrical engineering) and Dr. Aniruddha Chandra (Dept. Of electronics & communication engineering) were also present. The meeting was presided by Mr. Aniq Ur Rahman and Mr. Animesh Dutta. Plans for the upcoming sessional year was discussed. New events and their forthcoming planning and schedule were stated. The budget for academic session 2019-20 was proposed. The event also marked the handover of the posts to the new office bearers for the next academic year.

The meeting was attended by the Student Branch executives Along with the Guest of honor and faculty Advisors of IEEE SB, NIT Durgapur.

A.2 IEEE Computer Society Student & Young Professionals India Committee F2F Meet

The first face to face meeting of IEEE CS SYP team was conducted as a part of TechX in Mandarmani on 28th February 2020. The members who couldn't physically be present joined in on the online meeting. The meeting was conducted to discuss this term plan. Various initiatives and ideas were discussed by various Initiative leads (student and young professional). The meeting ended with discussing the timeline of the Mandelman two flagship events of IEEE Computer Society, Computer society India Symposium (CSIS) and All India Computer society Students and Young Professional Congress (AICSSYC)

A.3 Student Branch Meetings

Student Branch meeting for all the executives is conducted every month in order to briefly discuss and plan the future activities for IEEE. The meeting also focuses on discussing opportunities to collaborate with other Branches and IEEE Societies. Meeting were conducted physically during regular months while these meeting are addressed over online platforms such as Google Meet and Microsoft Teams regularly during COVID-19 period.

B. STUDENT AND AFFINITY GROUP

B.1 IEEE DAY 2020, 6th October

IEEE day, as is widely known, is the day when engineers, tech geeks gather worldwide to celebrate the anniversary of the first time when IEEE members assembled in Philadelphia to share their technical ideas in 1884. To commemorate the day and its rich legacy, IEEE SB NIT Durgapur hosted a virtual gathering on 6th October 2020. The celebrations were held under the theme of “Leveraging Technology for a better tomorrow”. The event started with the first speaker Dr. Aniruddha Chandra, associate professor of the ECE department at NIT Durgapur and Marie Curie fellow at the Brno University who gave a talk titled ‘IEEE for me?’ on the benefits of IEEE and how IEEE has helped in his 2 decade long academic journey. He also discussed about the intricacies of writing a good research paper and talked about molecular communication and wireless power transfer. The first session concluded with a round of Q&A session where our executive members and other enthusiastic students of colleges asked various questions from diverse topics.

The second speaker for the day was Mr. Aniq Ur Rahman, researcher at the Communication Theory lab and former summer research intern at CERN. He is also an Ex-Chair of IEEE NITD SB and one of the founding members of our SB. Mr. Aniq held a talk about his association with IEEE and how it helped him in shaping his research journey. He also talked about the benefits of IEEE membership, how networking helps in getting access to job opportunities and honing leadership skills. Overall, the event was a grand success where more than 100 students virtually participated. The event concluded with a vote of thanks.

B.2 IEEE TECH X CONGRESS 2020

EASTERN INDIA TECHNO-MANAGEMENT LEADERSHIP SUMMIT

TechX Congress 2020, the Eastern Indian Techno-Management Leadership Summit hosted by the IEEE Computer Society SYP MGAB technically co-sponsored by IEEE Kolkata Section, was officially inaugurated on the 28th of February, 2020 at the splendid Sun City Resort at Mandarmani. The event was co-hosted by student branches of NIT Durgapur and Jadavpur University. The purpose of this event was to promote IEEE activities within the section as well as serve as a platform where participants can augment their technical awareness and network with like-minded people. The event kick-started with an opening ceremony address by Ms. Soumya Kashyap, Secretary, IEEE CS SYP R-10. Day 1 witnessed several tracks including session on intersection of Technology and Management by Mr. Siddharth Rajhans, a Harvard educated technology entrepreneur who is currently working as a principal policy officer with the United Nations and Emotional Intelligence Track led by Miss Megha Ben. Day 2 marked a hub of several interesting competitions and workshops like Drone building workshop, PCB design workshop, Talent development workshop and important sessions on 5G technology and Internet of things. The last day saw TechX coming to a great finale with its final two seminars, first being Applications of Machine learning by Mr. Shivam Abhilash. he

delved into applications of Machine Learning like recommendation systems and in the field of pharmaceuticals. This was followed by a hands-on session where the delegates were assigned problem statements which they had to brainstorm and find the solutions to using the concepts they learnt. The second session was Internship Boot Camp conducted by Ms. Ishani Nag and Ms. Prateek Chatterjee of IEEE NIT Durgapur where they laid out the roadmap on how to secure great internships. Both the days saw exciting Social Nights which left everyone grooving on their feet. The closing ceremony was marked by the night sky starred by sky-lit lanterns commemorating the enormous success of TechX. The feedback given by participants justified the hard work behind making the summit happen. It gave the participants a platform to network and learn, opening them to a plethora of opportunities to explore and grow.

B.3 E-ROBO

To break the boredom of the students during the pandemic, IEEE SB, NIT DURGAPUR along with student branches of IIT Patna, NIT Raipur, NIT Patna, BIT Mesra and other colleges came up with E - Robo. As the name suggests, E-Robo is a simulation challenge that focuses on solving real life problems using trending technologies and 'Control-O-Bot'. The event was conducted between 14 October to 13 November, 2020 and witnessed zest of skill presentation through Simulation challenges and mentorship. The virtual robotics event bragged heavy prizes worth Rs. 40000 and even an opportunity of Summer Internships related to Artificial Intelligence and IoT fields. The event mainly pondered over learning things and then applying them to solve problems during the course of competition. The mentors for the competition came from both research and corporate backgrounds and guided the teams throughout the competition. E-Robo aimed to spread technical awareness among students through practical Implementation of the Subject. This was an initiative to develop healthy relationships with other student Branches from different premiere colleges. The event marked huge participation of teams registering for the event in online mode.

C. PROFESSIONAL ACTIVITIES

C1 Polaris: Your Guide to Innovative Careers

Undeniably, Careers in Research are necessary and exciting but they demand proper guidance to follow what one has yearned. Considering the above fact, on 14th May, 2020 IEEE SB NIT DURGAPUR introduced a series of mesmerizing talks under the event POLARIS: Your Guide to Innovative Careers, whereby notable alumni were invited to share their journey to excellence creating an exceptional opportunity the research enthusiasts to learn from their expertise through virtual conference. The inaugural episode showcased how Dr. Chattopadhyay achieved his dream of becoming Senior Research Scientist at NASA, the challenges he faced, and how he overcame them. Not so long after, on 19th June, 2020 with the second edition of the event Dr. Tanmay Dutta, a Marie Curie Postdoctoral Research Fellow at Empa Dübendorf, the, Canton of Zürich, Switzerland was invited who enlightened us with his experience in his field of research and clearing all the doubts posed. The series were bought to the enthusiasts through You Tube live platform. The viewers were in absolute concordant with the usefulness of the event and with a such a huge turnout, Polaris proved to be a big hit.

C.2 QRIOSITY 2.0

The IEEE Student Branch NIT Durgapur brought out the hidden cryptographer in all, through Qriosity 2.0 - an intriguing quiz based on the theme of the Enigma. The Quiz was conducted from 12th to 13th September, 2020. With a spectacular website design and some brain twisting questions, this event was a great success with a turn up of around 150 people. The event had two levels which spanned a duration of two days. People tried to decode their way through the two levels with great zeal.

The quiz website, which was built and hosted by the branch itself, had a real time leaderboard which unquestionably proliferated the ecstatic experience of the players. At the end, the winners were featured in our social media handles.

In all, the quiz was a whole new experience for all the players and gathered a huge participation all across the years. The wholehearted response is what will motivate us to organize it again in the coming years too!

C.3 INSIGHT

IEEE Student Branch, NIT Durgapur opened a new door to technical blogging by through the genesis of INSIGHT, a blog website that entices people towards diverse technical events and innovation. Insight launched its first blog on 26 March, 2020 which was based on Bluetooth Low Energy Audio. Through this, the Student Branch aimed to build a bridge between the students and the latest technological innovation that is happening around us. This inspired the students to read up more about the topics and explore several new career prospects. Topics like the Internet of things, Decoding the 5G Euphoria, AI Deepfake Technology, virtual and augmented reality, Cryptocurrency Decrypted were incorporated in the blog to assist the students to move beyond the traditional career option and dive into the ocean of innovation which is augmenting as the days pass by. Our Student Branch accepts original articles from students and a bench of reviewers passes it if it's worthy and original enough to be uploaded. Insight gained huge popularity with a total of 14 entries till date from several colleges.

C.4 SAT SIEGE

IEEE Student Branch NIT Durgapur conducted the event Sat-Siege, a satellite communication symposium on the 18th of January, 2020. The idea behind this symposium was to introduce the topic of satellite communication to students. The event was addressed by 2 prominent speakers Dr. Anindya Bose and Dr. Chandrakanta Kumar. Dr Anindya Bose, currently a professor at the University of Burdwan, experienced in the field of global navigation satellite system, and also a member of the astronomical society of India addressed the audience. At the start of the session Prof. Rowdra Ghatak, head of department of Electronics and Communication NIT Durgapur, felicitated the guest speaker and shared few words. Dr. Bose explained key points involving orbital satellites,

how satellites communicate with the base, mathematics involved and how to estimate the exact location of where to place them. He also discussed the potential and challenges of the multi constellation signal environment. Dr Chandrakanta Kumar was one among the many faces behind the very recent ISRO projects Chandrayaan 1 and Chandrayaan 2. His session was mainly focussed on the basics of antenna design and how to improve the signal reception. He also gave a live demo of satellite communication at the end of the session. The event was a huge success and saw participation of about 200 students across both sessions.

D. SOCIAL ACTIVITIES

D.1 BONFIRE

At IEEE Student Branch NIT Durgapur, team work and good relations are above which this branch was built. Apart from organizing events and collaborative network intensive conferences in and outside NIT Durgapur, the Student Branch also organized a fun and interactive Bonfire cum Barbeque Night on 12th January, 2020 at a place just a few blocks from our college campus. Here all the juniors of the Branch along with the seniors took roles and responsibilities to organize for foods and refreshments for everyone there. The event was organized for the sole purpose of getting to know each other at a more personal level and have a bit more informal relation with everyone. The Night was filled with various fun activities and also the most important phase, starting a coal fire from scratch for the Barbeque which went quite hilarious with every failed attempt. Overall, the event was full of jolly interaction and fun team building activities.

IEEE GRSS STUDENT BRANCH, SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY ACTIVITY REPORT

Total number of events related to Student Branch: 05

Event 1

Mention the dates of the events 01/05/2020

Number of attendees 30

Very short and precise descriptions Invited talk on **'Key Challenges for using Remote Sensing'** by Dr. Swastika Chakraborty, Associate Professor, Sikkim Manipal Institute of Technology. Students and faculties of Abacus engineering College and Sikkim Manipal Institute of Technology were present.

Event 2

Mention the dates of the events 15/08/2020

Number of attendees 25

Very short and precise description **Start up idea Competition**

Students of core engineering branches have presented new challenging start up ideas in this competition. Three awards have been given to successful participants.

Event 3

Mention the dates of the events 20/10/2020

Number of attendees 25

Very short and precise description **Three Minute Thesis Competition**

Students of different engineering branches have presented new proposal for Thesis ideas in this competition. Three awards have been given to successful participants.

Event 4

Mention the dates of the events 29/10/2020

Number of attendees 35

Very short and precise description Participation in **IDEA/WISE-E Inspire & Empower Panel**

This event is organized by IEEE GRSS WIE section. Dr, Swastika Chakraborty has participated as woman leader to motivate our chapter girl students globally. Entire chapter members have participated in different role.

Event 5

Mention the dates of the events 03/12/2020

Number of attendees 20

Very short and precise description Participation in INGARSS 2020 YP Activities Dr, Swastika Chakraborty has participated in the event as session chair. Entire chapter members have participated in different role.

ANTENNA AND PROPAGATION STUDENT BRANCH CHAPTER,
INSTITUTE OF ENGINEERING & MANAGEMENT, KOLKATA

Part A – Administrative

Annual General Meeting, Committee Meeting, Connection with Local National Organizations meeting

Total Number of Administrative meetings: 5

- Mention the dates of the meetings from November-2018 onwards:
15th July 2019, 13th August 2019, 9th November 2019, 12th January 2020 and 15th July 2020
- Number of attendees:

Date	No. Of Attendees
15 th July, 2019	11
13 th August. 2019	13
9 th November, 2019	9
12 th January, 2020	14
15 th July, 2020	14

Very short and precise description:

Date	Description
15 th July	Discussion of the Inauguration of the Student Chapter
13 th August	Discussion of the Projects to be undertaken
9 th November	Annual General Meeting, 2019
12 th January	Planning of Lecture Session of Prof. Bratin Das
15 th July,2020	Annual General Virtual Meeting, 2020

Part B – Student and Affinity Group Activities

Student Branch /Young Professionals / Women in Engineering / Life Member /Humanitarian Activities /Educational Activities which shall promote leadership and interpersonal skills of the Student/ YP/ WIE/ LM / Society members as well promote visibility of the IEEE objectives.

Total number of events related to Student Branch and Affinity Groups: 2

- Mention the dates of the events: 30th July, 2020 and 14th March
- Number of attendees: 45 and 15

- Very short and precise description: 30th July 2019 was the inauguration of our Student Branch Chapter and 14th March was the inauguration of our Antenna Lab for carrying out research activities.

Part C – Professional Activities

Continuing Education include Professional Lectures, Seminars and Workshops / Technical Activities / Partner University / Industry Activities

Total number of professional lectures/ seminars/ workshops /technical activities.....

- Mention the dates of the events: 7th February,2020
- Number of attendees: 54-60 (approx.)
- Very short and precise description: Guest Lecture by Prof. Bratin Ghosh, IIT Kharagpur
-

Jadavpur University Student Branch

Branch Code: 2506831

Student Branch Counselor: Dr. Bhaskar Gupta

Student Branch Chair: Rohan Mitra

Website: <https://ieee-jaduniv.in/>

IEEE is the world's largest technical professional organization that is working constantly towards the advancement of technology and to promote research with a special emphasis on helping the society.

The Jadavpur University IEEE student branch, founded in 2010, belongs to the Kolkata section of Region 10 of the organization. We are a group of enthusiastic students who are promoting innovative ideas both within and outside the campus.

Activities:

The Jadavpur University IEEE student branch conducts various events like seminars, workshops, paper presentations and tech quizzes. It is a platform where students come together, work, cooperate, coordinate, compete and as a result, develop both their intellectual as well as professional skills. Our events also involve welfare activities which have an impact on the society.

Student Branch Chapters

- **IEEE Industry and Applications Society Student Chapter**

Student Branch Code: SBC06831C

Chapter Advisor: Shivam Abhilash

Chapter Chair: Yogesh Chandra Prasad

The Industry Applications Society, as a transnational organization, is interested in advancement of the theory and practice of electrical and electronic engineering in the development, design, manufacture and application of electrical systems, apparatus, devices and controls to the processes and equipment of industry and commerce; promotion of safe, reliable and economic installations; industry leadership in energy conservation and environmental, health, and safety issues; creation of voluntary engineering standards and recommended practices; and the professional development of its membership. The IEEE JU SB started this chapter way back in late 2019 and has gone on to stand in its ideals.

- **IEEE Computer Society Student Chapter**

Student Branch Code: SBC06831B

Chapter Advisor: Sarmistha Neogy

Chapter Chair: Mayank Agarwal

The IEEE Computer Society is the premier source for information, inspiration, and collaboration in computer science and engineering. Connecting members worldwide, the Computer Society empowers the people who advance technology by delivering tools for individuals at all stages of their professional careers. Our trusted resources include international conferences, peer-reviewed publications, a robust digital library, globally recognized standards, and continuous learning opportunities. The Student Chapter in our Student Branch was initiated in early 2019 and it's work can broadly be classified into 4 sections : Technological Updates, Seminars, Meets and Competitions, Interactive sessions and Project Developments.

- **IEEE Microwave Theory and Techniques Society Student Chapter**

Student Branch Code: SBC06831A

Chapter Advisor: Bhaskar Gupta

Chapter Chair: Koushik Patra

The IEEE Microwave Theory and Techniques Society (MTT-S) is a transnational society with more than 10,500 members and 190 chapters worldwide. The society promotes the advancement of microwave theory and its applications, including RF, microwave, millimeter-wave, and terahertz technologies. The Student Chapter established back in the 1st quarter of 2019 has organized events and activities leading to the benefit of the research enthusiasts in the same field.

- **IEEE Engineering in Medicine and Biology Society Student Chapter**

Student Branch Code: SBC06831

Chapter Advisor: Piyali Basak

Chapter Chair: Pratik Das

IEEE Engineering in Medicine and Biology Society (EMBS) is the world's largest international society of biomedical engineers. The organization's 10,000 members reside in some 97 countries around the world. EMBS provides its members with access to the people, practices, information, ideas and opinions that are shaping one of the fastest growing fields in science. The IEEE EMBS is the oldest Student Chapter in our IEEE Jadavpur University Student Branch.

PART-A: Administrative

Membership Drive 2.0

Organised By: IEEE Jadavpur University Student Branch

IEEE's real vision of advancing technology for humanity is one which we at Jadavpur University Student Branch firmly have believed.

Apart from our constant flow of new members, we conduct seminars in various seminar halls across the college campus to induce various members. Among such sessions, one of particular importance was the Membership Drive 2.0.

Membership Drive 2.0 was the second drive to induce new members into the society. With the pandemic forcing everyone to stay at home and to depend on the digital world for their day-to-day work, we in our Student Branch didn't shy off from doing the same. The drive this year was completely virtual keeping the Covid restrictions in mind. The drive marked remarkable results with our membership, as it witnessed the addition of over 15 new members to the Student Branch.

Annual General Meetings

1. **Date:** 20th February, 2020

Venue: Jadavpur University, Kolkata, India.

2. **Date:** 31st August, 2020

Venue: Google Meet (Virtual)

PART-B: Student and Affinity Group Activities

Leadership and Young Professionals Track

IEEE TechX Congress

Candidates sat in groups and spoke of their fears, strengths, and adventures in a unique workshop conducted by Megha Ben, the vice-chair of IEEE CS MGAB for Student Young Professionals activities, on day one of TechX Congress. Interactive sessions, games and puzzles were used to delve deep into facets

like the heart and mind connection, the IQ-EQ balance and more.

A simultaneous workshop led by Mr. Siddharth Rajhans, Harvard-educated technology entrepreneur and currently a principal policy officer with the United Nations, focussed on the intersection of tech, policy and management. In this enriching session, Siddharth spoke of his life, his failures, his blueprint of DEVELOPED INDIA 2020 and most importantly, about making India a knowledge superpower rather than a dominant world power.

Date: 28th February, 2020

Location: Mandarmani, India

Website: <https://ieee-techx.com/#>

PART-C: Professional Activities

IEEE TechX Congress

Organized by: IEEE Jadavpur University and NIT Durgapur Student Branch
in collaboration with the IEEE Computer Society

The IEEE TechX Congress was the Eastern Indian Techno-Management Leadership Summit hosted by the IEEE computer society SYP MGAB, where it assimilated all IEEE student members, professionals and student chapters associated with the society. The goal of this congress was to create awareness about technological advancement in the world along with creating cultural and technological exchange of ideologies in turn making a step ahead in progress and moulding minds of young students to become the best innovators of the next generation. This included lectures by reputed researchers and innovators to guide the audience and share their experiences along with bringing bright young minds to light.

Date: 28th February - 1st March, 2020

Attendees: 200+

Location: Mandarmani, India

Website: <https://ieee-techx.com/#>

ElevateX

Organized by: IEEE Jadavpur University Industry and Applications Society Student Chapter

ElevateX was an all-in-one mentorship program organized by the IEEE Jadavpur University Student Branch. Be it research or industry, be it competitive coding, electronics or soft skill development, we had tracks tailor-made for your needs, complete with doubt-clearing, quick contests, real-world problems and webinars by field experts. While everyone was stuck in the middle of a pandemic, locked up at home, this was our way of helping you engage yourself in something productive!

Our mentors included primarily final and pre-final year students of Jadavpur University in and outside the Student Branch who have achieved great success in their careers in the said fields. The ElevateX ended with some wonderful webinars by *Miri Rodriguez*, Global Head of Internships at Microsoft; *Sandeep Jain*, Co-Founder of GeeksForGeeks and *Sandeep Varma*, Principal at ZS Associates.

Date: April - May, 2020

Participants: 50+

Webinar Attendees: 300+

Website: <https://ieee-jaduniv.in/ElevateX/>

Projection

Organized by: IEEE Jadavpur University Industry and Applications Society Student Chapter

IEEE JU IAS Chapter presents PROJECTION was a one-on-one mentorship cum research program for 2nd year and 3rd year undergraduate students led by multiple experts across industries. The event made it possible for the students to get industrial exposure to professional and research projects by working under leaders from industrial giants. Students learned and directly worked under these leaders for projects/research work for two to three months. Owing to the performance of the students, some were even offered internships at those companies to continue building their career.

Our mentors included the likes of *Sandeep Varma*, Principal Partner at ZS Associates; *Mukesh Jain*, Vice President at Capgemini; *Subodh Gajare*, Senior Solutions Architect at Cisco

Date: June-October, 2020

Participants: 50+

Webinar Attendees: 100+

Pass the Mic

Organized by: IEEE Jadavpur University Computer Society Student Chapter

IEEE Jadavpur University Computer Society Student Chapter presents Pass the Mic is a specially curated series of weekly podcasts to warm up your winter weekends. The podcasts will be a 5-week series covering various topics like Cybersecurity, Astronomy, Fact-checking, Machine Learning, Entrepreneurship, etc. The podcast series went live on 20th December, 2020. Our speakers include *Pratik Sinha*, Co-Founder of AltNews; *Sanket Sarkar*, Co-Founder of TeamCognito; *Debi Prasad Duari*, Astrophysicist and Director, MP Birla Planetarium; *Brandon Folz*, Senior Learning Designer - Decision Sciences and Finance, Cengage Learning, etc.

Date: December 20th, 2020 - Ongoing

Attendees: 50+(Ongoing)

Website: <https://ieee-jaduniv.in/ptm/>

Spotify Link: <http://spoti.fi/3mEMKPA>

PART-D: Social Activities

Women in Technology

Blog Series

On the occasion of the International Women's Day, we celebrate the lives of women. What today, and the rest of the days of the year hold for the millions of ordinary women with extraordinary lives is something we aren't very sure about. The Women in Technology Blog Series was a week long blog post series where we celebrated the lives of Women in Science and Technology, the often unsung heroes behind several revolutionary works in their fields. We brought to you a story every day, and all that we hoped for was to inspire at least one woman out there, help her dream, nudge her forward with stories that are very real. Our blog series included write ups on *Katherine Johnson*, *Grace Hopper*, *Rosalind Franklin*, *Patricia Bath*, *Tessy Thomas*, *Anita Sengupta* and *Debjani Ghosh*.

Date: 9th-15th March, 2020

Blog Page: <https://ieee-jaduniv.in/blog/>

MTT-S SBC JADAVPUR UNIVERSITY CHAPTER ACTIVITY

REPORT

Jan 2020 - Dec 2020

Faculty Advisor: Prof. Bhaskar Gupta Chapter Chair: Ardhendu Kundu

Chapter Name: Jadavpur University, MTT17, SBC06831A

Chapter Activities during 2020

Activity #1: Professional Activity (Technical Seminar)

Topic: Method of Moments in Electromagnetics: Concepts and Practical Real-World Applications

Date: January 14, 2020

Speaker: Dr. Arkaprov Das, Co-founder at Simyog Technology Private Limited **Venue:** Seminar Room, Dept. of ETCE, Jadavpur University

Attendance: 17 IEEE Members and 06 Guests

Activity #2: Professional Activity (Technical Seminar)

Topic: Electromagnetics in MIMO Antennas for Future Networks: Correlation and Channel Manipulation

Date: Feb 20, 2020

Speaker: Dr. Debdeep Sarkar, Post-doctoral Research Fellow, RMC Canada **Venue:** Seminar Room, Dept. of ETCE, Jadavpur University

Attendance: 12 IEEE Members and 02 Guests

Activity #3: Professional Activity (Technical Seminar)

Topic: Full-wave analysis and design of Dielectric Resonator Antennas

Date: March 13, 2020

Speaker: Prof. Bratin Ghosh, IIT KGP

Venue: Seminar Room, Dept. of ETCE, Jadavpur University **Attendance:** 09 IEEE Members and 02 Guests

Activity #4: Professional Activity (Technical Webinar)

Topic: Webinar on Nature Inspired Optimization Techniques and their Applications to Antenna Design

Date: June 20, 2020

Speaker: Dr. Arindam Deb, Kalinga Institute of Industrial Technology (KIIT) **Online Platform:** Google Meet

Attendance: 23 IEEE Members and 29 Guests

Activity #5: Professional Activity (Technical Quiz in Virtual mode)

Topic: Online Quiz on Electromagnetics, Microwave and Antenna

Date: July 05 – July 09, 2020

Online Platform: Google Form

Qualified: 45

Attendance: 65 IEEE Members and 154 Guests

Activity #6: Professional Activity (Technical Webinar)

Topic: Webinar on 'Advances in Tracking RADAR Systems for Test Range Application'

Date: July 28, 2020

Speaker: Mr. Rajkumar Dutta, Scientist-'E', RADAR Systems Group -ITR, DRDO, Chandipur

Online Platform: Google Meet + Live streaming **Attendance:** 36 IEEE Members and 232 Guests

Activity #7: Professional Activity (Technical Webinar)

Topic: Webinar on 'Silicon Micromachining for mmW and sub-mmW Technology'

Date: Aug 02, 2020

Speaker: Mr. Ayan Karmakar, Scientist/Engineer-SE, SCL Chandigarh, ISRO **Online Platform:** Google Meet

Attendance: 31 IEEE Members and 39 Guests

Activity #8: Administrative Meeting

Topic: Half-Yearly General Meeting (2020) of IEEE MTT-S Student Branch Chapter, Jadavpur University

Date: Aug 03, 2020

Online Platform: Google Meet

Attendance: 11 IEEE Members and 01 Guests

Activity #9: Professional Activity (Technical Webinar)

Topic: Webinar on 'Hybrid electromagnetic solvers for EMI/EMC' **Date:** Aug 08, 2020

Online Platform: Google Meet

Speaker: Mr. Bibhu Prasad Nayak, Robert Bosch Engineering and Business Sol., Bengaluru

Attendance: 35 IEEE Members and 57 Guests

Activity #10: Professional Activity (Technical Webinar)

Topic: Webinar on 'Miniaturized antenna for Wireless Capsule Endoscopy system: a Make-in-India approach'

Date: Aug 22, 2020

Online Platform: Google Meet

Speaker: Dr. Balaka Biswas, CSIR-CSIO Chandigarh, India (SRA-Scientist Pool) **Attendance:** 33 IEEE Members and 65 Guests

Activity #11: Professional Activity (Technical Webinar)

Topic: Webinar on 'Passive/Active Microwave Absorbers based on Frequency Selective Surfaces'

Date: Aug 29, 2020

Online Platform: Google Meet

Speaker: Dr. Saptarshi Ghosh, Assistant Professor, Electrical Engineering, IIT Indore, India

Attendance: 37 IEEE Members and 63 Guests

Activity #12: Professional Activity (Technical Webinar)

Topic: Webinar on 'MIMO antennas and Beamforming Techniques' **Date:** Sept 06, 2020

Speaker: Dr. Leeladhar Malviya, Associate Professor, ETCE Department, S. G. S. I. T. S., Indore

Online Platform: Google Meet

Attendance: 38 IEEE Members and 81 Guests

Activity #13: Professional Activity (Technical Webinar) **Topic:** Webinar on 'Making of RF Anechoic Chamber' **Date:** Sept 12, 2020

Online Platform: Google Meet

Speaker: Mr. Mahesh Chand Kala, Chartered Engineer, CEO and Founder, JV Micronics, India

Attendance: 33 IEEE Members and 73 Guests

Activity #14: Professional Activity (Technical Webinar)

Topic: Webinar on 'Body Centric Wireless Communication Services: An Insight into UWB Channel Modeling and Deep Tissue Micro-implant Systems for Biomedical Telemetry'

Date: Sept 19, 2020

Speaker: Dr. Debarati Ganguly, Post Doctoral Research Fellow, Royal Military College of Canada

Online Platform: Google Meet

Attendance: 33 IEEE Members and 72 Guests

Activity #15: Professional Activity (Technical Webinar) **Topic:** Webinar on ‘Challenges in Spacecraft Antenna Design’ **Date:** Sept 26, 2020

Online Platform: Google Meet

Speaker: Prof. V. Mahadevan, Scientist (R), ISRO / Professor (R), PES University

Attendance: 70 IEEE Members and 174 Guests

Activity #16: Professional Activity (Technical Picture Puzzles in Virtual mode)

Topic: 'Online Picture Puzzles on Electromagnetics, Microwave and Antenna

Date: Oct 02-Oct 06, 2020

Online platform: Google form

Qualified: 32

Attendance: 47 IEEE Members and 118 Guests

Activity #17: Social Activity

Topic: 'Virtual Aptitude Quiz Contest to Celebrate IEEE DAY 2020' **Date:** Oct 06, 2020

Online platform: Google Meet

Qualified: 02

Attendance: 10 IEEE Members and 02 Guests

Activity #18: Professional Activity (Technical Webinar)

Topic: Webinar on 'Pedagogical Learning in Electromagnetics using TaraNG' **Date:** Oct 10, 2020

Speaker: Mr. Swapnil Gaul, Founder, NUMEREGION **Online Platform:** Google Meet

Attendance: 22 IEEE Members and 53 Guests

Activity #19: Professional Activity (Technical Webinar)

Topic: Webinar on 'Radars for Autonomous Vehicle Application' **Date:** Oct 17, 2020

Online Platform: Google Meet

Speaker: Mr. T. Jayanandan, Founder/CEO, Tesla Minds, India **Attendance:** 34 IEEE Members and 77 Guests

Activity #20: Professional Activity (Technical Webinar)

Topic: Webinar on 'Microwave Filter : Gateway of modern communication system'

Date: Nov 01, 2020

Online Platform: Google Meet

Speaker: Dr. Sayan Chatterjee, Associate Professor, ETCE, Jadavpur University **Attendance:** 51 IEEE Members and 97 Guests

Activity #21: Professional Activity (Technical Webinar)

Topic: Webinar on 'Near and Far-Field Wireless Power Transfer: Trends, Techniques and Recent Developments'

Date: Nov 07, 2020

Online Platform: Google Meet

Speaker: Dr. Chinmoy Saha, Associate Professor, Department of Avionics, Indian Institute of Space Science and Technology, Dept. of Space, Govt. of India **Attendance:** 24 IEEE Members and 49 Guests

Activity #22: Professional Activity (Technical Webinar)

Topic: Webinar on 'Dielectric Resonator Antenna: Fundamentals, Analysis & Ideas'

Date: Nov 22, 2020

Online Platform: Google Meet

Speaker: Dr. Raghvendra Kumar Chaudhary, Assistant Professor, EE Dept., IIT (ISM) Dhanbad, India

Attendance: 45 IEEE Members and 74 Guests

Activity #23: Professional Activity (Technical Webinar) **Topic:** 2nd Doctoral Scholars' Colloquium (2020) **Date:** Nov 28, 2020

Online Platform: Google Meet

Expert Panel Members: Dr. Arijit Majumder, SAMEER Kolkata; Dr. Somak Bhattacharyya, IIT (BHU) Varanasi; and Prof. V. Mahadevan, Scientist (R), ISRO / Professor (R), PES University, Bangalore.

Participants: 10 Doctoral Research Scholars **Awarded:** 03

Activity #24: Student and Affinity Group Activities

Topic: Online interactive session on "Communication: Past, Present and Future" **Date:** Dec 06, 2020

Online Platform: Google Meet

Speaker: Prof. Bhaskar Gupta, ETCE Dept., Jadavpur University **Attendance:** 74 School Students (X, XI & XII)

Activity#25: Administrative Meeting

Topic: Election of Chapter Officers for 2

Topic: Election of Chapter Officers for 2021

Date: Dec 17-19, 2020

Online Platform: Google Form

Voting Members: 11 members of IEEE MTT-S SBC, Jadavpur University **Elected Chapter**

Officials: Sayan Sarkar (Chair 2021), Ayona Chakraborty (Vice-Chair 2021), and Samipendu Das (Treasurer)

Activity #26: Administrative Meeting

Topic : Annual General Meeting (2020) of IEEE MTT-S Student Branch Chapter, Jadavpur University

Date: Dec 22, 2020

Venue: PCB Lab, Dept. of ETCE, Jadavpur University **Attendance:** 10 IEEE Members and 02 Guests

Activity #27: Professional Activity (Technical Webinar) **Topic:** Workshop on 'Different Computational Electromagnetic Techniques and Their Applications'

Date: Dec 27-29, 2020

Online Platform: Google Meet

Speakers: Prof. Ratnajit Bhattacharjee, EEE Dept., IIT Guwahati; Prof. Pradip K Saha, University of Calcutta; and Dr. Debdeep Sarkar, Assistant Prof., ECE, IISc Bangalore.

Status: To be hosted

Chapter Name: IEEE ED MSIT SBC

Part C – Professional Activities

1. International Conference- IEEE VLSI DCS 2020

- Date of the event: 18th-19th July, 2020
- 150 attendees were present in the program out of which 73 were the IEEE members

2020 IEEE VLSI Device, Circuit and System Conference (VLSI-DCS) has been organized by the IEEE ED MSIT SBC on 18th-19th July, 2020. The conference was dedicated to provide an international forum for researchers and participants to report up-to-the minute innovation and development and exchange ideas and advances in all aspects of VLSI device, circuits and systems. The response to the conference's call for papers has been outstanding. **Total 236 papers were submitted to our conference out of which 104 papers have been registered for presentation, after being peer-reviewed.** Total 104 reviewers have been selected to provide a broad range of expertise, to balance junior and senior members, and to represent a variety of geographical locations. The reviewers have worked diligently to select papers and speakers that met the criteria of high quality and relevance to our various fields of interest. It takes time and a great amount of effort to review a paper carefully, and every member of the Technical Program Committee is to be commended for his or her contribution to the success of this conference. **Total 20 Plenary and Keynote speakers deliver their talks and 32 distinguished Professors chaired 16 parallel technical sessions. Total more than 150 attendees were present in the program out of which 73 were the IEEE members.** All the papers have been included in IEEE Explorer. Dr. Manash Chanda, Vice Chair, IEEE EDS Kolkata Chapter acted as General Chair under the patronage of Techno India Group.

2. Technical Talk on "IoT Devices and Low power Applications"

- Date of the event: 14th March 2020
- 85 students attended the event

One day technical talk on "IoT Devices and Low power Applications" organized by The ED MSIT Student Branch Chapter and MSIT Student Branch, in association with the Department of ECE, MSIT on **14th March 2020**. Lecture was delivered by Dr. Subhankar Majumdar, Assistant Professor, Department of Electronics and Communication Engineering, NIT Meghalaya. Almost **85 students** attended the event. Out of the 85, almost 31 IEEE student members attended the talk.

3. Student Paper Contest

- Date of the event: 26th June, 2020
- 65 students participated out of which total 24 were the IEEE members.

A student paper contest was organized by the IEEE EDS MSIT SBC in association with the Dept. of ECE, MSIT on **26th June, 2020**. Almost 31 papers have been presented in this event. Total **65 students** participated out of which total 24 were the IEEE members. Total 26 IEEE EDS student members attended the paper contest. The contest has been organized to motivate the students towards the research of the VLSI device and circuits.

4. **Webinar on "Overview on Robotics and Its Applications"**

- Date of the event: 25th -26th July, 2020
- Number of participants in the webinar were more than 200 (about 30 IEEE student members).

A webinar on "Overview on Robotics and Its Applications" was organised by IEEE ED MSIT SBC in association with IEEE COMSOC MSIT SBC and the dept. of ECE, MSIT, Kolkata for the 1st year students on **25th -26th July, 2020** to spread the awareness of automation and also to involve them in the research of Robotics and automation. Dr. Chanda Pani, Chapter Advisor, IEEE COMSOC MSIT Chapter, Dr. Monika Saha, Dr. Manash Chanda, Chapter Advisor, IEEE ED MSIT SBC and Dr. Swapnadip De, Counselor, Student Branch were the key person of this event. Number of participants in the webinar were more than 200 (about 30 IEEE student members).

5. **Membership Awareness Workshop**

- Date of the event: 27th July, 2020
- About 65 students participated in the workshop.

A workshop has been organized for the 1st year students on **27th July, 2020** to spread the awareness of IEEE membership and also to involve them in the research of VLSI Device and circuit design and modelling. Dr. Manash Chanda, Chapter Advisor, IEEE ED MSIT SBC and Dr. Swapnadip De, Counselor, Student Branch were the key person of this event. **Total 42 students from the first year have taken the membership of IEEE EDS after the event.** Other students were also immensely benefitted and motivated by the talk of the Advisor and counsellor.

6. **IEEE EDS Technical Talk Program by Prof. Sudeb Dasgupta**

- Date of the event: 22nd August, 2020
- About 96 participants attended the session.

Prof. Sudeb Dasgupta, HOD, Department of Electronics and Communication Engineering at Indian Institute of Technology, Roorkee has delivered an illuminating talk on low power design in a technical talk program organized by IEEE ED MSIT SBC in association with Department of ECE, MSIT at 6:00 pm on **22nd August, 2020**. The duration of the talk was about 90mins. Prof. (Dr.) Ankur Ganguly, the Principal of MSIT gave the introductory speech which was followed by a speech given by Dr. Swapnadip De, branch counselor of

IEEE ED MSIT SB. Dr. Manash Chanda, the chapter advisor of IEEE ED MSIT SBC coordinated the session. **About 96 participants attended the session.** Dr. Chandni Pani gave the vote of thanks at the end. We are extremely thankful to Prof. Dasgupta for this immensely benefiting talk. We look forward to have more such sessions with him. Almost 54 IEEE members and 65 non-IEEE members attended the talk and immensely benefitted from the talk.

7. IEEE EDS Technical Talk Program by Mr. Sankalp Jain

- Date of the event: 15th September, 2020
- About 105 participants were present, out of which 35 were IEEE members.

IEEE ED MSIT SBC in association with Department of ECE, MSIT, Kolkata has organised IEEE EDS Technical Talk Program by Mr. Sankalp Jain, SoC Implementation Engineer, Apple, Austin, USA on **15th September, 2020**. Prof (Dr.) Ankur Ganguly gave the introductory speech, which was followed by a speech of Dr. Swapnadip De, HOD, Dept. of ECE, MSIT and Branch Counselor, IEEE MSIT SB. Dr. Manash Chanda, Chapter Advisor, IEEE ED MSIT SBC coordinated the session. **About 105 participants were present, out of which 35 were IEEE members.** It was an engaging talk and the students were highly benefited.

8. IEEE EDS Technical Talk Program by Dr. Shubham Sahay

- Date of the event: 16th October, 2020
- Almost thirty-five students attended the event.

Dr. Shubham Sahay, Assistant Professor, Dept. of Electronics and Communication Engineering, IIT Kanpur delivered an IEEE EDS technical Talk on “Neuromorphic Computing” on **16th October, 2020**. The IEEE EDS Technical Talk program has been organized by the IEEE EDS MSIT SBC, in association with the Dept. of ECE. Almost **thirty-five students attended the event.** Out of which, twenty-six IEEE EDS student members also attended.

IEEE NETAJI SUBHASH ENGINEERING COLLEGE STUDENT

BRANCH

[STB15115]

1. IEEE GRSS Student Branch Chapter

Part A – Administrative

[Annual General Meeting, Committee Meeting, Connection with Local National Organizations meeting]

Total Number of Administrative meetings: Nil

Sl. No	Date of meeting after NOV '20	Number of attendees	Brief Description	Meeting picture	Annual General Membership Assembly
N/A	N/A	N/A	N/A	N/A	N/A

Part B – Student and Affinity Group Activities

[Student Branch /Young Professionals / Women in Engineering / Life Member /Humanitarian Activities /Educational Activities which shall promote leadership and interpersonal skills of the Student/ YP/ WIE/ LM / Society members as well promote visibility of the IEEE objectives.]

Total number of events related to Student Branch and Affinity Groups: Nil

Sl. No	Date of event	Number of attendees	Brief Description	Meeting picture
N/A	N/A	N/A	N/A	N/A

Part C – Professional Activities

[Continuing Education include Professional Lectures, Seminars and Workshops / Technical Activities / Partner University / Industry Activities]

Total number of professional lectures/ seminars/ workshops /technical activities: 3

Sl. No	Date of event	Number of attendees	Brief Description
1	17.02.2020	26	A technical lecture on “ Revolution in Society through Satellite ” by Dr. Parameswar Banerjee, Former Scientist G and Deputy director of National Physics Laboratory, India and presently associated with Amity University, delivered his lecture on various aspects of communication satellite. He discussed about various mode of propagation and their applications in the field of space, aviation, and agriculture and disaster relief. He also discussed about various aspect of satellite communication in remote sensing.
2	2.03.2020	19	A technical lecture on “ Machine Learning ” by Prof. Ashish Ghosh, Former In-Charge, Center for Soft Computing Research, and Professor & Head, Machine Intelligence Unit delivered his lecture on basics of Machine learning. He discussed about various examples. He explained very well about supervised learning and unsupervised learning and their applications in remote sensing.
3	4.10.2020	80	An online technical lecture on “ Fundamentals of Universe ” was delivered by Dr. Dibyashree Sengupta, a Post-Doctoral Fellow of National Taiwan University. She discussed about the standard model of dark matter and how the universe was created.

Part D – Social Activities

[Award Ceremony, Family oriented or Team Building Activities, Social Events]

Total number of events conducted: Nil

Sl. No	Date of events	Number of attendees	Brief Description	Meeting picture
N/A	N/A	N/A	N/A	N/A

2. IEEE Antenna and Propagation Society Student Branch Chapter

Part A – Administrative

[Annual General Meeting, Committee Meeting, Connection with Local National Organizations meeting]

Total Number of Administrative meetings: Nil

Sl. No	Date of meeting after NOV '20	Number of attendees	Brief Description	Meeting picture	Annual General Membership Assembly
N/A	N/A	N/A	N/A	N/A	N/A

Part B – Student and Affinity Group Activities

[Student Branch /Young Professionals / Women in Engineering / Life Member /Humanitarian Activities /Educational Activities which shall promote leadership and interpersonal skills of the Student/ YP/ WIE/ LM / Society members as well promote visibility of the IEEE objectives.]

Total number of events related to Student Branch and Affinity Groups: Nil

Sl. No	Date of event	Number of attendees	Brief Description	Meeting picture
N/A	N/A	N/A	N/A	N/A

Part C – Professional Activities

[Continuing Education include Professional Lectures, Seminars and Workshops / Technical Activities / Partner University / Industry Activities]

Total number of professional lectures/ seminars/ workshops /technical activities: Nil

Sl. No	Date of event	Number of attendees	Brief Description	Event picture
N/A	N/A	N/A	N/A	N/A

Part D – Social Activities

[Award Ceremony, Family oriented or Team Building Activities, Social Events]

Total number of events conducted: Nil

Sl. No	Date of events	Number of attendees	Brief Description	Meeting picture
N/A	N/A	N/A	N/A	N/A

3. IEEE Electron Devices Society Student Branch Chapter

Part A – Administrative

[Annual General Meeting, Committee Meeting, Connection with Local National Organizations meeting]

Total Number of Administrative meetings: Nil

Sl. No	Date of meeting after NOV '20	Number of attendees	Brief Description	Meeting picture	Annual General Membership Assembly
N/A	N/A	N/A	N/A	N/A	N/A

Part B – Student and Affinity Group Activities

[Student Branch /Young Professionals / Women in Engineering / Life Member /Humanitarian Activities /Educational Activities which shall promote leadership and interpersonal skills of the Student/ YP/ WIE/ LM / Society members as well promote visibility of the IEEE objectives.]

Total number of events related to Student Branch and Affinity Groups: Nil

Sl. No	Date of event	Number of attendees	Brief Description	Meeting picture
N/A	N/A	N/A	N/A	N/A

Part C – Professional Activities

[Continuing Education include Professional Lectures, Seminars and Workshops / Technical Activities / Partner University / Industry Activities]

Total number of professional lectures/ seminars/ workshops /technical activities: 4

Sl. No	Date of event	Number of attendees	Brief Description
1	17.01.2020	45	Dr. Ajit Kumar Panda, Professor and Dean, National Institute of Science and Technology, Behrampore delivered a beautiful lecture on the advancements in communication technology and introduction about 5G technology including GaN HEMT technology suitable for mm wave 5G applications presenting a relevant case study.

2	27.01.2020	40	Prof. Amlan Chakrabarti, Professor and Director, A.K. Chowdhury School of Information Technology, University of Calcutta, delivered a lecture session on 'Machine Learning for IOT Analytics' presented a detailed overview on basics of IoT Analytics. The lecture also included the factors which paved the way for rapid developments in hardware and software, communication advancements, and the need for IoT these days.
3	26.10.2020 and 27.10.2020	60	A 2 day webinar was held on '4G and 5G security-opportunities and challenges' by Dr. Ashutosh Dutta, who is an IEEE fellow, a senior scientist and 5G Chief Strategist at Johns Hopkins University, USA. The first was regarding 4G technology, security, advantages and scopes. In the 2nd session, the speaker gave an insight of the 5G technology, the opportunities and challenges related to this.
4	18.10.2020	35	A one day webinar on 'Signal processing tools for condition monitoring of biomedical systems' by Mr. Saptarshi Chatterjee, Visvesvaraya PhD fellow, Electrical Engineering Department, Jadavpur University. He explained the development of Computer Aided Diagnosis (CAD) Systems as an emerging research trend in recent years, as well as, the challenges in this field.

Part D – Social Activities

[Award Ceremony, Family oriented or Team Building Activities, Social Events]

Total number of events conducted: Nil

Sl. No	Date of events	Number of attendees	Brief Description	Meeting picture
N/A	N/A	N/A	N/A	N/A

IEEE GEOSCIENCE & REMOTE SENSING SOCIETY STUDENT

BRANCH CHAPTER

NETAJI SUBHASH ENGINEERING COLLEGE

2020 REPORT

A Lecture on “Revolution in Society through Satellite”

by Dr. Parameswar Banerjee,

Former Scientist G and Senior Deputy Director of National Physics Laboratory, India

On 17 February, 2020 the GRSS NSEC Student Branch Chapter in association with the department of ECE organized a technical lecture on “**Revolution in Society through Satellite**” at the Seminar room, ECE Dept., NSEC from 2:30 pm to 4:30 pm. Dr. Parameswar Banerjee, Former Scientist G and Deputy director of National Physics Laboratory, India and presently associated with Amity University, delivered his lecture on various aspects of communication satellite. He discussed about various mode of propagation and their applications in the field of space, aviation, agriculture and disaster relief. Then he discussed about various aspect of satellite communication in remote sensing. Around 20 students along with the faculty members were present in the event.

A Technical talk on “Machine Learning”

by Prof. Ashish Ghosh,

Professor & Head, Machine Intelligence Unit

Former In-Charge, Center for Soft Computing Research

On 2 March, 2020 the GRSS NSEC Student Branch Chapter in association with the department of ECE organized a technical lecture on “**Machine Learning**” at the Seminar room, ECE Dept., NSEC from 2:30 pm to 4:30 pm. Prof. Ashish Ghosh, Former In-Charge, Center for Soft Computing Research, and Professor & Head, Machine Intelligence Unit delivered his lecture on basics of Machine learning. He discussed about various examples. He explained very well about supervised learning and unsupervised learning and their applications in remote sensing. Around 20 students along with the faculty members were present in the event.

A Technical talk on “Fundamentals of Universe”

by Dr. Dibyashree Sengupta,

Post Doctoral Fellow

National Taiwan University, Taipei 10617, Taiwan (R.O.C).

On 4 October 2020 the GRSS NSEC Student Branch Chapter in association with the department of ECE organized a technical lecture on “**Fundamentals of Universe**” by Dr. Dibyashree Senguptain online mode from 3 pm to 4 pm. She discussed about standard model dark matter and how universe created. Around 80 students along with the faculty members were present in the event.

Chapter Name: National Institute of Technology Agartala (STB11469)

Part A – Administrative

Annual General Meeting, Committee Meeting, Connection with Local National Organizations meeting

Total Number of Administrative meetings: Four (04)

- **The dates of the meetings form 17TH DECEMBER-2019 onwards:**

First: 30/01/2020,

Second: 05/02/2020,

Third: 17/07/2020,

Fourth: 19/08/2020.

Number of attendees:

First meeting: 06

Second meeting: 03

Third meeting: 04

Fourth meeting: 04

Very short and precise description:

First meeting: Meeting was organised to decide and convey the working/schedule of IEEE-SB to all the members regarding year-ahead working/schedule/task of IEEE-SB at NIT Agartala.

Second meeting: Organised a meeting for distributing the ‘gifts’ received from IEEE USA.

Third meeting: Organised the meeting on a virtual platform for discussion on the upcoming webinar on ‘Cyber Forensics’ by IEEE SB NITA on 20th July 2020. Chair, vice-chair, secretary, and other board members have participated in the meeting for preparing schedule/programme minutes for the event.

Fourth meeting: Organised the meeting on a virtual platform regarding the preparation of the ‘attendees certificates’ and distribution of the same for the webinar organised on 20th July 2020.

- **One picture of the meeting:** Meetings were held on virtual platforms.
- Annual General Membership Assembly when held: No ‘*Annual General Membership Assembly held*’ in the current year due to COVID-19 Pandemic.

Part B – Student and Affinity Group Activities

Student Branch /Young Professionals / Women in Engineering / Life Member /Humanitarian Activities /Educational Activities *which shall promote leadership and interpersonal skills of the Student/ YP/ WIE/ LM / Society members as well promote visibility of the IEEE objectives.*

Total number of events related to Student Branch and Affinity Groups: 01 (one)

- **Mention the dates of the events:** 20/08/2020 to 21/08/2020
- **Number of attendees:** 01.
- **Very short and precise description:** Mr. Soumesh Chatterjee, Vice-chair, IEEE-SB NITA had participated in the ‘Student Membership and Leadership summit’ on a virtual platform (ZOOM). The event was organised by IEEE SB BUET and IEEE Bangladesh section. The event was supported by ‘IEEE Region 10 Student Activities Committee’. Members of SBs associated to IEEE region 10 have attended the event.

Part C – Professional Activities

Continuing Education include Professional Lectures, Seminars and Workshops/Technical Activities / Partner University / Industry Activities

Total number of professional lectures/ seminars/ workshops /technical activities: Two (02)

- **Mention the dates of the events:** 20/07/2020, 12/10/2020 to 14/10/2020
- **Number of attendees for the first meeting:** 43
- **Very short and precise description:** Two professional/technical lectures had been arranged in the program entitled as ‘IEEE student Branch/Chapter - Benefits and Application Process’ and ‘Cyber Forensic’. Prof. P. S. Avadhani, Director IIIT Agartala had been invited as a distinguished speaker to deliver lecture on ‘Cyber Forensics’. Mr. Sameer Gajghate, who is also the Chair of the IEEE-SB NITA branch, had delivered lecture on ‘IEEE student Branch/Chapter - Benefits and Application Process’. The event was organised in google-meet platform with the link “<https://meet.google.com/bax-hjec-ngb>”.

Number of attendees for the second meeting: 540

Very short and precise description: IEEE-SB NITA and Department of Mathematics jointly organised three days international webinar on ‘Mathematical Modelling in the Context of COVID-19 and the Global Crises’ from 12th to 14th October 2020. Experts from different countries have graced the event with their insightful lectures on the above said topic. Prof. Oscar Castillo, Tijuana Institute of Technology, Mexico; Prof. Adrijit Goswami, IIT KGP; Prof. Nita H. Shah, Gujarat University; Dr. Biswajit Sarkar, Yonsei University, South Korea; Prof. Chandra K. Jaggi, Delhi University; Prof.

Manoranjan Maity, Vidyasagar University; Prof. Ranjit K. Upadhyay, ISM Dhanbad few of them to name. Experts have mainly discussed various problems related to domestic, academia and industry due to COVID-19 pandemic and how those can be modelled in a mathematical way. The programme has got huge success with a massive number of participants.

Part D – Social Activities

Award Ceremony, Family oriented or Team Building Activities, Social Events

Total number of events conducted: Social activities could not be arranged due to COVID-19 pandemic.

- **Mention the dates of the events:** NA.
- **Number of attendees:** NA.
- **Very short and precise description:** NA.
- **Only One picture of the event:** NA.

Prepared By-

Mr. Sameer S. Gajghate, Chair & Past- Secretary

Mr. Soumesh Chatterjee, Vice-Chair,

NIT Agartala Student Branch

IEEE VSSUT BURLA STUDENT BRANCH

Chapter Name: IEEE VSSUT BURLA STUDENT BRANCH

Part A – Administrative

Total Number of Administrative meetings: 2

1. First introductory meeting

Date: 18th February 2019

Number of attendees: 43

After the inauguration ceremony of the Student Branch by honourable Prof. T.Srinivas from IISC, Bangalore in presence of the honourable Vice Chancellor Prof. Atal Chaudhuri, Technical Vice President Dr. Harish Kumar Sahoo and Faculty advisor Dr. Papia Ray , a meeting of the Student Branch was held.

The meeting covered:

- a) Agenda for the Student Branch to function potentially under Bhubaneswar Sub-Section and Kolkata Section.
- b) Introduce the members and make them familiar with the kind of activities IEEE does through various branches, sections, sub-sections and regions and the kind of activities that can be done initially by the branch.
- c) Membership details and its benefits were also discussed.

2. Assign of new roles:

Date: 22nd September 2020

Number of attendees: 15

This administrative meeting was held in presence of the honourable Branch Counselor Dr. Harish Kumar Sahoo and honourable Faculty Advisor Dr. Papia Ray.

The following is the conclusion of the meeting:

I. Formation of new Official team with confirmation regarding position and respective position holders that includes positions for Chair Person, Secretary, Treasurer, P.R Head, Web master, Content Writing Head, Sponsorship Chair, Assistant Secretary and Assistant Treasurer.

ii. Discussion regarding

- A) Proper management of the official WhatsApp group that will be used to pass the information from the officials
- B) Making the IEEE STUDENT BRANCH website active.
- C) To collaborate with other IEEE Student Branches for future activities
- D) Follow up meetings of the Web Master, Chair Person, Secretary and the Treasurer to proceed for the website.

Part B – Student and Affinity Group Activities

Total Number of Administrative meetings: 1

Date: 15th January 2020

No. of attendees: 12

Total number of events related to Student Branch and Affinity Groups: 1

In order to develop interpersonal skills among the members, the IEEE VSSUT BURLA STUDENT BRANCH organised a session where the new members were given an abstract topic and were allowed to speak for 3 minutes. As a part of this session, members were also encouraged to promote the student branch among their batchmates. This was also set as a criterion for the selection of new official members for the year 2020-21.

Part C – Professional Activities

Total number of professional lectures/ seminars/ workshops /technical activities: 6

1. **Technical Debate:**

Date: 13th March 2020

No. of attendees: 10

In order to make students feel the vibe of Technology, the Student Branch organised the techno-debate competition. In this, students were allowed to speak either for or against the technical topic given to them on spot. While judging, the time limit and the points used to prove the point was taken care. The event was rightly given the tagline "the gladiatorial combat of technology".

2. **Paper Presentation**

Date: 14th March 2020

No. of attendees: 10

To promote research enthusiasm among students, the Student Branch conducted Paper Presentation competition. The participants were allotted 10 technical topics 10 days before the competition out of which they selected the topic of their choice and presented the power point presentation prepared by them Infront of the judge- Dr. Harish Kumar Sahoo (the branch counsellor of the Student Branch). They were judged on the basis of 5 areas based on the kind of research done by them and then the winner was declared.

3. Recent advancements and the Future of Python

Date: 26th March 2020

No. of attendees: 45

On 26th September 2020 IEEE VSSUT Burla Conducted a webinar on "Recent Advancement an future of Python". The webinar was conducted in collaboration by CTTC, Bhubaneswar. The event witnessed a participation of more than 45 students with an overall registration of 100 students. The event hosted virtually on Google meet. The event was followed by an interactive QNA session. The event was mentored by Ritu Maity and Asutosh Pati of CTTC, Bhubaneswar.

4. Introduction to Matlab and Simulink:

Date: 5th March 2020

No. of attendees: 55

On 26th September 2020 IEEE VSSUT Burla Conducted a webinar on" Recent Advancement on future of Python". The webinar was conducted in collaboration by CTTC, Bhubaneswar. The event witnessed a participation of more than 45 students with an overall registration of 100 students. The event hosted virtually on Google meet. The event was followed by an interactive QNA session. The event was mentored by Ritu Maity and Asutosh Pati of CTTC, Bhubaneswar.

5. IEEE - Beyond the Sphere

Date: 5th March 2020

No. of attendees: 40

On the occasion of IEEE DAY, THE IEEE VSSUT BURLA STUDENT BRANCH organised a webinar on " IEEE - Beyond the Sphere " on 5th October 2020 at 5:30 PM. The webinar was chaired by Dr.S.R Samantaray , Associate Professor, IIT Bhubaneswar and Secretary, IEEE, Bhubaneswar Sub-Section. The event started with the dignified words by Dr. Harish

Kumar Sahoo, Branch Counsellor of the Student Branch. The event had around 40 participants. It threw insight on the advantages of IEEE, its reaches to regions, sections, sub-sections and branches, the authorship details, recognition through various awards & medals and different IEEE events organised throughout the year. As a whole this webinar was quite important in understanding the whole spectrum of IEEE. This was followed by a query resolution round. The whole event was streaming live in You Tube.

6. **The Future of Farming- Artificial Intelligence and Agriculture**

Date: 6th March 2020

No. of attendees: 38

On the occasion of IEEE day, a series of events were conducted by IEEE VSSUT BURLA STUDENT BRANCH including a webinar on " The Future of Farming- Artificial Intelligence and Agriculture " on 6th October 2020 at 6:30 pm. The Speaker of the evening was Mr. Suvendu Kumar Dash who is the present CEO and CTO at Oretes. Dr. Harish Kumar Sahoo, the Branch Counsellor of the Student Branch and Dr. Papia Ray, the faculty advisor of the Student Branch also graced the event with their presence. The event witnessed more than 100 registrations and more than 35 participants. It commenced with the introduction to Artificial intelligence followed by the advancements in technology, impact of AI on farming, the future challenges of agriculture and the advantages of AI. This was followed by an interesting interactive question-answer round. The whole event streamed live on You Tube.

Part D – Social Activities

Total Number of Administrative meetings: 22 (2-3 meetings in each month)

Date: 18th February 2019

Number of attendees: 43

The IEEE VSSUT BURLA STUDENT BRANCH organised several team building meetings, at least two in every month.

Month: February 2019- July 2019

- Planning for inauguration ceremony and events for samavesh 2019.
- Month: August 2019-September 2019
- introductory sessions for the new comers, familiarising them with the existing student branch and the social sites including instagram and LinkedIn.

Month: October 2019- November 2019

- Planning for conducting the Workshop by Texas Instruments and seminar by Dr.Kalam.
- Follow up meetings to check the progress of the work like poster designing, content and others.
- Meeting after the event for its coverage in news papers and social sites.

Month: December 2019- January 2020

- A task is given to the members to check the IEEE official websites and plan for the events to be conducted during Samavesh 2020.
- Stress on promotion of the Student Branch.

Month: February 2020-March 2020

- Planning for the events to be held during Samavesh 2020.
- Follow up meetings to check the progress and finalising the poster and content.
- iii . Checking that it has reached to all the official whatsapp groups and has been posted in all the social media accounts.

Month: April 2020- August 2020 (meeting in google meet)

- Stress on making the social sites active.
- Check for the posters for various occasions to be released and posted on the social sites.
- Encouraging members for the IEEE Membership.

Month: September 2020 – October 2020 (meeting in google meet)

- Informing members about the selection of new official members and posts to be kept.
- Meetings for planning the events to be conducted on IEEE Day.
- Follow up meetings to check the progress.

Month: November- December

- Checking the IEEE official website for Participation in various events
- Discussions about planning for some events to be conducted further

NITS HACKS 3.0 HACKATHON

NITS Hacks 3.0 Hackathon was organised by the National Institute of Technology Silchar on the 1st February 2020. Hackathon is a blend of the words "hack" and "marathon" where developers had to use their sense of exploratory programming skills to complete an assigned task. The outcome of such hackathons is disruptive innovations that create a new niche for themselves and eventually displace current products.

The event consisted of three modules, a coding competition, a software hackathon, and a hardware hackathon. A plethora of events, ranging from competitive programming and algorithms to developing software applications on real-time issues like digitization of immunization process, NGO monitoring, etc. and hardware applications on Road condition Analysis/Monitoring system were conducted.

NITS HACKS 3.0 was one such platform for like-minded developers, enthusiasts that aspire to be a part of an upcoming technology disrupt. The hackathon consisted of two modules.

Software Hackathon: A platform for enthusiastic developers craving to prepare software applications on different real-life problems as described below -

1. Simple - Digitization of the immunization process.
2. Complex - NGO Monitoring.
3. Complicated - Strengthen surveillance using computer vision.

Hardware Hackathon: An arena where the hardware developers had a chance to show up and contribute their idea over the problem of the Road Condition Analysis/Monitoring system.

This HACKATHON provided the participants with opportunities to interact with some of the very best developers and researchers in this field.

International Conference on Advanced Communication Technologies and Signal Processing (IEEE ACTS – 2020 | Virtual Conference)

2020 International Conference on Advanced Communication Technologies and Signal Processing (ACTS – 2020),(Virtual Conference) with Technical Co-Sponsorship by IEEE Kolkata Section is organized during 4-6 December, 2020 in association with IEEE ComSoc Kolkata NITS SBC to promote the state of art and cutting edge research in the field of Communication and Signal Processing.

IEEE ACTS-2020 is technically supported by IEEE Communications Society SBC-NIT Silchar and financially sponsored by TEQIP-III. The distinguishing characteristic of IEEE ACTS-2020 is the promotion of advanced research and developments in the promising fields of Communication Technologies and Signal Processing and provide a platform for academia and industry to bridge the gap between academic research, industry initiatives, and governmental policies.

This 3-day event included several keynote speeches by distinguished speakers from academia, industry and government sectors; panels and forums; technical sessions featured technical papers extensively reviewed by peers; workshops focusing on the latest trends in various technology; tutorials delivered by experts in respective disciplines.

Some of the eminent speakers were Prof. Saswat Chakrabarti from IIT Kharagpur, Prof. Preetam Kumar from IIT Patna, Prof. Prabhat K. Upadhyay from IIT Indore, Prof. Ram Bilas Pachori from IIT Indore, Prof. Debarati Sen from IIT Kharagpur, Prof. Marceau Coupechoux from Telecom ParisTech Paris, France and last but not the least Prof. Peter Chong from Auckland University of Technology, Auckland, New Zealand.

The conference was inaugurated with the gracious presence of the Prof. Sivaji Bandyopadhyay, Director NIT Silchar , Prof. Saswat Chakrabarti from IIT Kharagpur , Geenal Chair, Mr. Sanjay Kar Chowdhury, Chair , IEEE Kolkata Section, Dr. Dragana S. Krstić, Faculty, University of Nis, Serbia and other distinguished academicians and industrial personalities. The conference was hosted

online with pre-recorded presentation of all the accepted papers. The acceptance ratio of IEEE ACTS-2020 is less than 30% as per the guidelines of the standard IEEE conference.

The theme of the conference was: Connect, Sense and Bridge. The keynote talks covered areas of Smart city in the light of 5G, 5G communication standards, MIMO communications, FBSE-EWT. There were three best papers and three special mentioned papers in the three tracks of in the conference.

The organizing committee expresses its thankfulness to IEEE Kolkata Section and IEEE ComSoc Kolkata Chapter for their constant guidance and motivation.

The 2021 version of ACTS is under IEEE Kolkata Section and in collaboration with some other NITs and institutes.

AP-S Student Branch Chapter University of Calcutta

Event 1: November, 2020

Title of the talk : “ Multi-functional MIMO Antenna for 5G Applications”

Speaker: Dr. Raghvendra Kumar Chaudhary, IIT(ISM) Dhanbaad

Date: Nov. 29, 2020, Time: 3.00p.m.-5.00 p.m (IST)

Platform: Google meet

A Technical talk by Dr. **Raghvendra Kumar Chaudhary, IIT(ISM) Dhanbaad** has been organized by IEEE APS Student Branch Chapter, University of Calcutta in association with IEEE AP/MTT Kolkata Chapter on 29th November, 2020 in a virtual mode Platform (Google meet). Participants joined all over from India and many renowned personalities of Antenna and Microwave domain were present in the audience seat. It was started with an inaugural talk by Dr. Sujoy Biswas, AP/MTT Kolkata Chapter Chair and followed by a short inspiring talk about our speaker by Professor Debatosh Guha, University of Calcutta. The program was started on 3.00p.m. (IST) with almost 100 attendees and run smoothly with lots of technical throughputs by our eminent speaker till 4.30p.m. (IST).

It was then followed by a long interactive session between the speaker and the audience. A lot of discussions were held not only in the MIMO, 5G and cognitive radio domain but also from fundamental levels. Certificates were issued to all the participants and a special letter of appreciation was delivered to the speaker within 7 days.

The programme was hosted by Ms. Debi Dutta, SBC Chair.

The full programme is available at the YouTube channel: <https://youtu.be/AiVi98LGE2w>

Event 2: December, 2019

A Technical talk by **Dr. Somak Bhattacharyya, IIT-BHU** has been organized by IEEE APS Student Branch Chapter, University of Calcutta in association with IEEE AP/MTT Kolkata Chapter on 24th December, 2019 at A.N.Daw auditorium in Institute of Radio Physics and Electronics, University of Calcutta. Students from undergrad, post grad level and researchers joined in the program. Professors from the Antenna and RF Microwave domain were also present in the audience seat. It was started with an inaugural talk by Professor Debatosh Guha, Dr. J. Y. Siddiqie and Prof. A. Maitra of University of Calcutta. The program was started on 3.00p.m. (IST) with almost 25-30 attendees and run smoothly with lots of technical throughputs by our eminent speaker till 4.45p.m. (IST).

It was then followed by a long interactive session between the speaker and the audience. A lot of discussions were held not only in the Metasurface, Terahertz domain but also from fundamental levels. A small token of appreciation was delivered to the speaker by our professors.

The SBC has received the First Prize for SBC Activities in 2019 IEEE Indian Conference on Antennas and Propagations.