

Chapter Report 2022

IEEE AP/MTT KOLKATA CHAPTER

Activity Summary:

Total Non-Technical Meeting: 7 (AGM+ 6 ExCom)

Total Technical Events: 11 (2 virtual + 8 Physical + 1 Hybrid)

Download Detail Event Reports: [Download](https://rb.gy/or7foz) (https://rb.gy/or7foz)

Download Brief Report: [Click here](https://rb.gy/yvcifj) (https://rb.gy/yvcifj)

Total member Count (as of 31st Dec 2022): 458 (F-1, Graduate Student-69, Life Mem-1, Life Senior-2, Member-74, Sr. Member-42, Student Member – 269)

Technical Events:

Event 1:

IEEE Talk: Python Scripting in Ansys HFSS (online)

Speaker: Dr. Ravi Kumar Arya, Zhongshan Institute of Changchun University of Science and Technology (CUST), China

The IEEE AP/MTT-S Kolkata Chapter, India organized a lecture program online on Python Scripting in Ansys HFSS by Dr. Ravi Kumar Arya, from the Zhongshan Institute of Changchun University of Science and Technology (CUST), China on 18 February 2022 (Friday) at 7:00 PM (IST). This talk discussed the design automation by Python scripting in Ansys HFSS. Almost anything someone can do through the GUI in HFSS and can also do through a script. In this talk, Dr Arya has taken some design examples and created those designs through the scripting interface of HFSS. The event was attended by more than 30 students, researchers, executive committee members and faculties. Prof. Debatosh Guha also attended the event and interacted with the speaker. Dr. Chandreyee Sarkar introduced the speaker. It was a highly successful event with loads of interaction among the attendees and the speaker. Chapter Chair Dr. Koushik Dutta gave the vote of thanks and the final concluding remarks.

Event 2:

IEEE Talk: Basic concepts of RF and Microwave Measurement (online)

Speaker: Mr. Vishal Gupta, Segment Manager (India) and Solutions Architect at Keysight Technologies, India

The IEEE AP/MTT-S Kolkata Chapter, India organized a lecture program online on Basic concepts of RF and Microwave Measurement by Mr. Vishal Gupta from Segment Manager (India) and Solutions Architect at Keysight Technologies, India on 15 March 2022 (Tuesday) at 7:00 PM (IST). The event was attended by more than 50 students, researchers, executive committee members and faculties. Chapter Chair Dr. Koushik Dutta introduced the speaker. It was a highly successful event with loads of interaction among the attendees and the speaker.

Event 3:

IEEE Technical Lecture: Spacecraft Antennas (In-person)

Organized by: IEEE AP-MTTs Kolkata Chapter, in association with MTT-S SBC of Jadavpur University

Speaker: Dr. Chandrakanta Kumar, U R Rao Satellite Centre ISRO, Bangalore

Venue: Jadavpur University (Physical)

The event was attended by more than 35 students, researchers, executive committee members and faculties. Chapter Chair Dr. Koushik Dutta introduced the speaker. It was a highly successful and 1st in-person event of 2022 with lots of interaction among the attendees and the speaker.

Event 4:

Workshop: Antenna Measurement Techniques (In-person)

Organized by: IEEE AP-S Technical Committee on Antenna Measurements & IEEE AP/MTT-S Kolkata

Speakers: Mr. Debojyoti Choudhuri, Deputy General Manager, HCL Technologies, Chennai, India

The Technical Committee on Antenna Measurements of IEEE AP Society organized a technical workshop on Antenna Measurement Techniques on Friday, 22 April 2022 at the Institute of Radio Physics and Electronics, University of Calcutta, Kolkata, India. The IEEE AP-MTTs Kolkata Chapter was the host of the event and extended the fullest support in organizing the same. Industry leader and antenna expert Mr. Debojyoti Choudhuri, Deputy General Manager, HCL Technologies, Chennai, India graced the occasion as a distinguished speaker. He primarily addressed the basic needs and challenges for antenna measurements and elaborately narrated the state-of-the-art techniques. It created a huge interest among the attendees which comprised nearly 20 undergraduate students along with a group of 10 young scientists and faculty members (10 of them were IEEE AP-S members).

On behalf of the IEEE AP-S Measurements committee, Prof. Debatosh Guha conducted the session and encouraged the students to join the IEEE AP Society. The concluding interactions revealed a huge interest among the young group to join IEEE as AP-S student members.

Event 5:

IEEE Lecture: Space Antennas and related communication systems (In-person)

Speakers: Dr. Md. Intiyas Pasha and Dr. B. Pavan Kumar, U R Rao Satellite Centre ISRO, Bangalore

Lecture1: Design aspects of digital microwave communication systems (by Dr. Mahammad Intiyas Pasha)

Lecture2: Antenna Systems for High throughput Data Transmission from Low Earth Orbiting Satellites (by Dr. B. Pavan Kumar)

The IEEE AP/MTT-S Kolkata Chapter, India in association with IEEE AP-S SBC, University of Calcutta organized two technical lectures on Space Antennas and related communication systems on Tuesday, 26 April 2022 at the Institute of Radio Physics and Electronics, University of Calcutta, Kolkata, India. Two Senior Scientists and RF experts Dr. Mahammad Intiyas Pasha and Dr. B. Pavan Kumar from U R Rao Satellite Centre, ISRO, Bengaluru, India graced the occasion as distinguished speakers. Dr. Pasha emphasized practical design aspects of digital microwave transducer systems and Dr. Kumar elaborately shared his experiences dealing with Antennas for high throughput data transmission from Low Earth Orbiting Satellites. It created a huge interest among the attendees which comprised nearly 22 undergraduate and postgraduate students along with a group of 10 young scientists and faculty members (15 of them were IEEE AP-S members). On behalf of the IEEE AP-S SBC Chapter, C.U Ms. Debi Dutta, SBC chair conducted the session. The concluding interactive session was moderated by Prof. Debatosh Guha, AP-s student branch chapter advisor. It reveals huge interest among participants in knowing the basic needs and challenges in designing the Antenna and its sub-systems for industry applications and especially for the Space program. It was a two-hour program and ended with a vote of thanks by Prof. Guha and Dr. Kaushik Mandal, Treasurer of the AP/MTT-S Kolkata Chapter.

Event 6:

Workshop: Advanced School of Antennas 2022 (In-person)

IEEE AP-S Antenna Measurement Committee in association with IEEE AP/MTT Kolkata Chapter and KIIT-Deemed to be University, successfully organized a two-day (June 3-4, 2022) workshop event 'Advanced School of Antennas 2022' in the School of Electronics Engineering, KIIT-DU, Bhubaneswar. It comprised a series of lectures focusing mainly on 5G, mm-wave, terahertz antenna measurement techniques, state-art-of work, facilities and future advancements. Eminent speakers from abroad Prof. Sungtek Kahng, Prof. Yang Yang and from the country Dr. Koushik Dutta, Dr. Chandrakanta Kumar, FNAE, and Prof. Debatosh Guha, delivered a talk and shared their experiences with the participants. It was an interactive and vibrant session in physical mode. Special thanks go to Prof. Sudhakar Sahu and the KIIT

volunteer team for extending their kind support in making the event successful in-person mode. Some captured moments are shared here.

Event 7:

IEEE AP-S COPE Special project for Underprivileged Schools, under APS SIGHT (Hybrid)

Venue: Virtual Classroom Facility at S.D.P.U. Vidyachakra, Raiganj by IEEE AP/MTT-s Kolkata Chapter
IEEE AP/MTT-s Kolkata Chapter took an initiative under IEEE APS COPE project for underprivileged school students in creating a virtual classroom facility at a government-sponsored school at Raiganj, Uttar Dinajpur. The total funding amount for this project was 1000 USD. Dr. Sujoy Biswas, former chair of IEEE AP/MTT-s Kolkata Chapter, initiated the process in 2021 and this has been executed by the current chair Dr. Koushik Dutta. The facility for mentoring about a hundred students at a time has been inaugurated on September 13, 2022. Prof. Debatosh Guha was physically present in that inaugural program which was also virtually attended by the Chapter executives. Dr. Koushik Dutta, Dr. Chandreyee Sarkar, and Ms. Debi Dutta of our chapter addressed the students. The program was attended by about 80 students of the school along with a group of teachers. Headmaster Shri Avijit Dutta welcomed the delegates and the students and hugely appreciated the generous support from the IEEE for the benefit of the school students. This inauguration was followed by an inspiring speech by an illustrious alumnus of the school Swami Suviranandaji Maharaj, General Secretary of Belur Math Ramkrishna Mission. He addressed the students online from his Belur office. The students expressed their happiness and humble gratitude to the IEEE leaders. Some refreshments were arranged on behalf of the chapter and were distributed among the students at the end of the program.

Event 8:

Technical Event: One-day technical outreach program (In-person)

Organized by: IEEE AP/MTTs Kolkata Chapter, in association with APS SBC, University of Calcutta

A one-day technical outreach program had been successfully organized by IEEE AP/MTT-s Kolkata Chapter in association with the APS Student branch chapter, C.U at Prasarbharati Doordarshan Kendra Kolkata on 28th September 2022. A total of nineteen(19) no. of students participated and out of them fourteen (14) no. of students were IEEE AP/MTT student members. The event started at 11.00 am and lasted until 7.00 pm. DDK has different sections starting from signal processing, transmitter/receiver, video streaming, postproduction, stage management, archives etc. Almost every segment had been tried to cover within a short period. The students were so exhilarated getting some real industry flavours from the visit. They were also encouraged to continue their IEEE student membership to explore more such benefits that IEEE provides for the students. On behalf of the organizer, Ms Debi Dutta, Chair, AP SBC conducted the event.

Event 9:

Hands-On Workshop: Advanced Antenna Design (In-person)

IEEE AP-MTTs Kolkata Chapter and IEEE AP Student Branch Chapter of Netaji Subhash Engineering College are jointly organizing a one-day “Hands-on Workshop on Advanced Antenna Design” in association with the IEEE AP Student Branch Chapter of Calcutta University in the Seminar room of the ECE department on 21.11.2022. The workshop began at 11 AM and ended at 4 PM. The resource person was Mr. Sk Rafidul (Senior Research Fellow at the University of Calcutta). In the inaugural session of the workshop, Dr. Koushik Dutta (Chair, IEEE AP-MTTs Kolkata Chapter & Head, ECE, NSEC) gave a welcome speech, followed by Mrs. Soma Chattopadhyay (convenor of this workshop). The inaugural talks were delivered by Dr. P. K. Banerjee (Emeritus Professor of ECE, NSEC) & Dr. Tridibesh Nag (Treasurer, IEEE Kolkata Section) and Mr. Sk Rafidul (the workshop resource person). Following the grand inauguration, the speaker, Mr. Sk Rafidul, delivered the workshop session in which he provided a detailed explanation of antenna and transmission line design as well as the limitations of modern antenna design techniques. During the second half of the workshop, a couple of advanced antennas were designed using

Ansys HFSS software. In addition to the technical content delivered by the speaker, the hands-on sessions were equally interesting and were at par with industry standards. About 34 people attended the workshop, including IEEE members, students, young professionals, and faculty. There was a registration kit and lunch provided for the participants on that day. Participants, young professionals, and faculty members benefited greatly from the event. A Q&A session at the end was very informative as participants learned about current research trends and had their doubts clarified. The positive response of the participants indicates that the event was a huge success! NSEC's Director, Dr. Hrishikesh Mondal, and NSEC's Emeritus Professor of ECE, Dr. P. K. Banerjee addressed the validation session at the end of the workshop.

Event 10:

IEEE Lecture: Ultra-Wideband Antenna Sub-Systems (In-person)

IEEE AP-MTTs Kolkata Chapter and IEEE AP Student Branch Chapter of Netaji Subhash Engineering College are jointly organizing a one-day IEEE Talk on “Ultra-wideband Antenna Sub-system” in association with IEEE AP Student Branch Chapter of Calcutta University in the Seminar room of ECE department on 29.11.2022 from 1 PM to 2.30 PM. The resource person was Ranadhir Chatterjee, Lead Engineer, HCL Technologies Pvt. Ltd.

In the inaugural session of the workshop, Dr. Koushik Dutta (Chair, IEEE AP-MTTs Kolkata Chapter & Head, ECE, NSEC) gave a welcome speech, followed by Prof. Niladri Sekhar Mishra (convenor of this program). The inaugural talks were delivered by NSEC's Director, Dr. Hrishikesh Mondal, Dr. P. K. Banerjee (Emeritus Professor of ECE, NSEC), NSEC's Dean Academics, Prof. Sukumar Roy and Mr. Ranadhir Chatterjee (resource person). Following the grand inauguration, the speaker, Mr. Ranadhir Chatterjee delivered a lecture focusing on the basic requirements and challenges of designing an ultra-wideband antenna sub-system with elaborate descriptions of state-of-the-art techniques. In addition to explaining the advantages and applications of this Ultra-wideband Antenna Sub-system, current research activities are also discussed that are equally interesting and on par with industry standards. Nearly 34 undergraduate students along with a group of 10 young scientists and faculty members (10 of them were IEEE AP-S members). Dr. Koushik Dutta (Chair, IEEE AP-MTTs Kolkata Chapter, Mrs. Devi Dutta (AP SBC chair of Calcutta University) and Anirban Chatterjee (AP SBC chair of NSEC) concluded the meeting by giving a vote of thanks and concluding remarks.

Event 11:

IEEE Lecture: 5G - A Reality Now (In-person)

Organized by: IEEE AP-MTTs Kolkata Chapter and IEEE COMSOC Kolkata Chapter, in association with APS SBC of NSEC and CU

IEEE AP-MTT Kolkata Chapter and IEEE COMSOC Kolkata Chapter in collaboration with IEEE AP Student Branch Chapters of Netaji Subhash Engineering College are jointly organizing a one-day IEEE Talk on “5G - A Reality Now” in the APC hall of Netaji Subhash Engineering College in the Seminar room of ECE department on 19.12.2022 from 1.30 PM to 2.30 PM. Industry leader and expert Mr. Chanchal Chakraborty (CEO, ATMI Private Limited) was the resource person.

In the inaugural session of the workshop, Dr. Koushik Dutta (Chair, IEEE AP-MTTs Kolkata Chapter & Head, ECE, NSEC) gave a welcome speech, followed by Prof. Swagata Roychoudhury (convenor of this event). The inaugural talks were delivered by Prof. Iti Saha Mishra, (Prof. JU, IEEE Chair-Elect 2023 of IEEE Kolkata Section), Dr. Subhamoy Chakraborti (Chair, IEEE COMSOC Kolkata Chapter), Dr. P. K. Banerjee (Emeritus Professor of ECE, NSEC), Prof. Sukumar Roy (NSEC's Dean Academics) & and Mr. Chanchal Chakraborty (CEO, ATMI Private Limited). After the grand inauguration, Mr. Chanchal Chakraborty presented a lecture on how 5G technology compares to existing technologies. He has provided an elaborate description of the design criteria and challenges involved in the development of this technology. It created a huge interest among the attendees which comprised nearly 45 undergraduate students along with a group of 15 young scientists and faculty members (35 of them were IEEE AP-S

members and 25 of them were IEEE COMSOC members). A Q&A session at the end was very informative as participants learned about current industrial requirements and had their doubts clarified.

The positive response of the participants indicates that the event was a huge success! Dr. Koushik Dutta (SAC Chair, IEEE Kolkata Section & Head, ECE, NSEC), Prof. Iti Saha Mishra, (Prof. JU, IEEE Chair-Elect 2023 of IEEE Kolkata Section), Dr. Subhamoy Chakraborti (Chair, IEEE COMSOC Kolkata Chapter), Dr. P. K. Banerjee (Emeritus Professor of ECE, NSEC), Prof. Sukumar Roy (NSEC's Dean Academics) concluded the meeting by giving a vote of thanks and concluding remarks.

Non-Technical Events:

Meeting 1 (AGM):

IEEE AP-MTTs Kolkata Chapter (Annual General Meeting) AGM, 2022

All members of the IEEE AP/MTT Kolkata Chapter are invited to attend the Annual General Meeting (AGM), 2022 on 19th January 2022 from 7:30 pm (IST). This meeting was conducted virtually via the Google Meet platform. The meeting started with a welcome message from the chair Dr. Sujoy Biswas. The key points discussed in the AGM are as follows.

1. Address by the Chapter Chair.
2. Adoption of the Annual Report for the year 2021 by the Chapter Secretary.
3. Adoption of Audited Accounts for the year 2021 by the Chapter Treasurer.
4. Confirmation of SLATE for the year 2022.
5. The meeting ends with a vote of thanks by the secretary.

Members Present: 18

ExCom Meeting 2:

Meeting Mode: Online

Date: 12 Feb 2022; Time: 08:00 PM to 09:30 PM; Members Present: 10

ExCom Meeting 3:

Meeting Mode: Online

Date: 18 Feb 2022; Time: 08:00 PM to 09:00 PM; Members Present: 8

ExCom Meeting 4:

Meeting Mode: Online

Date: 29 Mar 2022; Time: 04:00 PM to 05:00 PM; Members Present: 9

ExCom Meeting 5:

Meeting Mode: Online

Date: 04 Aug 2022; Time: 08:30 PM to 09:30 PM; Members Present: 10

ExCom Meeting 6:

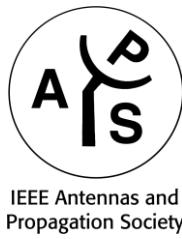
Meeting Mode: Online

Date: 9 Sep 2022; Time: 08:30 PM to 9:30 PM; Members Present: 8

ExCom Meeting 7:

Meeting Mode: Online

Date: 17 Sep 2022; Time: 08:30 PM to 10:00 PM; Members Present: 10

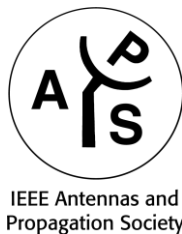


IEEE

AP-MTTs Kolkata Chapter

Report -2022

Koushik Dutta
Chapter Chair, IEEE AP/MTT Kolkata Chapter



Chapter Officers 2022

Chapter Chair

Koushik Dutta



Secretary

Chandreyee Sarkar



Treasurer

Kaushik Mandal



Vice-Chair

Chittajit Sarkar

Summary by Product by Region		
Product Name	Region	Total
IEEE Antennas and Propagation Society Membership	R10	173
	Total	173
IEEE Microwave Theory and Technology Society Membership	R10	362
	Total	362
Grand Total		535



Immediate Past Chair

Sujoy Biswas



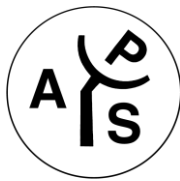
Achievements

Achievements in 2022

- Chapter Member **Debatosh Guha** has been elected as **IEEE APS Distinguished Lecturer for 2022-2024**
- **Debatosh Guha** has been appointed as the **Chair, IEEE AP-S Technical Committee on Antenna Measurements 2022**
- **Debatosh Guha** has been listed as one of the **Outstanding Associate Editors** of the IEEE Transactions on Antennas and Propagation in the period June 1, 2021, through May 31, 2022
- 2 AP and 3 MTT-s Student branch chapters have been newly constructed.

A few achievements in 2021

- IEEE MTT-S SBC, Jadavpur University has received "2021 IEEE MTT-S Outstanding Chapter Award".
- **Mr. Ardhendu Kundu**, Chair, IEEE MTT-S SBC (2020), JU, is the winner of "IEEE Region 10 Young Professionals REVOL 2021 program" and appointed as the "IEEE Region10 YP Ambassador".
- **Ms. Debi Dutta**, IEEE APS SBC Chair, CU, received IEEE APS PhD travel grant award in Singapore.
- **Raghvendra Kumar Chaudhary** received **Young Scientist Platinum Jubilee Award**, National Academy of Sciences, India (NASI), 2021
- After the pandemic, the chapter has organized the “**Young Scientist Conclave 2021**” in Dec 2021



IEEE Antennas and
Propagation Society



IEEE AP
MTT
KOLKATA CHAPTER



IEEE AP
MTT
KOLKATA CHAPTER

IEEE AP/MTT Kolkata Chapter Young Scientist Conclave 2021

SPEAKERS

📅 21st December, 2021

Time: 10.10 am – 10.50 am (IST) ←

Dr. Koushik Dutta

Dr. Chandreyee Sarkar

→ Time: 10.50 am – 11.10 am (IST)

Time: 11.10 am – 11.30 am (IST) ←

Mr. Bijit Biswas

Dr. Raghvendra Kumar Chaudhary

→ Time: 12.00 pm – 12.40 pm (IST)

Time: 12.40 pm – 01.00 pm (IST) ←

Dr. Soumava Mukherjee

Mr. Aritra Banerjee

→ Time: 01.00 pm – 01.20 pm (IST)

Time: 02.30 pm – 03.20 pm (IST) ←

Prof. Giuliano Manara
(keynote speaker)

Mr. Ardhendu Kundu

→ Time: 03.30 pm – 03.50 pm (IST)

Time: 03.50 pm – 04.10 pm (IST) ←

Ms. Prapti Ganguly

Mr. Susamay Samanta

→ Time: 04.10 pm – 04.30 pm (IST)

Panel Discussions

→ Time: 05.00 pm – 05.30 pm (IST)

APS Student
Branch Chapter,
University of
Calcutta



IEEE Antennas and
Propagation Society



Technical Talk 2022

Date: 18th February 2022

Time: 7:00 PM (IST)

Title : Python Scripting in Ansys HFSS

Mode: Online

Attendance: 40 (IEEE 25)

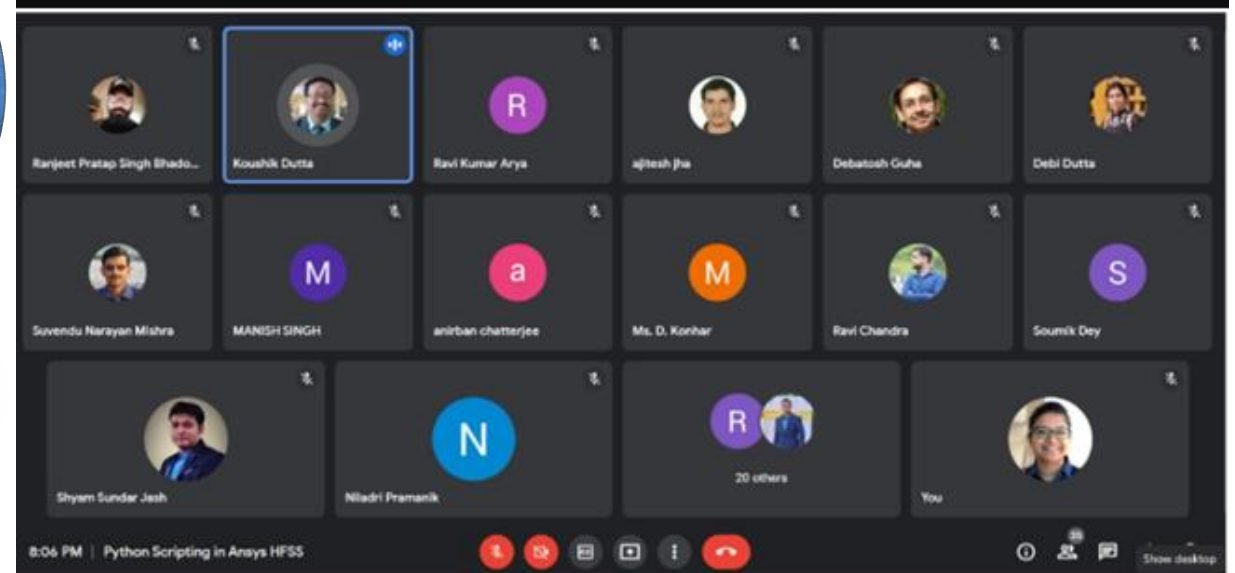
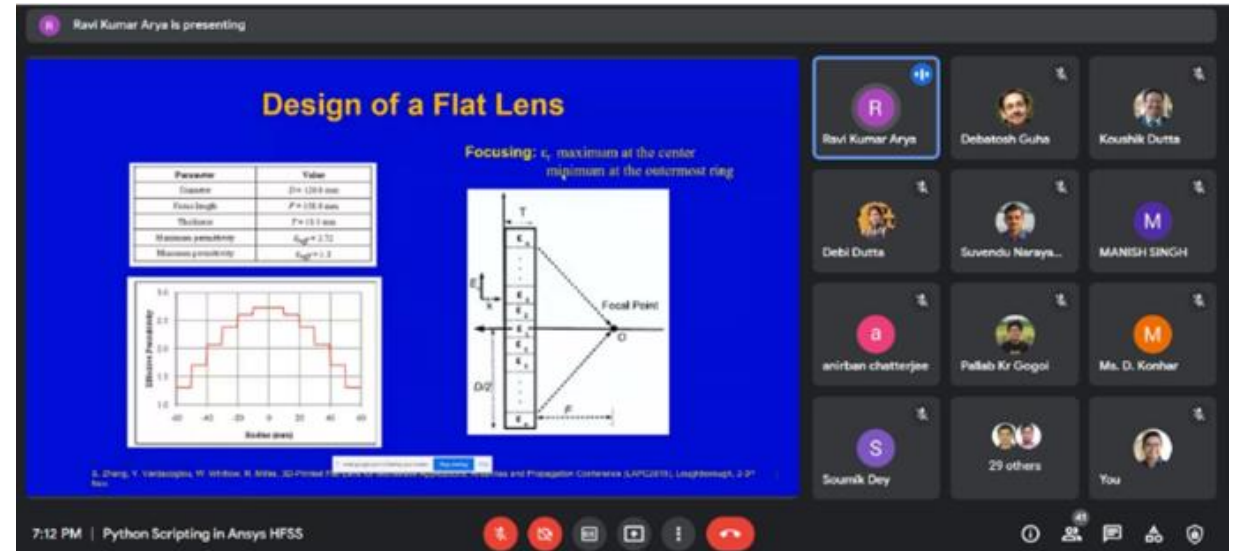
Speaker:

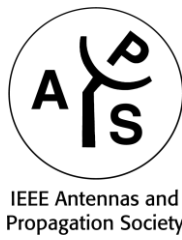
Dr. Ravi Kumar Arya

Zhongshan Institute of
Changchun University of Science
and Technology (CUST), China



IEEE AP-MTTs Kolkata Chapter





Technical Talk 2022

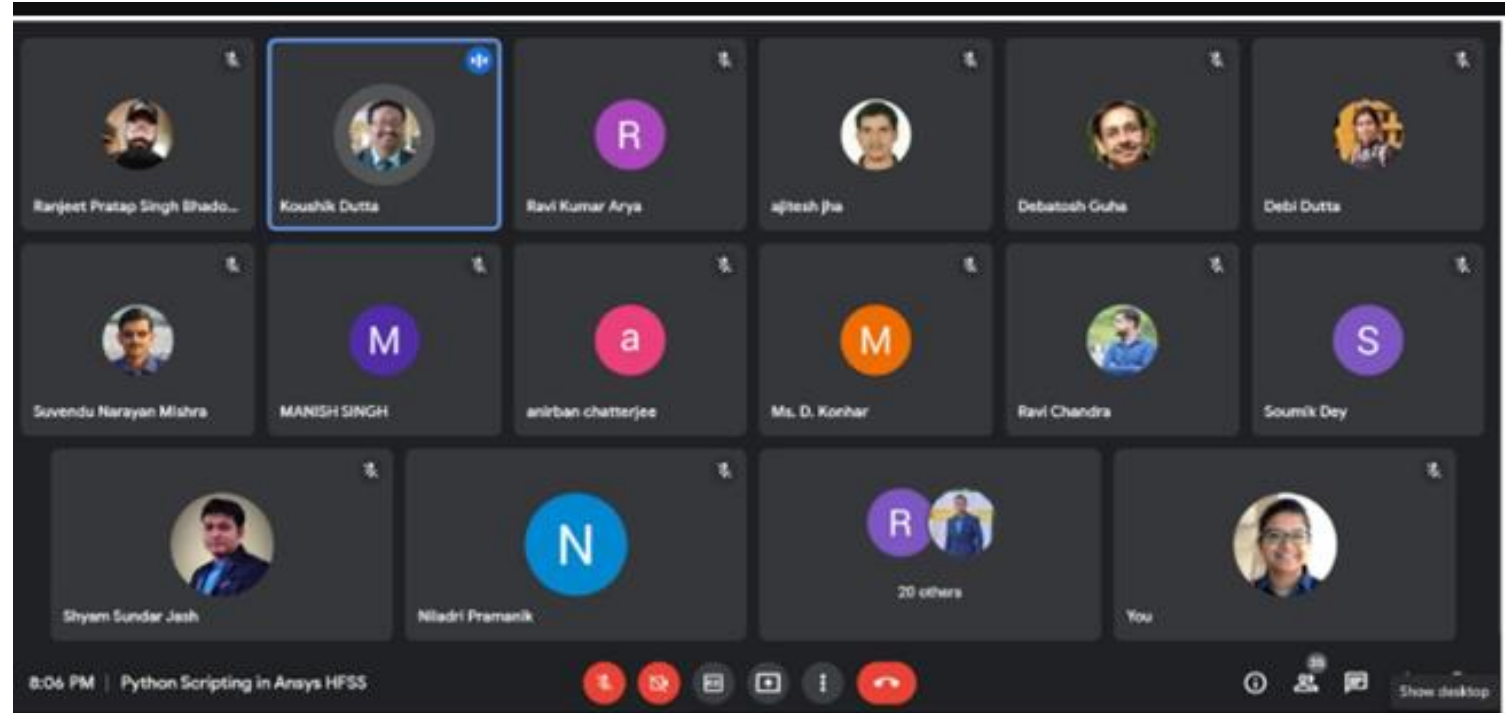
Date: 15th March 2022

Time: 7:00 PM (IST)

Title : Basic concepts of RF and Microwave Measurement

Mode: Online

Attendance: 45 (IEEE 30)



Speaker:

Mr. Vishal Gupta

Segment Manager (India) and
Solutions Architect at Keysight
Technologies, India

IEEE AP-MTTs Kolkata Chapter

Lecture Meeting 2022

Date: 29th March 2022

Time: 4:00 PM (IST).

Title : Spacecraft Antennas

Venue: Seminar Room, ETCE Dept.
Prayukti Bhavan, J U, Kolkata

Mode: In person

Attendance: 30 (IEEE 25)



Speaker:

Dr. Chandrakanta Kumar
Scientist, U R Rao Satellite
Centre, ISRO, Bangalore



Lecture Meeting 2022

Activity: IEEE Lecture

Date: 22nd April 2022

Venue: A. N. Daw Seminar Room, CU,
Kolkata

Title : Antenna Measurement
Techniques

Attendance: 40 (IEEE 25)



Speaker:

Mr. Debojyoti Choudhuri
Deputy General Manager
HCL Technologies, Chennai, India



Lecture Meeting 2022

Activity: Technical lectures

Date: 26th April, 2022

Venue: Institute of Radio Physics and
Electronics, CU, Kolkata

Title : Satellite and Microwave
Communication Systems

Attendance: 32 (IEEE 15)



IEEE AP-MTTs Kolkata Chapter

Keynote speakers:

Dr. Mahammad Intiyas Pasha

(U R Rao Satellite Centre, ISRO, Bengaluru, India)

Lecture: **Design aspects of digital microwave communication systems**



Dr. B. Pavan Kumar

(U R Rao Satellite Centre, ISRO, Bengaluru, India)

Lecture: **Antenna Systems for High throughput Data Transmission from Low Earth Orbiting Satellites**





IEEE Antennas and
Propagation Society



Advanced School of Antennas 2022

KIIT University, Bhubaneswar (In person)

Date: 3-4 June 2022

Participants: 30

(IEEE Member-30)

Keynote speakers:

- Prof. Sungtek Kahng
- Prof. Yang Yang
- Prof. Debatosh Guha
- Dr. Koushik Dutta
- Dr. Chandrakanta Kumar



IEEE AP-S COPE Special project

In-Person for School students

Title : IEEE AP-S COPE Special project
for Underprivileged School

Date: 13th September 2022

Time: 10:00 AM to 05:00 PM

Mode : Virtual Classroom Facility at
S.D.P.U. Vidyachakra, Raiganj

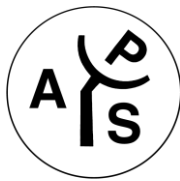
Attendance: 120+



Key Persons present:

Swami Suviranandaji Maharaj (General Secretary,
Belur Math Ramkrishna Mission)

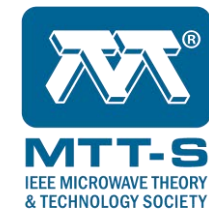
- **Prof. Debatosh Guha**
- **Dr. Koushik Dutta**
- **Headmaster Shri Avijit Dutta**
- **Dr. Chandreyee Sarkar**
- **Ms. Debi Dutta**



IEEE Antennas and
Propagation Society



IEEE AP
MTT
KOLKATA CHAPTER



Technical Outreach Program

Title : One day technical outreach program

Date: 28th September 2022

Time: 11:00 AM to 07:00 PM

Visited Place: Doordarshan Kendra, Kolkata

Attendance: 19 (IEEE 14)



IEEE AP MTTs Kolkata Chapter

Hands-on Workshop on Advanced Antenna Design

Date: 21st Nov 2022

Venue: ECE Seminar Room, Dept. of
ECE, Netaji Subhash Engineering College

Attendance: 34 (IEEE 10)

In collaboration with
**IEEE AP Student Branch
Chapters of NSEC and CU**

Speaker:

Sk Rafidul

**Senior Research Fellow
University of Calcutta**



IEEE Lecture on Ultra-wideband Antenna Sub-Systems

Date: 29th Nov 2022

Venue: ECE Seminar Room, Dept. of
ECE, Netaji Subhash Engineering College

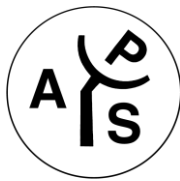
Attendance: 34 (IEEE 10)

In collaboration with
**IEEE AP Student Branch Chapters of
NSEC and CU**



Speaker:
Ranadhir Chatterjee
Lead Engineer, HCL
Technologies Pvt. Ltd.

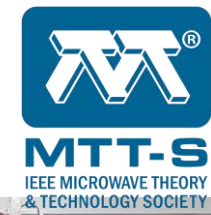




IEEE Antennas and
Propagation Society



IEEE AP
MTT
KOLKATA CHAPTER



IEEE AP
MTT
KOLKATA CHAPTER

IEEE ComSoc
IEEE Communications Society

IEEE AP-MTTs & IEEE COMSOC Kolkata Chapter Present

IEEE Lecture on
5G - A Reality Now

Organized by

Netaji Subhash Engineering College, Dept. of ECE
In association with

IEEE AP Student Branch Chapter of NSEC



Speaker: Chanchal Chakraborty CEO, ATMI Private Limited

Date: 19 December 2022 (Monday)

Time: 1:30 pm - 3:00 pm

Venue: APC Hall, Netaji Subhash Engineering College

Abstract of the Talk and Speaker's Short Bio ([click here](#))

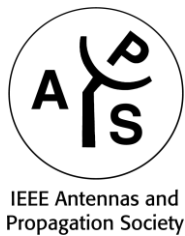
An IEEE Membership Drive has been arranged along with this event

All are Cordially Invited



ExCom Meetings 2022

1. 12th February 2022; 8-9:30 PM (Online); **Attendance:** 10
2. 18th February 2022; 8-9:30 PM (Online); **Attendance:** 8
3. 29th March 2022; 8:30-9:30 PM (Online); **Attendance:** 9
4. 4th Aug 2022; 8:30-9:30 PM (Online); **Attendance:** 10
5. 9th Sept 2022; 8:30-9:30 PM (Online); **Attendance:** 8
6. 17th Sept 2022; 8:30-9:30 PM (Online); **Attendance:** 10



THANK YOU

Event Reporting 2022
IEEE AP/MTT-S Kolkata Chapter

Event-1

Technical Talk: Python Scripting in Ansys HFSS

Event: Technical Talk

Speaker: Dr. Ravi Kumar Arya, Zhongshan Institute of Changchun University of Science and Technology (CUST), China

Title of the Talk: Python Scripting in Ansys HFSS

Date: 18 February 2022 (Friday)

Time: 7:00 PM (IST)

Mode/Venue: Online

The IEEE AP/MTT-S Kolkata Chapter, India organized a lecture program online on Python Scripting in Ansys HFSS by **Dr. Ravi Kumar Arya**, from the Zhongshan Institute of Changchun University of Science and Technology (CUST), China on **18 February 2022 (Friday) at 7:00 PM (IST)**.

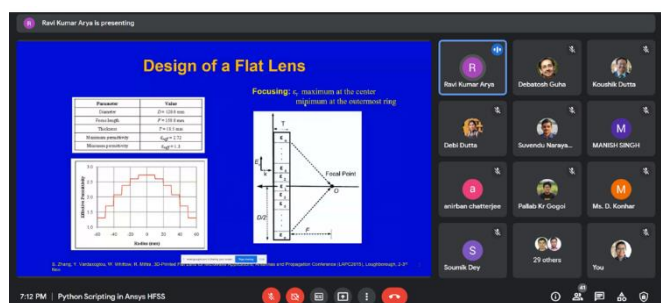
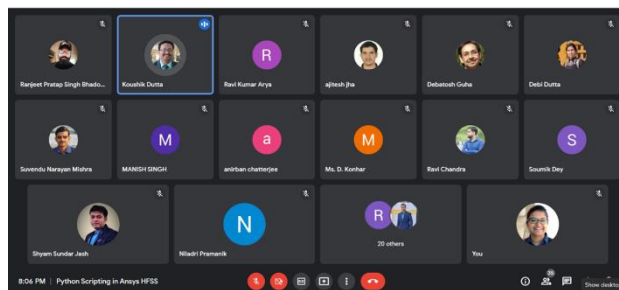


Dr. R K Arya is currently working as a Research Fellow at Xiangshan Laboratory (XSL), Zhongshan Institute of Changchun University of Science & Technology (CUST), China. He is also working as guest faculty at the School of Engg. JNU, Delhi. Before joining CUST/JNU, he was working as an Assistant Professor in the NIT Delhi, India from the year 2019 to 2021. He obtained his Ph.D. degree in Electrical Engineering from the Pennsylvania State University, the USA in 2017. From 2017 to 2018, he worked with the Isotropic Systems, MD, USA as RF Optical Design Engineer where he developed various antennas and software for satellite communication systems. In the past, he has worked with Electronics

Corporation of India Limited, India, and Centre for Development of Telematics (C-DOT), Bangalore, India. His research interests include RF circuit design, antenna design, lens design, machine learning, and the analysis of frequency-selective surfaces.

This talk discussed the design automation by Python scripting in Ansys HFSS. Almost anything someone can do through the GUI in HFSS and can also do through a script. In this talk, Dr Arya has taken some design examples and create those designs through the scripting interface of HFSS.

The event was attended by more than 30 students, researchers, executive committee members and faculties. Prof. Debatosh Guha also attended the event and interacted with the speaker. Dr. Chandreyee Sarkar introduced the speaker. It was a highly successful event with loads of interaction among the attendees and the speaker. Chapter Chair Dr. Koushik Dutta gave the vote of thanks and the final concluding remarks.



Event Reporting 2022
IEEE AP/MTT-S Kolkata Chapter

Event-2

Technical Talk: Basic concepts of RF and Microwave
Measurement

Event: Technical Talk

Speaker: Mr. Vishal Gupta, Segment Manager (India) and Solutions Architect at Keysight Technologies, India

Title of the Talk: Basic concepts of RF and Microwave Measurement

Date: 15 March 2022 (Tuesday)

Time: 7:00 PM (IST)

Mode/Venue: Online



The IEEE AP/MTT-S Kolkata Chapter, India organized a lecture program online on **Basic concepts of RF and Microwave Measurement** by **Mr. Vishal Gupta** from Segment Manager (India) and Solutions Architect at Keysight Technologies, India on **15 March 2022** (Tuesday) at **7:00 PM** (IST).

The event was attended by more than 50 students, researchers, executive committee members and faculties. Chapter Chair Dr. Koushik Dutta introduced the speaker. It was a highly successful event with loads of interaction among the attendees and the speaker.

Event Reporting 2022
IEEE AP/MTT-S Kolkata Chapter

Event-3

IEEE Lecture Meeting
Organized by
IEEE AP-MTTs Kolkata Chapter
In association with
MTT-S SBC of Jadavpur University

Event: Technical Talk

Speaker: Dr. Chandrakanta Kumar, U R Rao Satellite Centre ISRO, Bangalore

Title of the Talk: Spacecraft Antennas

Date: 29 March 2022 (Tuesday)

Time: 4:00 PM (IST)

Venue: Jadavpur University (Physical)



Dr. Chandrakanta Kumar is a senior scientist of U R Rao Satellite Centre ISRO, Bangalore. He has completed the Space Studies Program at International Space University, France, in 2013. He primarily designs the antenna systems for the Indian space program and develops the antenna systems of 20 spacecrafts, including the Mars Orbiter Mission. He served as the Deputy Project Director (DPD) for RF Systems of Chandrayaan2, Orbiter; project manager—antenna systems, and for the Chandrayaan1 and Moon Impact Probe, ASTROSAT and GSAT-12 missions. He has 130 publications in national and international journals and conferences, including 49 in IEEE journals to his credit. He has supervised two masters' and two Ph.D. theses. His current research areas are low cross-pol printed antennas, defected ground structures (DGS), phased-array antennas, and lightweight antennas for spacecrafts. Dr. Kumar is a fellow of the Indian National Academy of Engineering (INAE) and the Institution of Electronics and Telecommunication Engineers (IETE), India, and a Life Member of the Astronautical Society of India. He is also a member of the team that received the Team Excellence Award of ISRO for his design of Chandrayaan-1 antenna systems in 2008. He was a recipient of the Young Scientist Merit Award from ISRO in 2009 and the Prof. S. N. Mitra Memorial Award and the Hari Ramji Toshniwal Award from IETE in 2011 and 2018, respectively.

The event was attended by more than 35 students, researchers, executive committee members and faculties. Chapter Chair Dr. Koushik Dutta introduced the speaker. It was a highly successful and 1st in-person event with loads of interaction among the attendees and the speaker.



Event Reporting 2022
IEEE AP/MTT-S Kolkata Chapter

Event-4

Workshop on Antenna Measurement Techniques
Organized by
IEEE AP-S Technical Committee on Antenna Measurements
In Association with
IEEE AP/MTT-S Kolkata Chapter, India
3.30 PM • Friday, 22 April 2022

Event: Workshop

Speakers: Mr. Debojyoti Choudhuri, Deputy General Manager, HCL Technologies, Chennai, India

Workshop Title: Antenna Measurement Techniques

Date: 22 April 2022 (Friday)

Time: 3:30 PM (IST)

Venue: A. N. Daw Seminar Room, 1st floor, Institute of Radio Physics and Electronics, University of Calcutta (Physical Mode)

The Technical Committee on Antenna Measurements of IEEE AP Society organized a technical workshop on Antenna Measurement Techniques on Friday, 22 April 2022 at the Institute of Radio Physics and Electronics, University of Calcutta, Kolkata, India. The IEEE AP-MTTs Kolkata Chapter was the host of the event and extended fullest supports in organizing the same. Industry leader and antenna expert Mr. Debojyoti Choudhuri, Deputy General Manager, HCL Technologies, Chennai, India graced the occasion as a distinguished speaker. He primarily addressed the basics needs and challenges for antenna measurements and elaborately narrated the state-of-the-art techniques. It created a huge interest among the attendees which comprised nearly 20 undergraduate students along with a group of 10 young scientists and faculty members (10 of them were IEEE AP-S members).

On behalf of the IEEE AP-S Measurements committee, Prof. Debatosh Guha had conducted the session and encouraged the students to join IEEE AP Society. The concluding interactions revealed a huge interest among the young group to join IEEE as AP-S student members.



Event Reporting 2022
IEEE AP/MTT-S Kolkata Chapter
Event-5



IEEE Lecture Meeting
Organized by
IEEE AP-MTTs Kolkata Chapter
In association with
IEEE AP-S SBC, University of Calcutta



Event: Technical Lecture

Speakers: Dr. Mahammad Intiyas Pasha and Dr. B. Pavan Kumar, U R Rao Satellite Centre ISRO, Bangalore

Lecture1: Design aspects of digital microwave communication systems (by **Dr. Mahammad Intiyas Pasha**)

Lecture2: Antenna Systems for High throughput Data Transmission from Low Earth Orbiting Satellites (by **Dr. B. Pavan Kumar**)

Date: 26 April 2022 (Tuesday)

Time: 3:30 PM (IST)

Venue: A. N. Daw Seminar Room, 1st floor, Institute of Radio Physics and Electronics, University of Calcutta (Physical Mode)

The IEEE AP/MTT-S Kolkata Chapter, India in association with IEEE AP-S Student Branch Chapter, University of Calcutta organized two technical lectures on Space Antennas and related communication systems on Tuesday, 26 April 2022 at the Institute of Radio Physics and Electronics, University of Calcutta, Kolkata, India. Two Senior Scientists and RF experts Dr. Mahammad Intiyas Pasha and Dr. B. Pavan Kumar from U R Rao Satellite Centre, ISRO, Bengaluru, India graced the occasion as distinguished speakers. Dr. Pasha emphasized on practical design aspects of digital microwave transducer systems and Dr. Kumar elaborately shared his experiences dealing with Antennas for high throughput data transmission from Low Earth Orbiting Satellites. It created a huge interest among the attendees which comprised nearly 22 undergraduate and post graduate students along with a group of 10 young scientists and faculty members (15 of them were IEEE AP-S members).

On behalf of the IEEE AP-S SBC Chapter, C.U Ms. Debi Dutta, SBC chair conducted the session. The concluding interacting session was moderated by Prof. Debatosh Guha, AP-s student branch chapter advisor. It reveals huge interests among participants about knowing the basic needs and challenges in designing the Antenna and its sub systems for industry applications and especially for Space program. It was a two-hour program and ended with a vote of thanks by Prof. Guha and Dr. Kaushik Mandal, Treasurer of the AP/MTT-S Kolkata Chapter.



Advanced School of Antennas 2022

In person, 3-4 June 2022 ■ KIIT-DU, Bhubaneswar

IEEE AP-S Antenna Measurement Committee in association with IEEE AP/MTT Kolkata Chapter and KIIT-Deemed to be University, successfully organised a two-day (June 3-4, 2022) workshop event 'Advanced School of Antennas 2022' in the School of Electronics Engineering, KIIT-DU, Bhubaneswar. It comprised of a series of lectures focussing mainly on 5G, mm-wave, terahertz antenna measurement techniques, state-art-of the work, facilities and future advancements. Eminent speakers from abroad Prof. Sungtek Kahng, Prof. Yang Yang and from the country Dr. Koushik Dutta, Dr. Chandrakanta Kumar, FNAE, and Prof. Debatosh Guha, delivered talk and shared their experiences with the participants. It was an interactive and vibrant session in physical mode. Special thanks go to Prof. Sudhakar Sahu and the KIIT volunteer team for extending their kind support in making the event successful in person mode. Some captured moments are shared here.



Fig. 1. Inaugural talk delivered on the 1st day at KIIT, DU-Bhubaneswar



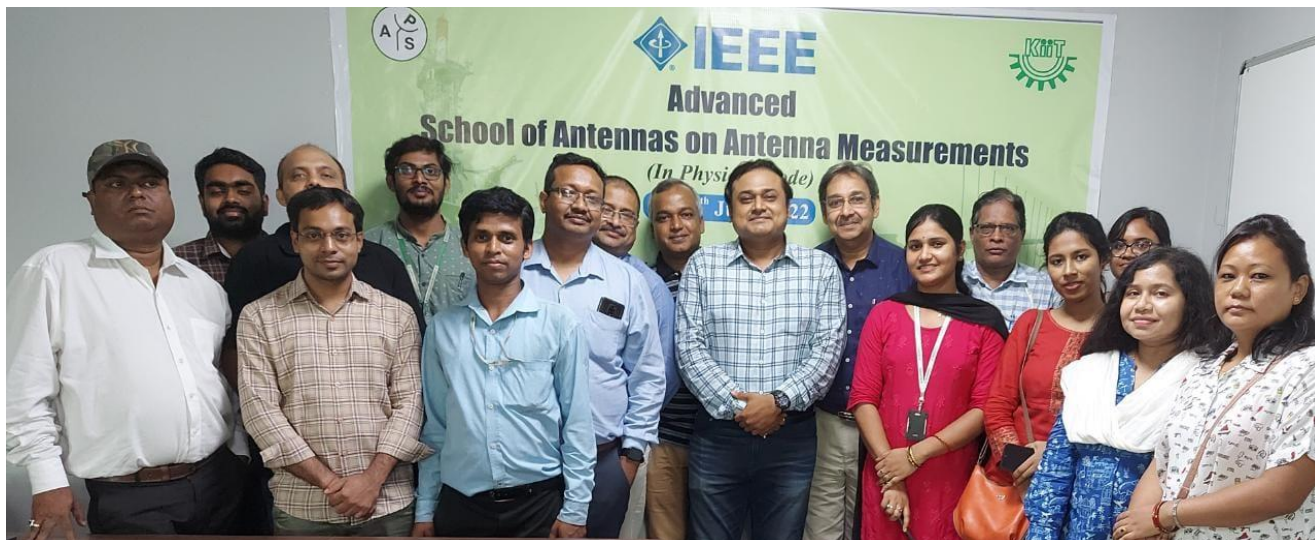


Fig. 4. Group photo with participants, Day 1, June 3, 2022



Fig. 5. Group photo with participants, Day 2, June 4, 2022

Detailed two days program schedule is shared here:

Advanced School of Antennas 2022

Theme: Antenna Measurements

3-4 June 2022 • School of Electronics Engineering, KIIT University, Bhubaneswar

Organized by

IEEE APS Technical Committee on Antenna Measurements

in association with

IEEE AP/MTT-s Kolkata Chapter

& School of Electronics Engineering, KIIT University, Bhubaneswar

Technical Program

Friday 3 June 2022

9:30 am Registration

10:00 am Welcome speech

10:30 am Coffee

11:00 am **Introduction to Antenna Measurements Approaches** (Academia-India)

12:00 am **Antenna Measurements: R&D of 5G Beamforming Antennas and Metamaterial Surfaces**

Prof. Sungtek Kahng, *Incheon National University, South Korea*

13:30 pm Lunch

14:30 pm **3D Dynamic Beam Measurement Platforms – From Radio Waves to Terahertz Waves**

Prof. Yang Yang, *University of Technology Sydney, Australia*

16:00 pm Interactive session

Saturday 4 June 2022

10:00 am **Measurement Challenges and Technical Insights** (R&D, India)

11:30 am Coffee

12:00 am **Brainstorming Session**

13:30 pm Lunch

15:00 pm Interactive session

**IEEE AP-S COPE Special project for Underprivileged School
Virtual Classroom Facility at S.D.P.U. Vidyachakra, Raiganj
by
IEEE AP/MTT-s Kolkata Chapter**

IEEE AP/MTT-s Kolkata Chapter took an initiative under IEEE APS COPE project for underprivileged school student in creating a virtual classroom facility at a government sponsored school at Raiganj, Uttar Dinajpur. The total funding amount for this project was 1000 USD. Dr. Sujoy Biswas, former chair of IEEE AP/MTT-s Kolkata Chapter, initiated the process in 2021 and this has been executed by the current chair Dr. Koushik Dutta. The facility for mentoring about hundred students at a time has been inaugurated on September 13, 2022. Prof. Debatosh Guha was physically present in that inaugural program which was also virtually attended by the Chapter executives. Dr. Koushik Dutta, Dr. Chandreyee Sarkar, and Ms. Debi Dutta of our chapter addressed the students. The program was attended by about 80 students of the school along with a group of teachers. Headmaster Shri Avijit Dutta welcomed the delegates and the students and hugely appreciated the generous support from the IEEE for the benefit of the school students. This inauguration was followed by an inspiring speech by an illustrious alumnus of the school Swami Suviranandaji Maharaj, General Secretary of Belur Math Ramkrishna Mission. He addressed the students online from his Belur office. The students expressed their happiness and humble gratitude to the IEEE leaders. Some refreshments were arranged on behalf of the chapter and was distributed among the students at the end of the program.



Fig. 1. On inaugural day, September 13, 2022



Fig. 2. Swami Suvirananda Maharaj delivering his talk during inauguration



Fig. 3. Prof. Debatosh Guha on the inauguration day, September 13, 2022

One day technical outreach program organized by IEEE AP/MTT-s
Kolkata Chapter in association with AP-s Student Branch Chapter,
University of Calcutta

28th September, 2022 ■ Doordarshan Kendra, Kolkata

A one day technical outreach program had been successfully organized by IEEE AP/MTT-s Kolkata Chapter in association with APS Student branch chapter, C.U at Prasarbharati Doordarshan Kendra Kolkata on 28th September, 2022. Total nineteen (19) no. of students participated and out of them fourteen (14) no. of students were IEEE AP/MTT student members. The event started from 11.00 am and lasts up to 7.00 pm in the evening. DDK has different sections starting from signal processing, transmitter/receiver, video streaming, post production, stage management, archives etc. Almost each segment had been tried to cover within the short time span. The students were so exhilarated getting some real industry flavours from the visit. They were also encouraged to continue their IEEE student membership to explore more such benefits that IEEE provides for the students. On behalf of the organizer, Ms Debi Dutta, Chair, AP SBC had conducted the event.



Fig. 1. Participants listening to the scientist at DD Kolkata, September 28, 2022



Fig. 2. Transmitter section visit, Group photo of participants and Scientists at DD Kolkata, September 28, 2022



Fig. 3. Group photo with participants, DD Kolkata, September 28, 2022



REPORT ON HANDS-ON WORKSHOP ON ADVANCED ANTENNA DESIGN

IEEE AP-MTTs Kolkata Chapter, and IEEE AP Student Branch Chapter of Netaji Subhash Engineering College are jointly organizing a one-day “Hands-on Workshop on Advanced Antenna Design” in association with IEEE AP Student Branch Chapter of Calcutta University in the Seminar room of ECE department on 21.11.2022. The workshop began at 11 AM and ended at 4 PM. Resource person was Mr. Sk Rafidul (Senior Research Fellow of University of Calcutta).

In the inaugural session of the workshop, Dr. Koushik Dutta (Chair, IEEE AP-MTTs Kolkata Chapter & Head, ECE, NSEC) gave a welcome speech, followed by Mrs. Soma Chattopadhyay (convenor of this workshop). The inaugural talks were delivered by Dr. P. K. Banerjee (Emeritus Professor of ECE, NSEC) & Dr. Tridibesh Nag (Treasurer, IEEE Kolkata Section) and Mr. Sk Rafidul (the workshop resource person). Following the grand inauguration, the speaker, Mr. Sk Rafidul, delivered the workshop session in which he provided a detailed explanation of antenna and transmission line design as well as the limitations of modern antenna design techniques. During the second half of the workshop, a couple of advanced antennas were designed using Ansys HFSS software. In addition to the technical content delivered by the speaker, the hands-on sessions were equally as interesting and was at par with industry standards.



About 34 people attended the workshop, including IEEE members, students, young professionals, and faculty. There was a registration kit and lunch provided for the participants on that day.

Participants, young professionals, and faculty members benefited greatly from the event. A Q&A session at the end was very informative as participants learned about current research trends and had their doubts clarified.

The positive response of the participants indicates that the event was a huge success! NSEC's Director, Dr. Hrishikesh Mondal, and NSEC's Emeritus Professor of ECE, Dr. P. K. Banerjee addressed the validation session at the end of the workshop.







REPORT ON IEEE LECTURE ON ULTRA-WIDEBAND ANTENNA SUB-SYSTEMS

IEEE AP-MTTs Kolkata Chapter, and IEEE AP Student Branch Chapter of Netaji Subhash Engineering College are jointly organizing a one-day IEEE Talk on “Ultra-wideband Antenna Sub-system” in association with IEEE AP Student Branch Chapter of Calcutta University in the Seminar room of ECE department on 29.11.2022 from 1PM to 2.30PM. Resource person was Mr. Ranadhir Chatterjee (PhD IIT Kharagpur) Lead Engineer, HCL Technologies Pvt. Ltd.).

In the inaugural session of the workshop, Dr. Koushik Dutta (Chair, IEEE AP-MTTs Kolkata Chapter & Head, ECE, NSEC) gave a welcome speech, followed by Prof. Niladri Sekhar Mishra (convenor of this program). The inaugural talks were delivered by NSEC's Director, Dr. Hrishikesh Mondal, Dr. P. K. Banerjee (Emeritus Professor of ECE, NSEC), NSEC's Dean Academics, Prof. Sukumar Roy and Mr. Ranadhir Chatterjee (resource person). Following the grand inauguration, the speaker, Mr. Ranadhir Chatterjee delivered a lecture focusing on the basic requirements and challenges of designing an ultra-wideband antenna sub-system with elaborate descriptions of state-of-the-art techniques. In addition to explaining the advantages and applications of this Ultra-wideband Antenna Sub-system, current research activities are also discussed that are equally as interesting and on par with industry standards.

It created a huge interest among the attendees which comprised nearly 34 undergraduate students along with a group of 10 young scientists and faculty members (10 of them were IEEE AP-S members).

Dr. Koushik Dutta (Chair, IEEE AP-MTTs Kolkata Chapter, Mrs. Devi Dutta (Student Branch Chapter chair of Calcutta University) and Anirban Chatterjee (Student Branch Chapter chair of NSEC) concluded the meeting by giving a vote of thanks and concluding remarks.







REPORT ON

IEEE LECTURE ON 5G - A REALITY NOW

IEEE AP-MTT Kolkata Chapter, and IEEE COMSOC Kolkata Chapter in collaboration with IEEE AP Student Branch Chapters of Netaji Subhash Engineering College are jointly organizing a one-day IEEE Talk on “5G - A Reality Now” in the APC hall of Netaji Subhash Engineering College in the Seminar room of ECE department on 19.12.2022 from 1.30PM to 2.30PM. Industry leader and communication systems expert Mr. Chanchal Chakraborty (CEO, ATMI Private Limited) was the resource person. He is having 35 years of experience in Telecom and IT. He has worked in different capacities in NTPC, BSNL (erstwhile DOT) as ITS (Indian Telecom Service). Later on, he acted as Chief Technology Officer in Aircel, Uninor and Reliance Jio. He has Rolled out Metro Network and the entire East Zone green field Mobile network (2G,3G and 4G) for four operators including JIO. He has also worked as Principal, Staff Training College, Department of Telecommunication. He has received different accolades including “The Vishist Sanchar Seva Award” from the Ministry of Communications.

In the inaugural session of the workshop, Dr. Koushik Dutta (Chair, IEEE AP-MTTs Kolkata Chapter & Head, ECE, NSEC) gave a welcome speech, followed by Prof. Swagata Roychoudhury (convenor of this event). The inaugural talks were delivered by Prof. Iti Saha Mishra, (Prof. JU, IEEE Chair-Elect 2023 of IEEE Kolkata Section), Dr. Subhamoy Chakraborti (Chair, IEEE COMSOC Kolkata Chapter), Dr. P. K. Banerjee (Emeritus Professor of ECE, NSEC), Prof. Sukumar Roy (NSEC's Dean Academics) & and Mr. Chanchal Chakraborty (CEO, ATMI Private Limited).

After the grand inauguration, Mr. Chanchal Chakraborty presented a lecture on how 5G technology compares to existing technologies. He has provided an elaborate description of the design criteria and challenges involved in the development of this technology.

It created a huge interest among the attendees which comprised nearly 45 undergraduate students along with a group of 15 young scientists and faculty members (35 of them were IEEE AP-S members and 25 of them were IEEE COMSOC members). A Q&A session at the end was very informative as participants learned about current industrial requirements and had their doubts clarified.

The positive response of the participants indicates that the event was a huge success! Dr. Koushik Dutta (SAC Chair, IEEE Kolkata Section & Head, ECE, NSEC), Prof. Iti Saha Mishra, (Prof. JU, IEEE Chair-Elect 2023 of IEEE Kolkata Section), Dr. Subhamoy Chakraborti (Chair, IEEE COMSOC Kolkata Chapter), Dr. P. K. Banerjee (Emeritus Professor of ECE, NSEC), Prof. Sukumar Roy (NSEC's Dean Academics) concluded the meeting by giving a vote of thanks and concluding remarks.

Event Photos (Next Page) →

