The year 2022 is now behind us. There was hope for a new start with a COVID-free 2023. Unfortunately, 2023 began with the emergence of new COVID variants, discouraging overseas travels and in-person events. Notwithstanding the disruption, Chapter Activity Committee (CAC) members under the leadership of CAC Chair Dr. Ajay Poddar continued to interact and engage with Chapter officers, volunteers, and members globally. I am thankful to all the CAC members and Chapter officers for their support and cooperation in times of need to engage and motivate our members, young professionals, and students. The IEEE Antennas and Propagation Society (AP-S) recognizes the importance of a resilient core team of volunteers and members and the strength of its Chapters. In that spirit, our Chapters have conducted a record number of events, and many new Chapters were formed. Our Chapter officers are the Society’s advocates and representatives around the world in local Sections for the benefit of local Members and communities. Focus has been put on volunteers’ and members’ engagement for a humanitarian relevance.

We (CAC) continue to improve our responsiveness in the Chapter’s requests/services and concerns, questions, and issues. In addition to supporting Chapters worldwide, AP-S CAC provides a forum for the sharing of information, ideas, and inspiration related to improving the living conditions of the underserved around the world. Dr. Poddar’s proactive volunteering and leadership moved CAC a step toward joint IEEE inter-Society collaboration with the Special Interest Group on Humanitarian Technology (SIGHT), Committee on Promoting Equality (COPE), IEEE Smart Village, Humanitarian Activity Committee (HAC), and Young Professionals (YP), enabling the vision that IEEE will possess a large network of volunteers around the world carrying out and/or supporting impactful humanitarian activities at the local level. The joint collaboration effort during the pandemic was possible because of the tireless volunteering service, motivation, and mentorship by Dr. Ajay Poddar, chair of the IEEE HAC Inter-Society Working Group and cochair of AP-S COPE. I welcome and express gratitude to all the Chapter officers who nobly offer their time for IEEE volunteering services. I would also like to remind our Chapter officers to submit their requests for travel grants to attend the Chapter chairs meeting (CCM) at the IEEE International Symposium on Antennas and Propagation and the USNC-URSI Radio Science Meeting, which will be held from 23 to 28 July 2023 in Portland, OR, USA. This symposium is intended to be the premier international forum for the exchange of ideas on state-of-the-art research in antennas, propagation, electromagnetic engineering, and radio science. Through a range of technical and social activities, it will provide the opportunity to interact with the world’s leading experts in antennas and propagation from academia, industry, and government. We welcome you to attend the conference and its workshops, the CCM, the COPE and SIGHT meetings, and the awards function from 23 to 28 July 2023 in Portland, OR, USA.

Last year, a total of 15 AP-S Chapters, both independent and joint, were nominated for applications to the 2022 Outstanding Chapter Award Committee. The selection of the Outstanding Chapter Award follows a rigorous process because it involves many factors (technical events, involvement with local IEEE volunteers, membership drive and engagement, and STEM humanitarian project activities). The 2023 Outstanding Chapter Award nomination application can be downloaded at https://www.ieeeaps.org/chapters/chapters; the extended deadline for
submission is 15 April 2023. Self-nomination is allowed.

IEEE AP-S CHapter EVENTS

IEEE Microwave, Antennas, and Propagation Conference, Bangalore, India, 12–15 December 2022

AP-S and the IEEE Microwave Theory and Technology Society (MTT-S) have come together and signed a memorandum of understanding (MoU) for combining two flagship conferences of the respective societies, the IEEE International Microwave and RF Conference in India (IMaRC) sponsored by MTT-S and the IEEE Indian Conference on Antennas and Propagation (InCAP) sponsored by AP-S, to a single conference: the IEEE Microwave, Antennas, and Propagation Conference (MAPCON). The first edition of MAPCON was successfully organized in Bangalore, India, from 12 to 15 December 2022. In addition to technical sessions involving keynote talks, contributory paper presentations, special sessions, invited talks, workshops, and tutorials, focused tracks on YP and Women in Engineering, a highly successful SIGHT session, and a CCM were jointly organized as integral parts by AP-S and MTT-S on 12 and 15 December 2022.

Engagement With Chapters, Local School Students, Teachers, and SIGHT Volunteers, MAPCON, Bangalore, 12 December 2022

Dr. Ajay Poddar (IEEE AP-S CAC chair), Dr. Goutam Chattoppadhyay (IEEE MTT-S MGA chair), Dr. Chinmoy Saha (IEEE AP-S R10 coordinator), G.S. Mani (IEEE AP-S Pune Chapter chair), Puneet Mishra and Dr. M.K. Mandal (general cochairs, MAPCON 2022), and Dr. Jawad Y. Siddiqui (vice-chair, MTT-S, India Institute of Technology (IIT)–Banaras Hindu University (BHU)), Sandeep Chaturvedi (chair, AP-S/MTT-S/EMC-S Joint Chapter, Hyderabad), Prashant Mishra (vice-chair, AP-S/MTT-S/EMC-S Joint Chapter, Hyderabad), Satya Prakash (chair, AP-S–MTT-S, IIT, Kanpur), Ashutosh Kedar (secretary, AP-S–MTT-S Joint Chapter, Bangalore), Gopika R. (AP-S/MTT-S, IIST, Kerala), Dr. Azremi Abdullah Al-Hadi (AP-S/MTT-S/EMC-S Joint Chapter, Malaysia), Dr. Kaushik Dutta (AP-S–MTT-S Joint Chapter, Kolkata), Farheen Fatima (vice-chair, MTT-S, IIT, Kanpur), Ranaul Kumar Jaiswal (chair, AP-S, IIT, Kanpur), Dr. Dinesh Yadav (faculty advisor, AP-S–MTT-S, Manipal University), Dr. T. Shanmughanathan (chair, AP-S Madras Chapter), Dr. G.S. Mani (chair, JCAME, Pune Section), Prof. M.M. Sharma (chair, AP-S Delhi Section, Jaipur), Piyush Kumar Mishra (chair, MTT-S, NMIT, Allahabad), Naman Baghel (chair, AP-S, IIT, Jodhpur), Nusratgul Manan (chair, MTT-S, NIT, Trichy), Abhishek Patel (MTT-S, IIT, Jabalpur), Shilpi Singh (chair, MTT-S, IIT, Delhi), Dr. Sukomal Dey (AP-S–MTT-S, IIT, Palakkad), Tejaswini Ramakrishna (AP-S–MTT-S, MSRIT, Bangalore), Easha (MTT-S/AP-S, IISc, Bangalore), Ravi Mali (secretary, AP-S, IIT BHU), Nilanjan Dutta (MTT-S vice-chair, Assungd Engineering College), B. Veda Monikita (general secretary, MTT-S, VNVRJiET), and Gazali Bashir (treasurer, AP-S, IIT, Jamnur), presented the Chapter activities and future plans. The meeting was concluded by a photo session (Figure 1).

IEEE InterRegion and Intersection Event

North Jersey Section Chair Dr. Ajay Poddar and Pune Section Chair Girish Khilari signed the MoU on 5 December 2022 to initiate the ecosystem of interregion and intersection collaboration on some of the following areas: 1) humanitarian activities; 2) STEM/STEAME, young professional, and WiE initiatives; and 3) diversity, equity, and inclusion (DEI) for helping the underserved community. Bala Prasanna (IEEE R1 director-elect) and Deepak Mathur (IEEE R10 director) explained the benefits of interregional and intersectional collaboration and thanked Dr. Ajay Poddar, chair of IEEE AP-S CAC; Prof. G.S. Mani, chair of the AP/MTT/EMC Pune Chapter; Girish Khilari, chair of the IEEE Pune Section; and Prof. Mandar Khurjeekar, Dr. Neha Sharma, Dinanath Kholkar, and the entire executive committee of IEEE Pune and the IEEE North Jersey Section. Figure 2 shows a photo of the IEEE volunteers, Section chairs, and participants of the Pune Section year-end ExCom meeting, 5 December 2022.
IEEE AP-S ULRICH L. ROHDE HUMANITARIAN TECHNICAL FIELD PROJECTS AWARD: SIGHT/HAC PROJECT CALL FOR PROPOSALS

Proposals consisting of the details of the project and the budget can be submitted to Dr. Ajay K. Poddar (akpoddar@ieee.org) and Dr. Jauad Siddiqui, AP-S SIGHT Committee chair. The submission deadline for the IEEE AP-S Ulrich L. Rohde Humanitarian Technical Field Projects Award is 30 June 2023. The project selection process is in line with IEEE SIGHT and HAC project awards. The evaluation of the proposals will be based primarily on the technical content. After completion of the project, the awards committee will explore follow-up activities for low-cost production of the proposed technology, which is the key requirement for humanitarian needs.

IEEE AP-S CHAPTER STUDENT DESIGN CONTEST

There is additional funding available for supporting the Student Design Contest (SDC) cosponsored by local AP-S Chapters for the engagement of students and young professionals. The template for the SDC in the form “AP-S Special Project Request Form” and can be sent to IEEE AP-S CAC Chair Dr. Ajay K. Poddar (akpoddar@ieee.org). The SDC, special project form, and preparation guidelines are posted at the IEEE AP-S Chapter webpage (http://www.ieeeaps.org/chapters/chapters). The selected SDC project will be published in IEEE Antennas and Propagation Magazine. Please contact your AP-S Chapter activity region coordinator for clarifications and support related to financial support, travel grants, and other concerns. Please click the link for contact details for the AP-S Chapter activity region coordinators.

FIGURE 1. MAPCON AP/MTT Joint Chapter Chairs Meeting with Dr. Stefano Maci, AP-S president; Dr. Ajay Poddar, chair AP-S Chapter Activity and chair IEEE HAC Inter-Society Working Group; Prof. GS Mani, chair AP/MTT/EMC Pune Chapter; Dr. Goutam Chattopadhyay, chair MTT-S MGA; Dr. Mrinal Kanti Mandal, general chair MAPCON; Dr. Chinmoy Saha, AP-S R10 coordinator; and Dr. Charlotte Blair, chair IEEE R1 WIE.

FIGURE 2. IEEE volunteers, Section chairs, and participants at the Pune Section year-end ExCom meeting, 5 December 2022.
We are excited to share with you the recent highlights of the COPE activities during the SIGHT/COPE meeting held in Bangalore during MAPCON 2022: the IEEE Photonics Conference in Vancouver, BC, Canada; and other activities.

**A HIGH-IMPACT SIGHT/COPE WORKSHOP AT MAPCON IN BANGALORE, INDIA**

**Report by:** Chinmoy Saha and Ajay Poddar

AP-S and MTT-S jointly conducted a day-long high-impact SIGHT/COPE workshop during MAPCON 2022, held in Bangalore, India, from 12 to 15 December 2022. The joint AP-S and MTT-S SIGHT/COPE workshop, held on 12 December 2022, was organized by AP-S SIGHT/COPE and MTT-S SIGHT committees and featured multiple speakers and panel members.

Following the welcome speech by Shri Puneet Mishra (MAPCON general cochair) and Dr. Chinmoy Saha (AP-S R10 coordinator), Dr. Ajay Poddar (AP-S COPE vice-chair 1 and CAC cochair) and Dr. Jawad Siddiqui (AP-S SIGHT chair) briefed about the scope, opportunities, and guidelines of AP-S and MTT-S SIGHT/COPE activities and various perspectives of AP-S COPE. Prof. Weng C. Chew, chair of AP-S COPE, delivered a keynote talk exclusively featuring AP-S COPE and its initiatives and deployment of various projects across the globe. Dr. Ajay Poddar, IEEE AP-S CAC chair, elucidated various AP-S SIGHT, COPE, and HAC activities of all societies. This was followed by a keynote talk by Prof. G.S. Mani, chair, IEEE Joint Chapter AP/MTT/EMC (JCAME) in Pune, in which he highlighted two successful COPE projects, namely, “Swasth” and “EU-REKA,” implemented in association with Bhagini Nivedita Pratisththan (BNP) in Pune, India.

Swasth is an activity where college students, professionals, and volunteers educate high school children about sanitation and hygiene, particularly water, health, and sanitation. Under this, the Foldscope project cosponsored by AP-S COPE is gaining full momentum. Dr. Manjusha Mungi, Sumitra Hiray, Bharati Khurjekar, and Pallavi Malame shared their experience on implementing different schemes, such as organic farming for economically underprivileged women; the assembly of a low-cost microscope, the Foldscope; engaging local Chapter students and volunteers in creating interest and curiosity among rural schoolchildren; and creating awareness among high school students with the help of college students and school teachers as the ambassadors. The activities focus on “learning by doing,” where the trainers guiding and helping the schoolchildren to assemble the Foldscopes were earlier trained during a teacher-training workshop by another group of teachers. The agenda of knowledge dissemination is thus fulfilled through this activity as these schoolchildren use these Foldscopes to examine the quality of water and analyze it. They are also trained to prepare reports in the form of slides/photos using this Foldscope and upload the findings on the cloud platform. The objective is to make them understand the need for clean water and how technology can be used to improve health and sanitation. Dr. Manjusha Mungi, IEEE Pune Section, volunteered for another one-day workshop for STEM projects in underserved community on 17 January 2023, conducted by BNP Pune and cosponsored by AP-S COPE.

Sathy Mani, Pallavi Malame (a fourth-grade student from Pune), Naran Subramanian, Dr. Chinmoy Saha, and Prof. G.S. Mani also addressed the students and Chapter officers, organizers, speakers, and participants at the AP-S SIGHT/COPE Workshop.

Prof. Mahesh gave an overall idea of the recent AP-S and MTT-S SIGHT/COPE events and initiatives of the Bangalore Chapter, which include the implementation of smart classrooms in rural parts of Bangalore, setting up broadband connections for accessing online lectures and webinars, and setting up a lab facility for carrying out practical experiments.

The postlunch session started with a talk, “Industry 4.0/5.0 Sustainability and Carbon Emissions reduction using Satellite-based Sensor Networks,” by Naran Subramanian, CTO, AI for Sustainability. M.N. Prakash, headmaster, Kannada Medium Rural High School, highlighted the activities in his school with the help of IEEE AP-S initiatives, which was followed by the interaction of students. Dr. Chinmoy Saha highlighted the successful implementation of smart classrooms at the Government Upper Primary School, Ponnundi, India, and Asan Nagar High School, Nathia, India, funded by AP-S COPE. Many students shared their experiences of using smart classrooms, lab facilities, etc., and expressed their gratitude and appreciation to IEEE AP-S and MTT-S for the initiatives in their school.

The photo in Figure 3 was taken at MAPCON, Bangalore, 14 December 2022, with Prof. Saifur Rahman, IEEE president and CEO, discussing the engagement of local volunteers and industries for SIGHT/COPE and HAC activities.

This highly successful SIGHT/COPE session (Figure 4) was attended by more than 85 participants and was concluded by the distribution of AP-S goodies to the participants. A vote of thanks was delivered by Dr. Mrinal Kanti Mandal, general cochair of MAPCON 2022.

Dr. Ajay Poddar, cochair of AP-S COPE, discussed COPE project activities in IEEE Region 7 with IEEE
Photonics Society leadership, on 14 November 2022, during the IEEE Photonics Conference in Vancouver. He also discussed the progress and impact of the COPE projects that were awarded COPE funding during 2022 for STEM and ham radio activities in the underserved communities.

The Electromagnetics for Wireless: Opportunities and Challenges (EMWOC; 7–9 December 2022) one-day SIGHT/COPE cosponsored workshop was another successful event held at the Defense Institute of Armament Technology (DIAT) campus in Pune, India, on 7 December 2022. The workshop was a joint effort of Joint Chapter AP/MTT/EMC (JCAME), Pune, with DIAT (a deemed university). There were several invited speakers, and panel discussions were held under the theme of the EMWOC workshop, which was to highlight the issues faced in the design, development, and evaluation of electromagnetic systems for modern communications; the job opportunities provided by these challenges; and the skill set requirements to meet these challenges.

The IEEE Region 1 New Jersey Coast Section cosponsored a SIGHT/COPE Meeting, where Prof. Dr. Victor B. Lawrence presented the topic “Standards Racial Bias in Technology Pulse Oximeter, and More and Assisted Living” on 16 January 2023. The points highlighted during the presentation were as follows: Working with data from the past is not going to reduce racial bias, nor will it result in improved future algorithms, AI/ML, etc. Research and industry stakeholders should facilitate transparent design; improve communication and literacy of those who use devices; monitor and report how devices are used; and incorporate updated data, even small data, and experiences of users over time. This effort connects to humanitarian activities (HAC/SIGHT/COPE), DEI, sustainability, resilience, UN Sustainable Development Goals, and social determinants of health. World class technology solutions, too, were discussed at the meeting. More details can be found at https://meetings.vtools.ieee.org/m/342104.

AP-S COPE has also supported YP activities, and we are delighted to inform you that AP-S won the IEEE Young Professionals Hall of Fame Honorable Mention Award. The IEEE Young Professionals Hall of Fame Award is meant to recognize active and inspiring Young Professionals affinity groups and Society groups worldwide, based on their activities. CJ Reddy (AP-S YP chair) shared this news and mentioned that while we (AP-S) did not win the Hall of Fame Award itself (it went to the IEEE Nanotechnology Council), we are one of the two Societies (out of 40+ Societies and Councils) to receive the honorable mention, which in itself is a great recognition for the AP-S YP Committee members and the 2022 AP-S YP Ambassadors. Reddy expressed gratitude and acknowledged the opportunity to serve as the chair of YPC and the unwavering support from all for the AP-S YP activities. “It has been a rewarding experience for me! Looking forward to an exciting New Year 2023,” he said.

You can find more details at https://www.linkedin.com/posts/ieee-young-professionals_a-special-congratulations-to-this-years-activity-7014334852887904256-dtpO.

**AP-S COPE FUNDING REQUEST**
**DEADLINE: 15 MAY 2023**

AP-S COPE aims to fund projects that provide good use of IEEE expertise exhibiting strong technological
components, with clear engagement with the AP-S Chapters and local communities, indicating that the proposed solution is both desired and feasible. Projects must be successfully completed and submitted to the AP-S through final reporting indicating the status of the project and the utilization of funds at the end of each calendar year. Expense vouchers should be submitted as supporting documents for audit. A spreadsheet titled “AP-S COPE Project Budget Template 2023” should be submitted for the budget proposal during the application process, and an expense report should be submitted on completion of projects. Proposals are subject to review and scrutiny, and the total project funding will not exceed US$3,000 for any calendar year.

Please use the link to the Google Form to submit your project proposals under the COPE mission. AP-S Chapter officers/members can fill out and submit the IEEE AP-S COPE Special Project Funding Request Form 2023 using the link https://forms.gle/3LwHQwlz5pWHEmPf6. If Google Forms is not available in your region, you may use the form “AP-S Special Project Request Form” found on the IEEE AP-S website (https://ieeeps.org/chapters/chapters).

IEEE ANTENNAS & PROPAGATION MAGAZINE APRIL 2023

DISTINGUISHED LECTURERS

Committee Chair: Kwai Man Luk

With the kind support of the members of the Distinguished Lecturer Program Committee, we have selected the following five new Distinguished Lecturers for 2023–2025:

1) Maokun Li, Department of Electronic Engineering, Tsinghua University (Region 10) (area: computational electromagnetics and electromagnetic inverse problems)
2) Mohammad S. Sharawi, Electrical Engineering Department, Polytechnique Montreal (Region 7) (area: MIMO antenna systems and reconfigurable and active integrated antennas)
3) Yihong Qi, General Test Systems, Inc. (Industry) (area: wideband arrays and wireless intelligent sensing)
4) Yi Huang, Department of Electrical and Electronics, the University of Liverpool (Region 8) (area: wireless energy harvesting, wireless power transfer, and liquid antennas and wireless charging)
5) Ahmad Hoorfar, Department of Electrical and Computer Engineering, Villanova University (Region 2) (area: optimization techniques and radar imaging).

Our current and former Distinguished Lecturers have started to organize more physical trips during the last few months. Their reports can be found at the AP-S website. The report by Prof. Debatosh Guha is included here. Chapter chairs are encouraged to invite our Distinguished Lecturers to give talks in your regions, either online or on site.

IEEE AP-S/MTT-S JOINT CHAPTER FOR CENTRAL AND SOUTHERN ITALY
DISTINGUISHED LECTURE SERIES BY PROF. DEBATOSH GUHA

The IEEE AP-S/MTT-S Joint Chapter for Central and Southern Italy organized a couple of AP-S Distinguished Lectures by Prof. Debatosh Guha in November 2022 in two different cities in central/southern Italy. Chapter Chair Prof. Luciano Tarricone took the initiative and made it successful with the help of his colleagues and Chapter volunteers. The first lecture in the series was held on 25 November 2022 at 3:00 p.m. in a seminar hall of the University of Pisa and was locally organized by Prof. Giuliano Manara and Dr. Andrea Michel of the Department of Information Engineering, University of Pisa. At the beginning, Prof. Manara introduced the speaker (Figure 5). In Prof. Guha’s talk, “Is Antenna Made of Mathematics?” he described possible missing links between Maxwell’s theory and practice using multiple lines of evidence including several video demonstrations of Heinrich Hertz’s fundamental experiment. The seminar created huge interest among the audience and invoked multiple questions from them. This was attended by about 12–15 IEEE AP-S members, including departmental students, researchers, and faculty members (Figure 6).

The talk was followed by interactions with the students, which continued for about an hour. Prof. Guha, at the end of his technical talk, encouraged the students to join IEEE AP-S as student members and showcased several attractive features that could assist them in their career building. He also encouraged them to take active roles in the AP-S activities.

The second talk of the Distinguished Lecture series was organized in the Department of Information, Electronics, and Telecommunications, University of Sapienza, Rome, at 10 a.m. on 28 November 2022. Prof. Alessandro Galli had organized and coordinated the event in his department. He welcomed the audience, which indeed appeared to fill the seminar hall. Chapter Chair Prof. Luciano Tarricone of University of Salento, Italy, presided over the function and introduced his Chapter and Chapter activities before the audience. Prof. Guha gave his talk, “Mysteries in Dielectric Resonator Modes and Some Techniques for Advanced Antenna Designs,” which created a lot of interest. Several senior faculty members, including more than 20 students and researchers, were present. They extensively interacted with the speaker on various aspects of DRA technology and future possibilities.

The talk was followed by a discussion,
which continued for an hour, and Prof. Guha highlighted how AP-S extends various useful opportunities for the student members and the benefits of these opportunities.

IEEE Young Professionals 2022 Hall of Fame Honorable Mention
IEEE Antennas and Propagation Society

for their impact on young professionals’ career pathways, technical advancement, personal growth, and professional achievements

YOUNG PROFESSIONALS
Committee Chair: CJ Reddy

AP-S YOUNG PROFESSIONALS PROGRAM WINS 2022 IEEE YOUNG PROFESSIONALS HALL OF FAME HONORABLE MENTION AWARD

The IEEE Young Professionals Hall of Fame Award is meant to recognize active and inspiring Young Professionals affinity groups and Society groups worldwide, based on their activities. The main factors considered during the evaluation of submitted nominations include

- vitality of the group measured in the amount and quality of organized activities, which shall have an important impact on the Young Professionals community
- collaboration with other IEEE units to facilitate engagement of members of all grades
- collaboration with industry and academia
- new inspiring ideas that help grow the local Young Professionals community.

It is an honor for AP-S and the AP-S Young Professionals Program to receive the 2022 IEEE Young Professionals Hall of Fame Honorable Mention Award (Figure 7). Congratulations to the AP-S Young Professionals Committee members and the 2022 AP-S Young Professionals Ambassadors, whose efforts made this prestigious recognition possible. We thank the AP-S leadership for their wholehearted support of Young Professionals activities. We also thank the contributors of the Young Professionals Column in IEEE Antennas and Propagation Magazine and extend sincere gratitude to the IEEE Antennas and Propagation Magazine Editor in Chief Francesco P. Andriulli and Editorial Assistant Christina Tang-Bernas for their continued support.

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