

AP-S Award Winners, LACAP 2024, and Research Award Winners

2024 IEEE AP-S AWARD WINNERS AND AWARDS CEREMONIES IN JULY 2024 IN FLORENCE, ITALY

Report by: Branislav M. Notaroš, 2024 IEEE AP-S President  and Gianluca Lazzi, IEEE AP-S Awards Committee Chair

This is a report on 2024 award winners and Awards Ceremonies of the IEEE Antennas and Propagation Society (AP-S) that took place on 16–17 July 2024 in Florence, Italy, and were conducted in conjunction with the flagship IEEE APS/URSI 2024 Conference [1]. All awards were presented by Thomas Coughlin, IEEE President, Branislav Notaroš, AP-S President, and Gianluca Lazzi, AP-S Awards Committee Chair (Figure 1).

The main IEEE AP-S Awards Ceremony on 17 July 2024 at the Cavaniglia Hall of the Fortezza da Basso in Florence (Figure 2) [1] highlighted IEEE-level awards, 2004 IEEE AP-S Fellows, and 2024 AP-S Field, Industry, Paper, and Service Awards, as follows.

IEEE-LEVEL AWARDS

- 2024 IEEE Electromagnetics Award: Kamal Sarabandi, “For contributions to electromagnetic sensing technology and metamaterials for antenna miniaturization.”

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FIGURE 1. Presentations of IEEE and AP-S awards on 16–17 July 2024 during the APS/URSI Conference in Florence, Italy.



FIGURE 2. A conference hall packed with attendees of the main IEEE AP-S Awards Ceremony featuring IEEE-level awards, 2024 AP-S Fellows, and 2024 AP-S Field, Industry, Paper, and Service Awards.

- 2023 *IEEE Young Professional Hall of Fame Award*: AP Society and its Young Professionals Committee.

IEEE AP-S FELLOWS EVALUATED BY AP-S

- James Breakall, Yu Jian Cheng, Gregory Durgin, Giacomo Oliveri, Atif Shamim, Mohammad Sharawi, and Hang Wong.

IEEE AP-S FELLOWS ELEVATED BY OTHER SOCIETIES

- Josep Miquel Jornet, Ji Che; Premjeet Chahal, Kaixue Ma, Ho-jin Song, Thushara Abhayapala, and Yue Gao.

AP-S FIELD AWARDS

- 2024 *Distinguished Achievement Award*: Stuart Long, “For the introduction and development of the dielectric resonator antenna and the early development of the microstrip patch antenna.”
- 2024 *Chen-To Tai Distinguished Educator Award*: Nader Engheta, “For lifelong dedication to electromagnetic education and mentoring and for pioneering and transformative innovations in numerous areas in electromagnetics and optics.”
- 2024 *John Kraus Antenna Award*: Yang Hao, “For contributions to body-centric wireless communications and antenna innovations based on transformation optics and metamaterials.”
- 2024 *Donald G. Dudley Jr. Undergraduate Teaching Award*: Thomas Edgar Roth, “For excellence in promoting education and research at the intersection of electromagnetic and quantum information technologies among undergraduate students.”
- 2024 *Lot Shafai Mid-Career Distinguished Achievement Award*: Leyre Azpilicueta, “For contributions to radio wave electromagnetic propagation modeling through novel hybrid techniques and to the access of women to the field.”
- 2024 *Harrington-Mitra Award in Computational Electromagnetics*:

Douglas Werner, “For innovative contributions to the development of computational electromagnetics and optimization techniques for the simulation and inverse-design of antennas, metamaterials, and optical devices.”

AP-S OUTSTANDING SERVICE AWARD

- 2024 *Outstanding Service Award*: Piergiorgio L.E. Uslenghi, “In recognition of his exemplary dedication, leadership, and continuous contributions to the Society, as the Founding Editor of the *Antennas and Wireless Propagation Letters*, Editor in Chief of the *Transactions on Antennas and Propagation*, President of the Society, and of his significant work on enhancing the relationship between AP-S and URSI.”

AP-S INDUSTRY AND HUMANITARIAN AWARDS

- 2024 *Distinguished Industry Leader Award*: Sudhakar Rao, “For distinguished industry leadership, pioneering contributions, and innovations to advanced antenna technologies for satellite, air, and ground communications.”
- 2024 *Industrial Innovation Award*: Yihong Qi, “For contributions to the Radiated Two Stage MIMO OTA measurement method.”
- 2024 *IEEE AP-S Ulrich L. Rohde Humanitarian Technical Field Project Award*: G.S. Mani.

AP-S PAPER AWARDS

- 2024 *Sergei A. Schelkunoff Transactions Prize Paper Award*: Said Mikki
- 2024 *Harold A. Wheeler Application Prize Paper Award*: Thomas Jaschke and Arne F. Jacob
- 2024 *R.W.P. King Award*: Alexander Paulus and Thomas F. Eibert
- 2024 *Piergiorgio L.E. Uslenghi Prize Paper Award*: Modeste Bodehou, Gilles Monnoyer, Maxime Drouguet, Khaldoun Al Khalifeh, Luc Vandendorpe, and Christophe Craeye
- 2024 *Edward E. Altshuler Prize Paper Award*: Grigorii Ptitsyn, Mohammad Sajjad Mirmoosa,

Amirhosein Sotoodehfar, and Sergei A. Tretyakov.

RECOGNITION OF OUTGOING AP-S PRESIDENT, SYMPOSIUM CHAIRS, AND ADCOM MEMBERS

- 2023 *IEEE AP-S President*: Stefano Maci
- 2024 *Symposium General Chair and Cochairs*: Agostino Monorchio, chair; Roberto Graglia, cochair; Giuliano Manara, cochair
- 2024 *Symposium Technical Program Cochairs*: Andrew F. Peterson; Francesco Andriulli; Asimina Kiourti
- *Outgoing Administrative Committee (AdCom) Members (terminating in 2023)*: Magda El-Shenawee; Mohamed Essaaidi; Koichi Ito (2019 AP-S President); Kwai-Man Luk.

For the first time, we organized two more AP-S Awards Ceremonies during the lunch breaks on 16 and 17 July, respectively, in the Exhibit & Demo Area at Fortezza da Basso [1], where the **2024 AP-S Chapter Awards, Travel Grants, AP-S Student Paper Competition Awards, AP-S Student Design Contest Awards**, and some other awards and recognitions were presented.

This was followed by the APS/URSI 2024 Conference Banquet–Social Dinner, at Stazione Leopolda, which celebrated the conference, awardees, authors, members, and attendees [1].

See the supplementary material online for a full report on all awards, awardees, and award presentations with photographs.

SUPPLEMENTARY MATERIAL



FIRST IEEE LATIN AMERICAN CONFERENCE ON ANTENNAS & PROPAGATION, LACAP 2024, CARTAGENA DE INDIAS, COLOMBIA

Report by: Javier Araque, *Conference General Chair*; Francisco Pizarro, *Conference Co-Chair*; and Branislav M. Notaroš, *2024 IEEE AP-S President* 

This is a report on the inaugural edition of the Latin American Conference on Antennas & Propagation (LACAP), of the AP-S, LACAP 2024, held from 1–4 December 2024, in Cartagena de Indias, Colombia (Figure 3). The conference, as well as the associated IEEE and AP-S events in Cartagena, was an astounding success by all norms and measures. The LACAP 2024 Conference Organizing Committee was superbly led by General Chair Javier Araque and Cochair Francisco Pizarro. Branislav Notaroš served as the International Advisory Committee Chair and provided coordination and help as Society President. Technical Program Committee (TPC) Chair was Eva Rajo Iglesias, with Mauricio Rodríguez and Alexandre Serres serving as TPC Cochairs. The other members of the Organizing Committee were Camila Albuquerque, Javier Ojeda, Miguel Gutiérrez Gaitán,

Cartagena de Indias, a beautiful destination in the Colombian Caribbean and a UNESCO World Heritage Site, provided unique opportunities for LACAP attendees to learn about the history, art, and culture of the city and the country.

Gustavo Siles, Agnese Mazzinghi, Erick Reyes, Iván Páez, Dinael Guevara Ibarra, Marlon Patiño Bernal, Andrés Navarro, Melissa Diago, and Francesca Vipiana.

As few lines of background, at the 17–18 February 2024 meeting in Orlando, FL, USA, the AP-S AdCom approved the proposal by the AP-S President to create a new AP-S conference in Latin America, LACAP, with the AP-S as the 100% financial sponsor for the event and as a top priority of the Society. The LACAP initiative was immediately embraced by the LACAP Chairs and colleagues, who back in October 2023 had aimed at organizing a small local workshop in 2024 to gather the Region 9 Antennas and Propagation community. As a result, there

was an outstanding response and enthusiasm, as well as an outburst of communication and activity on planning and organization of the conference, throughout the rest of the year. This was just another confirmation of a strong and urgent demand for this conference in the region and the Society.

Cartagena de Indias, a beautiful destination in the Colombian Caribbean and a UNESCO World Heritage Site, provided unique opportunities for LACAP attendees to learn about the history, art, and culture of the city and the country and enjoy culinary delights, historic and architectural landmarks of multiple eras, and Caribbean Sea beaches and landscapes. The conference took place in the Hotel Estelar Cartagena de Indias, an amazing beachfront venue right next to the historic Spanish fort and the tallest building in Cartagena, offering stunning 360° views of the city and the sea.

The highly illuminating and relevant technical program consisted of more than 110 contributions from more than 300 authors, which is a fantastic accomplishment. The talks ran in two parallel tracks, over three completely packed conference days.



FIGURE 3. Participants of the Opening Ceremony of the First Latin American Conference on Antennas & Propagation, LACAP 2024, on 2 December 2024 in Cartagena de Indias, Colombia.

All sessions were well attended and received, with lively discussion and interesting questions following the talks. Poster Sessions included papers by LACAP 2024 Student Paper Award Finalists.

We had about 120 attendees, with the majority, about two thirds, coming from Region 9, from Columbia, Brazil, Chile, Bolivia, Peru, Argentina, Mexico, Ecuador, etc., as well as significant representations from the United States, Italy, Spain, Canada, China, Germany, Austria, Saudi Arabia, and Sweden, among others (Figure 3).

LACAP 2024 featured an outstanding group of Keynote Speakers: Constantine Balanis, Yahya Rahmat-Samii, Jennifer Bernhard, Richard Ziolkowski, Reinaldo Valenzuela, Susan Hagness, and John Mather. These extremely interesting, enlightening, and entertaining keynotes by highly reputed technical and professional leaders in the field, including celebrated book authors, U.S. National Academy of Engineering Members, U.S. National Academy of Inventors Fellows, AP-S Past Presidents, IEEE Electromagnetics Award Winners, and Nobel Prize in Physics Laureate, were a highlight of the conference (Figure 4). This was further enhanced by the hugely informative and educational AP-S Master Class given by Arthur Yaghjian, as well as the Intersociety Distinguished Lecture Workshop, with very diverse and interdisciplinary lectures by Branislav Notaroš, Paolo Gamba, Felix Vega, George Shaker, and Levent Sevgi.

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AP-S professional events during LACAP 2024 included the IEEE Region 9 AP-S Chapter Chairs Meeting; IEEE AP-S Special Interest Group of Humanitarian Technology (SIGHT) Competition (with the local support of Marlon Patiño, Jose Cely, and Andres Navarro); IEEE AP-S Young Professionals Reception; Women in Engineering Reception; AP-S NanoVNA Initiative Session; and many other organized and ad hoc gatherings and meetings.

Social programs were coupled with the technical and professional programs and included the Opening Ceremony; Welcome Reception at the open-sky Estelar 51 Sky Bar, the highest in Colombia; the Social Dinner with authentic Colombian and Caribbean entertainment, music, and dance; social lunches with delicious Colombian dishes; the Networking Tour: Discovering Cartagena; and Awards/Closing Ceremony.

Based on all numbers, parameters, outcomes, and developments for colleagues and students in Latin America and around the world, the IEEE, AP-S, and the community and profession at large, as well as testimonies of the participants, LACAP

2024 in Colombia was success beyond and above any expectations and predictions.

See the conference website online, <https://lacap2024.org/>, for all of the details, as well as the conference photos and video.

We are excited to announce that the second Latin American Conference on Antennas & Propagation: LACAP 2026 is scheduled for 21–25 February 2026, in Natal, Brazil, with Alexandre Serres as General Chair. The conference has been approved by the AP-S and the IEEE Conferences, Events & Experiences and the preparations are underway.

CONFERENCE WEBSITE



FAR-REACHING ACTIVITIES OF AP-S COMMITTEES AT LACAP 2024 IN COLOMBIA AND ACROSS IEEE REGION 9

Report by: Branislav M. Notaroš, 2024 IEEE AP-S President 

This is a report on impactful and far-reaching activities of several Standing Committees of the AP-S in association with the LACAP 2024, on



FIGURE 4. LACAP 2024 attendees listen to a keynote by Constantine Balanis on 3 December 2024.

1–4 December 2024, in Cartagena de Indias, Colombia, as well as across Region 9. IEEE Region 9, one of 10 fundamental operating and organizational geographical units of the IEEE, encompasses all countries of Latin America.

Region 9 has traditionally been largely underrepresented in AP-S membership and activities, in spite of a great potential for the AP-S to grow in the region, with numerous university programs, government entities, and industries within the Society's field of interest, and a large number of researchers, practitioners, and students whose technical

and professional interests are well aligned with those of current AP-S members.

To address these needs and opportunities, we established and organized LACAP. Namely, in addition to meeting technical and professional needs of researchers, educators, engineers, and students in Latin America and beyond, LACAP was designed to directly address a question and practical goal of increasing IEEE and AP-S membership and impact in Region 9 and its participation in IEEE and AP-S activities. This aligns perfectly with similar goals of the IEEE and our sister societies and organizations.

Right after our Florence flagship conference, multiple membership-oriented AP-S Standing Committees joined forces with the LACAP 2024 Conference Organizing Committee, led by Javier Araque, General Chair, and Francisco Pizarro, Cochair, working through a Society's action plan for LACAP 2024 and its impact on membership growth and engagement in Region 9 under coordination by Branislav Notaroš, 2024 Society President.

We created and disseminated versions of the Call for Papers and other flyers and documents in Spanish and Portuguese. We organized the Intersociety Distinguished Lecture Workshop, led by Levent Sevgi, AP-S Distinguished Lecturers Program Committee Chair, and the AP-S Master Class as parts of the conference.

We provided as many as 50 nano vector network analyzers (NanoVNAs) for students and AP-S chapters participating in LACAP 2024, the activity led by Ashwin Iyer, AP-S NanoVNA Initiative Coordinator. These units were delivered to the conference venue and handed to the recipients during a NanoVNA workshop organized to inform and train the users on the opportunities that NanoVNA offers for research, development, and



FIGURE 5. A group of AP-S Officers, Committee Chairs, and Region 9 volunteers during the IEEE Region 9 AP-S Chapter Chairs Meeting on 1 December 2024 in Cartagena de Indias, Colombia.



FIGURE 6. Participants of AP-S SIGHT "Sustainable Development Goals" Poster Presentations and Awards Ceremony with 17 teams of Columbian students on 2 December 2024 during LACAP 2024.

education in electromagnetics, antennas, and propagation.

To enhance travel to and participation at the conference and foster academic growth and professional development within the region, AP-S offered 25 travel grants of US\$1,500 each for LACAP 2024, for undergraduate and graduate students and postdoctoral fellows, preferably from Region 9, who were first authors of accepted and presented papers and did some volunteer work during the conference. This was organized by George Shaker, AP-S Membership and Benefits (M&B) Committee Vice Chair.

On 1 December 2024, we conducted a full-day IEEE Region 9 AP-S Chapter Chairs Meeting, organized and chaired by Ajay Poddar, AP-S Chapter Activity Committee (CAC) Chair, and attended by a large number of chairs and officers of the AP-S and joint chapters throughout Latin America (the Society covered their travel expenses to Cartagena) and Society leaders (Figure 5). LACAP 2024 and this meeting provided an opportunity for many Region 9 colleagues from different countries to meet in-person for the first time ever, and to make new connections and friendships, for many years to come.

Branislav Notaroš presented “Advancing Impacts of IEEE Antennas and Propagation Society in IEEE Region 9,” followed by the “AP-S CAC Report” by Ajay Poddar. Jawad Siddiqui, AP-S Special Interest Group on Humanitarian Technology (SIGHT) Committee chair, Anisha Apte, AP-S Committee on Promoting Equality (COPE) Vice Chair, and George Shaker talked about SIGHT, COPE, and M&B activities and opportunities.

The “IEEE AP-S Region 9 Report” was presented by Camila Albuquerque, AP-S CAC Region 9 Coordinator. This was followed by presentations of Region 9 Chapter Chairs and overall discussion. This was an invaluable opportunity to hear firsthand about challenges that our volunteers face within their chapters and IEEE sections, learn their fantastic suggestions and ideas on advancing our

operation, activities, and initiatives in the region and beyond, and make or solidify networks and alliances as we move forward.

Jawad Siddiqui and the SIGHT Committee, in collaboration with COPE, CAC, and the AP-S Colombia Chapter, organized a Poster Competition for “Sustainable Development Goals,” with the following aspects: IEEE AP-S SIGHT awareness, United Nations sustainable development goals, novel ideas and technological solutions for humanitarian needs, and emphasis on low-cost wireless engineering technology solutions for susceptible communities. We had a record number of 17 teams of undergraduate and high-school students located in Colombia apply and submit their works.

Five teams were selected for awards, and they presented their posters on 2 December 2024 in a packed room of attendees, including LACAP authors, AP-S leaders and volunteers, members of all competing teams, and families of students (Figure 6). Their proposals were full of fantastic observations and ideas, and their presentations were given, in a combination of Spanish and English, with perfection and enthusiasm. The SIGHT event was coupled with the IEEE AP-S Young Professionals Reception.

The evening was concluded by a speech by the AP-S President and “Sustainable Development Goals” Awards Ceremony and celebration. These phenomenal groups of students were so grateful to the IEEE and AP-S for giving them the opportunity to conduct and share their research and travel to LACAP. Many of them became IEEE and AP-S members. Their energy, excitement, and gratitude and all of the interactions we had with them and their families were a true highlight of the evening and the entire conference.

Described activities of AP-S leaders, committees, and Region 9 volunteers in establishing, preparation, and running of LACAP 2024 and related efforts across Latin America resulted in a truly dramatic increase of AP-S membership in Region 9, an

unprecedented 41% growth in one year, 2024.

See the LACAP 2024 website, <https://lacap2024.org/>, for all of the photos and a video of AP-S professional events during the conference.

CONFERENCE WEBSITE



EDUCATION COMMITTEE RESEARCH AWARD WINNERS

Committee Chair: Karl Warnick

Report by: John Young

The AP-S Education Committee is pleased to announce the winners of the 2024 competition for the IEEE AP-S Doctoral Research Grants and the Eugene F. Knott Memorial Pre-Doctoral Research Awards. In total, there were 112 doctoral submissions and 47 predoctoral submissions. Here are some interesting statistics from the competition:

- There were 10 doctoral recipients (seven male and three female recipients), with US\$5,000 per award.
- There were six predoctoral recipients (four male and two female recipients), with US\$3,500 per award.

The nationality distribution is:

- Doctoral: one from France, one from Italy, two from India, two from the United States, two from Iran, and two from China.
- Predoctoral: One from Chile, one from Türkiye, one from Bolivia, one from the Czech Republic, one from Brazil, and one from China.

The university distribution is:

- Doctoral: three from the United States, one from France, two from China, one from Sweden, one from Italy, one from Canada, and one from India.

- Predoctoral: one from Chile, one from Türkiye, one from Bolivia, one from the Czech Republic, one from Brazil, and one from the United States.

We express our immense gratitude to the members of the AP-S Education Committee for their commitment and dedication to reviewing the applications and to Prof. John Young and Prof. Grace Lim for managing the competition.

The doctoral fellowship winners are as follows:

- Marceau Bouchez, Institut d'Electronique et des Technologies du numÉrique, Rennes, France
- Sougata Chatterjee, Indian Institute of Technology Varanasi (IIT Varanasi), India
- Hui Chen, City University of Hong Kong, China
- Christos Exadaktylos, Florida International University, USA
- Yuki Gao, University of Wisconsin–Madison, USA

- Alireza Madannejad, KTH Royal Institute of Technology, Sweden
- Aditya S. Shekhawat, Arizona State University, USA
- Luca Tosi, ELEDIA@UniTN – DICAM, University of Trento, Italy
- Mahsa Zabetiakmal, Polytechnique Montréal, Canada
- Shengchi Zhu, Southeast University, China.

The Eugene F. Knott Memorial Pre-Doctoral Research Awards winners are as follows:

- Álvaro Allendes Castro, Pontificia Universidad Católica de Valparaíso, Chile
- Burak Ferhat Ozcan, Boğaziçi University, Türkiye
- Cristhian Saavedra, Universidad Privada Boliviana, Bolivia
- Filip Vladimír Setnička, Czech Technical University in Prague, Czech Republic

- Elégia Simionato, São Paulo State University, Brazil
- Mingyi Yao, Georgia Institute of Technology, United States

FULL REPORT AND WINNER BIOGRAPHIES



REFERENCE

[1] B. M. Notaroš, “APS/URSI 2024 conference and 75th AP-S anniversary celebration in Florence [President’s Message],” *IEEE Antennas Propag. Mag.*, vol. 66, no. 5, pp. 6–14, Oct. 2024, doi: 10.1109/MAP.2024.3456608.



TURNSTILE (continued from page 97)

ANSWERS TO TURNSTILE QUIZ

(All the answers are derived from [1], [2], [3], and [4].)

- 1) b) 1,000,000 m² (= 1 km²).
- 2) c) South Africa and Australia.
- 3) c) Both [131,072 log-periodic] dipoles and [197] dishes.
- 4) b) 50–350 MHz (SKA-Low).
- 5) c) Over 350 MHz (SKA-Mid: 350 MHz–15.4 GHz).
- 6) b) 2028.
- 7) a) An interferometer.
- 8) b) 100–200 MHz.
- 9) a) Giant rings of radio-wave radiation (origin currently unknown).
- 10) b) Creates undesirable radio interference.



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