

## IEEE AP-S DL Workshop – Istanbul Edition

**Topic:** Key Innovations in Antennas, Propagation, and Next-Generation Wireless Communications

**Date:** June 9, 2026

**Location:** Conference Hall, Kavacık South Campus, Istanbul Medipol University, Türkiye

**Attendance:** 100 participants in-person

**Audience Profile:** Master's and Ph.D. students, Academic Researchers.

### Prof. Dr. Hüseyin Arslan

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### Executive Summary

On June 9, 2026, Istanbul Medipol University hosted a high-level technical workshop as part of the **IEEE AP-S Distinguished Lecturer Workshop Series**. This event was an initiative organized and coordinated globally by Prof. Levent Sevgi, **the IEEE AP-S Distinguished Lecturer Program Chair**. The specific organization and coordination of the workshop in Istanbul was managed by the IEEE AP/MTT/EMC/ED Turkey Joint Chapter and the IEEE AP-S Istanbul Chapter, in close cooperation with the local organizer Prof. Dr. Hüseyin Arslan and the Communications, Signal Processing, and Networking Center (CoSiNC).

The event, held in the Conference Hall at the Kavacık South Campus, was opened by Prof. Dr. Hüseyin Arslan. He welcomed the distinguished international speakers and attendees, emphasizing the critical importance of such global collaborations for advancing research and fostering academic networks in the fields of electromagnetics and wireless communications. The workshop successfully brought together 100 in-person participants, facilitating deep, face-to-face engagement among leading experts and emerging researchers.

### Scientific Program

The afternoon seminar featured four internationally renowned experts and distinguished lecturers, bringing together diverse perspectives on electromagnetics and wireless communications:

- **AI-Enabled Antenna Technology: Prof. Zhi Ning Chen** (National University of Singapore, Singapore) discussed "AI-Enabled Antenna Technology and Smart Electromagnetics," demonstrating how artificial intelligence and generative design methodologies are revolutionizing the antenna development lifecycle. He showcased how these techniques enable the creation of innovative metantenna technologies and high-performance smart surfaces, effectively overcoming the limitations of traditional, iterative simulation-based design processes.
- **Wireless In-body Sensing and Implant Antennas: Prof. Sema Dumanlı Oktar** (Boğaziçi University, Türkiye) presented groundbreaking research on bio-integrated electromagnetics. Her talk detailed the physical bounds of electrically small antennas inside lossy human tissues and introduced the "AntennAlive" project, which leverages genetically engineered bacteria for continuous, non-invasive medical diagnostics.
- **Electromagnetic Engineering Education: Prof. Levent Sevgi** (Emeritus, Istanbul Technical University, Türkiye) provided a critical look at the pedagogical shift from theoretical "Engineering Electromagnetics" to applied "Electromagnetic Engineering,"

sharing his extensive experience and vision for training the next generation of engineers to balance analytical physics with modern simulation tools.

- **Radio Access Technologies for 5G and Beyond:** Prof. Dr. Hüseyin Arslan (Istanbul Medipol University, Türkiye) provided a comprehensive roadmap for 5G-Advanced and 6G networks. He highlighted the shift toward Terrestrial/Non-Terrestrial Network (TN/NTN) integration, energy efficiency, and the dual role of future networks in creating intelligence (AI/ML) and acting as environmental sensors.



*Picture 1: Speakers and award ceremony of the IEEE AP-S Distinguished Lecturer event.*

## Networking and Academic Impact

To facilitate the exchange of ideas, a **coffee break** was offered to all speakers and participants during the event. This gathering was a vital moment for networking, allowing **Master's and Ph.D. students** to engage in informal, one-on-one discussions with the visiting Distinguished Lecturers. Industry professionals and academic researchers also utilized this time to discuss practical R&D challenges with the visiting experts.

The networking activities continued into the evening with an **exclusive private boat cruise along Bosphorus**, arranged specifically for the distinguished speakers and organizers. Over dinner, surrounded by the scenic views of Istanbul, the speakers further strengthened their professional bonds. This intimate setting proved highly productive, as it fostered deep academic conversations and discussions regarding future joint research initiatives and potential collaborations between the participating universities.



**Picture 2:** A group photo after the workshop.

### **Attendee Feedback**

*Participating in the IEEE AP-S Distinguished Lecturer Workshop was a truly horizon-expanding experience. It showed me that RF engineering extends far beyond communications, with applications ranging from advances in the medical field to radar-based iceberg tracking and environmental monitoring. Learning how AI can also be leveraged for antenna design broadened my perspective on the field and opened my eyes to the many ways RF technologies can impact society.*

*Mohammad Nawasreh, PhD student*

*Prof. Dumanlı Oktar's presentation on in-body sensing provided me with a clear and insightful understanding of the powerful intersection between biomedical systems and electromagnetic engineering. The depth and clarity of the sessions made complex concepts more accessible and significantly expanded my academic perspective. These discussions have strongly influenced the direction of my future research interests in graduate studies.*

*Kiran Ashfaq, PhD student*

*An insightful workshop filled with valuable perspectives from leading professors in the field. It was a good opportunity to build meaningful connections and network across different disciplines. Moving beyond theoretical discussions, it once again demonstrated how transformative cross-disciplinary collaborations can truly be.*

*Güllühan Irmak, PhD student*

*The perspectives shared by Prof. Chen and Prof. Arslan during the workshop offered a deeper understanding of the challenges and opportunities in future communication systems. It was inspiring to learn from leading researchers whose work is shaping the evolution of AI-enabled wireless networks.*

*Jawair Yaseen, Ph.D. Student*



*Picture 3: A selection of photos and selfies from the workshops.*

## Conclusion

The IEEE AP-S Distinguished Lecturer Workshop concluded with a vibrant networking session, fostering new collaborations and strengthening academic ties within the electromagnetics community in Istanbul. The organizing committee extends its deepest gratitude to the IEEE AP-S, the Turkey Joint Chapter, and all the distinguished speakers for their invaluable contributions. Special thanks go to the students, researchers, and industry professionals whose active participation and insightful questions made this event a resounding success. This workshop stands as a testament to the power of global academic exchange and the continued pursuit of excellence in wireless communication technologies.