

IEEE AP-S DL Workshop at OsloMet, Norway

Theme: Advances in Computational and Theoretical Electromagnetics

Date: Sep. 21, 2026

Location: Oslo Metropolitan University (Pilestredet campus), Stensberggata 26, Natalie Rogoff Ramsøys hus, Floor U1, Room: X085 Undset; 0170 Oslo, Norway

Attendees: about 20 participants (incl. 8 professors and research students) in person

Organizer: Prof. Jianhua Zhang

Oslo Metropolitan University

E-mail: jianhuaz@oslomet.no



Introduction

On Sep. 21, 2026, Oslo Metropolitan University (OsloMet) hosted the IEEE AP-S Distinguished Lecturer (DL) Workshop as the first part of the IEEE AP-S DL Workshop Northern Europe Tour 2026. This global workshop program was an initiative organized and coordinated by Prof. Levent Sevgi, IEEE Fellow and the IEEE Antennas and Propagation Society (AP-S) DL Program Chair. The organization and coordination of the workshop in Oslo, Norway was led by Prof. Jianhua Zhang and supported by Profs. Bernt Andre Brodtkorb and Lothar Fritsch, all from OsloMet.

The opening address was given by Prof Zhang, who extended a warm welcome to the distinguished lecturers and participants, emphasizing the significance of such global collaborations for research and further connection with IEEE societies. Furthermore, Prof Bernt Andre Brodtkorb, Head of Department of Computer Science, OsloMet made some enthusiastic closing remarks at the end of the event, expressing genuine appreciation and support from the institute leadership.

Scientific Program

The workshop featured three internationally renowned IEEE AP-S Distinguished Lecturers, each delivering a lecture in the field of electromagnetism, ranging from traditional and advanced theory and methods for computational electromagnetics to modeling and simulation of electromagnetic scattering and diffraction, as well as theoretical problem about the fundamental limits of an electromagnetic system. The three lectures are introduced briefly as follows:

- 1) Computational Electromagnetics:** Prof. Özlem Özgün, IEEE AP-S DL from Hacettepe University, Turkey, delved into the computational electromagnetics (CEM), with emphasis on advanced methods (including AI, machine learning and digital twins) for modeling and analyzing complex electromagnetic problems that go beyond traditional numerical and simulation methods.

2) Electromagnetic scattering and diffraction: Prof. Levent Sevgi, IEEE Fellow and the former IEEE AP-S DL, from Istanbul Technical University, Turkey, delivered a talk entitled “*Electromagnetic scattering and diffraction modeling and simulation*”. He outlined the contemporary electromagnetic engineering and stressed the importance of educating the young talents in the interdisciplinary field.

3) Number of Spatial Degrees of Freedom: Prof. Mats Gustafsson, former IEEE AP-S DL (Lund University, Sweden) discussed a key theoretical problem in electromagnetic system and illustrated the importance of analytical approach to finding the number of spatial degrees of freedom (NDoF), which quantifies the fundamental limits of an electromagnetic system.

Participation and Discussion

The workshop was well organized and productive, featuring academic significance as well as active on-site discussion. Some comments or feedback are as follows.

- 1) The lectures covered some key directions in the field of electromagnetics, with both interesting and informative topics. Profs. Levent Sevgi, Özlem Özgün, and Mats Gustafsson focused on their own research results, from computational electromagnetics, electromagnetic scattering and diffraction to fundamental theoretical problem in electromagnetic system, forming a holistic academic perspective.
- 2) The lectures reflected the forward-looking nature of related research areas. The international speakers brought broad academic perspectives and research ideas, which enriched the workshop program and expanded the research horizon of the audience.
- 3) The overall atmosphere of the workshop was relaxing and pleasant which promoted the interaction/discussion between the audience and the guest speakers.

The event also served as a nice platform for academic/research exchange in the general field of electromagnetics, contributing to further deepened research and future collaborations.

Conclusion

The workshop hosted by OsloMet turned out to be a good success. With lecture topics ranging from computational electromagnetics to modeling and simulation of certain electromagnetic phenomena, as well as theoretical problem of an electromagnetic system, the workshop expanded the participants’ research horizons, nurtured further advances in the future, and enhanced the visibility of the IEEE AP-S community in Norway.



Picture 1: The flyer of the Workshop at OsloMet, Norway.



Picture 2: A collection of photos and selfies taken during the workshop.