

A Nordic Journey in Electromagnetics

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As part of the IEEE Antennas and Propagation Society (AP-S) Distinguished Lecturer (DL) Program, I embarked on a Northern European DL tour in September 2026, visiting five universities across Norway, Sweden, and Finland. The journey combined scientific exchange with the opportunity to experience some of the Nordic region's distinctive academic environments and cities.

The tour included:

- September 21, 2026 – Oslo Metropolitan University, Oslo, Norway
- September 23, 2026 – Chalmers University of Technology, Gothenburg, Sweden
- September 25, 2026 – KTH Royal Institute of Technology, Stockholm, Sweden
- September 28, 2026 – University of Oulu, Oulu, Finland
- September 30, 2026 – Aalto University, Espoo, Finland

Beyond the academic program, one of my strongest impressions throughout the journey was the remarkable sense of calm that characterizes Northern European cities. Even in the capitals, life seemed to move at a quieter and more measured pace. The streets were rarely noisy or crowded, and there was a distinctive feeling of order and tranquility. The tour also coincided with the beginning of the Nordic autumn, with trees displaying shades of green, yellow, and occasionally red across the cities. We were fortunate to experience several sunny days, which are not always easy to find at this time of year, together with occasional rain. Somehow, even the rain seemed to fall quietly. Another striking feature was the architecture: historical buildings that at times evoke a medieval atmosphere coexist naturally with elegant contemporary structures. This combination of autumn colors, quiet urban life, history, and modern design gave the entire journey a very distinctive character.

Oslo Metropolitan (OsloMet) University; Oslo, Norway

The first stop of the tour was Oslo Metropolitan (OsloMet) University on September 21. Oslo has a strong and recognizable Nordic character, combining a waterfront setting, historic architecture, modern urban design, and extensive green spaces. OsloMet itself reflects a practical and application-oriented engineering culture. Its engineering activities span electrical and electronic engineering together with areas such as automation, robotics and related technologies such as machine learning.

Chalmers University of Technology; Gothenburg, Sweden

The second lecture was held at Chalmers University of Technology in Gothenburg on September 23. Gothenburg is a compact city with considerable charm. It feels accessible almost immediately: the city center, canals, trams, historic buildings, and waterfront areas create a pleasant and friendly urban environment.

Chalmers has a particularly strong engineering identity, and this was clearly reflected in the academic environment. Its activities in microwave engineering extend across high-frequency devices, antenna engineering, millimeter-wave and terahertz technologies, supported by strong links with the surrounding industrial ecosystem in Gothenburg.

KTH Royal Institute of Technology; Stockholm, Sweden

The third stop was KTH Royal Institute of Technology in Stockholm on September 25. Stockholm has a remarkably diverse visual character. Built across islands and surrounded by water, it seems to contain many different urban atmospheres within one city. Historic streets, monumental buildings, colorful facades, waterfront views, modern neighborhoods, and even the famously artistic metro stations all contribute to a city that constantly changes character from one district to another. For this reason, I would describe Stockholm quite simply as a city containing almost every color. KTH provided an equally stimulating academic environment. Its electromagnetics research includes high-frequency electromagnetics, antennas, microwave devices, metamaterials, electromagnetic interference, physical bounds, and inverse problems.

University of Oulu; Oulu, Finland

The fourth lecture was held at the University of Oulu on September 28. Oulu is a compact northern city with its own quiet appeal. Its low-rise urban landscape, open spaces, and very calm atmosphere give the city a distinctive character. There is a certain simplicity to the city that I found pleasant—nothing seems hurried or unnecessarily complicated. Academically, however, Oulu's scale is quite different from the scale of the city itself. The University of Oulu has developed an internationally prominent research ecosystem in wireless communications, particularly through its 6G Flagship. Research activities span antennas, radio technologies, experimental networks and advanced RF systems, making the university highly relevant to the broader IEEE AP-S community.

Aalto University; Espoo, Finland

The final stop of the tour was Aalto University in Espoo, following time spent exploring nearby Helsinki. Helsinki appeared particularly green and wooded, and the autumn colors were especially noticeable there, with trees showing rich shades of green, yellow, and occasional red. The characteristic yellow-and-green trams also seemed to fit naturally into this overall color palette, contributing to a coherent urban identity. Aalto University brings together engineering, science, architecture, design, and innovation within a highly interdisciplinary environment. This setting provided a fitting final stop for the Northern European IEEE AP-S DL tour.

Concluding Reflections

The tour was much more than a sequence of academic lectures. Each university provided a different scientific environment, while each city offered its own interpretation of Northern European life. I am deeply grateful to the colleagues, students, researchers, and organizers who welcomed us at each institution. These visits once again demonstrated the unique value of the DL Program—not only as a mechanism for sharing technical knowledge, but also as a means of building friendships, discovering different academic cultures, and strengthening the international electromagnetics community.

It was a great pleasure to share this tour with IEEE AP-S DLs, including Prof. Ari Sihvola from Aalto University, Finland; Prof. Mats Gustafsson from Lund University, Sweden; Prof. Oscar Quevedo-Teruel from KTH Royal Institute of Technology, Sweden; Prof. Levent Sevgi from İstanbul Technical University, Türkiye; Prof. Costas

Sarris from University of Toronto, Canada; Prof. Pai-Yen Chen from University of Illinois Chicago, USA; and Prof. Zhen Peng from University of Illinois Urbana-Champaign, USA. I am grateful to Prof. Levent Sevgi for organizing the trip and to IEEE AP-S for sponsoring my participation. I also sincerely thank Prof. Marianna Ivashina, Prof. Oscar Quevedo-Teruel, Prof. Jack Soh and Prof. Ari Sihvola for their generous hospitality.



Picture 1: Photos from DL workshop at Oslo Metropolitan (OsloMet) University; Oslo, Norway.



Picture 2: Photos from DL workshop at Chalmers University of Technology; Gothenburg, Sweden.



Picture 3: Photos from DL workshop at KTH Royal Institute of Technology; Stockholm, Sweden.



Picture 4: Photos from DL workshop at Aalto University; Espoo, Finland.



Picture 5: Photos from DL workshop at the University of Oulu; Oulu, Finland.