The 17th European Conference on Antennas and Propagation (EuCAP)
26 - 31 March 2023

History of Electromagnetics and Antennas

Abstract

Historical aspects of science and engineering have their proper place at technical meetings and symposia. The discovery of electromagnetism happened around 200 years ago, with Hans Christian Ørsted's experiments in the year 1820 where he noted the effect of galvanic current on a compass needle. Later during the 19th century, with the efforts by Michael Faraday, James Clerk Maxwell, and others, electormagnetism was formulated into a solid scientific discipline. In addition to honoring Örsted and other pioneers, the plan of the session is to include some of the important twentieth-century history of antenna developments as seen through the eyes of present-day experts in the field.

Workshop outline:

This Scientific Workshop consists of two sessions, both containing five 20-minute presentations. The first session focuses on the history of the experimental discovery and conceptual developments of electromagnetism, and the second one on 20th-century and later developments on applications of electromagnetic principles into antenna theory and technologies.

- We encourage you to provide a graphical abstract: enclose a high resolution picture relevant to the workshop content (it is a responsibility of the proposers that the picture can be published on EuCAP webpage without IP violation).

A picture about Ørsted's experiment like the following:

key speakers

Ari Sihvola has organized several sessions on the history of electromagnetics in previous conferences (URSI Electromagnetic Theory Symposia, among others). He works in electromagnetics, remote sensing, and metamaterials. He is also a regular teacher of the course "History and innovations in electrical engineering" at Aalto University which is a course that begins with Thales' observations on static electricity 2600 years ago and goes through the history up to the invention of radio in the last years of the 19th century.

Arthur Yaghjian has written papers on Maxwell's Treatise and has done research in electromagnetics and antennas since the 1960's. He has been in close contact with the Electromagnetics Institute of the Technical University of Denmark since the 1970's. He has also been in touch through the years with most of the leading schools in electromagnetics in Europe as well as the United States. All other speakers are well-known experts in electromagnetics and antennas, all with a special interest in the historical developments of their area.

All other speakers are well-known experts in electromagnetics and antennas, all with a special interest in the historical developments of their area:

- Olav Breinbjerg (ElMaReCo, Denmark)
- Ovidio Bucci (University of Naples, Italy)
- Piergiorgio L. E. Uslenghi (University of Illinois at Chicago, USA)
- Edward Jull (University of British Columbia, Canada)
- Juan R. Mosig (EPFL, Switzerland)
- Krzysztof A. Michalski
- Yahya Rahmat-Samii (UCLA, USA)
- Ehud Heyman (Tel-Aviv University, Israel)
- Prabhakar Pathak (Ohio State University, USA)