



Technical cosponsors



INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC THEORY

22-26 May 2023, Vancouver, BC, Canada

CALL FOR PAPERS

The International Symposium on Electromagnetic Theory (EMTS 2023) will be held from 22-26 May 2023 at the University of British Columbia in Vancouver, BC, Canada. The third largest metropolitan area in Canada, Vancouver is known for its stunning natural beauty, cosmopolitan atmosphere, and attractions like Stanley Park, English Bay, Granville Island, the North Shore mountains, and Whistler. Vancouver International Airport (YVR) is only 20 minutes by car from UBC. On campus accommodation is comparable to that offered by three-star hotels but at a fraction of the cost.

Organized by Commission B (Fields and Waves) of the International Union of Radio Science (URSI), EMTS 2023 is sponsored by the Canadian National Committee of URSI (CNC-URSI) and technically co-sponsored by the IEEE Antennas and Propagation Society. Since it was first organized in Montreal in 1953, 24 events in the triennial series of EMTS symposia have been held.

EMTS 2023 will focus on electromagnetic fields and their applications. The conference will offer plenary talks by distinguished speakers, regular oral and poster sessions, a one-day summer school (May 22), and several scientific & industrial tours and workshops. A number of Young Scientist Awards that cover the registration fee and accommodation during the conference will be offered. In addition, business meetings, receptions, and a conference banquet will be organized.

Contributions on any aspect within the scope of Commission B are solicited. Some suggested topics are listed below. The authors may submit an extended abstract of at least 250 words in length in single-column format not exceeding one page or a two-to-four-page summary in IEEE two-column format. Special-session topics will be listed later on the conference website. All submissions will be reviewed by the Commission B Technical Advisory Board. Accepted and presented summaries may be submitted to IEEE Xplore but extended abstracts will not be published in IEEE Xplore.

General Chair: Prof. David Michelson, *The University of British Columbia*, davem@ece.ubc.ca

Technical Program Chair: Prof. John Volakis, *Florida International University*, jvolakis@fiu.edu

Special Sessions Chairs: Prof. Lot Shafai, *University of Manitoba*, lot.shafai@umanitoba.ca

Prof. Zhizhang Chen, *Dalhousie University*, z.chen@da.ca

Prof. George Shaker, *University of Waterloo*, gshaker@uwaterloo.ca

Important Dates

- Paper submission site opens: October 1, 2022
- Deadline for paper submission: **December 15, 2022**
- Notification of acceptance: January 10, 2023
- Early-bird and author registration ends: March 31, 2023

Suggested Topics

1. Electromagnetic theory

- Analytical and semi-analytical methods
- Mathematical methods in electromagnetics
- Scattering and diffraction
- Inverse scattering and imaging
- Propagation and materials in electromagnetics
- Quantum techniques
- AI/ML and optimization methods
- Future directions in electromagnetic theory

2. Computational methods

- Integral equation methods
- Partial differential equation methods
- High-frequency and hybrid methods
- Fast solvers and high-order methods
- Time-domain techniques
- Computational algorithms
- Nonlinear electromagnetics

3. Materials and wave-material interaction

- Metamaterials and metasurfaces
- New materials for electromagnetics.
- Plasmonics and nano-electromagnetics
- Electromagnetic bandgaps and other periodic structures

- Optical devices
- EMC and EMI
- Electromagnetics in biology and medicine

4. Antennas and propagation

- Antenna theory
- Antenna measurements
- Multi-band and wideband antennas
- Antenna arrays and MIMO systems
- Wireless communication systems
- Guided waves and structures
- Random media and rough surfaces
- Millimeter wave/5G propagation
- Millimeter-wave antennas
- MIMO for 5G /6G communication
- Vehicular, marine, and automotive RF links

5. Other topics

- Wireless data and power transfer
- Wireless sensors for IoT
- History of electromagnetics
- Education in electromagnetics