


# Call for Papers

Presenting the 21st IEEE International Symposium on **Antenna Technology and Applied Electromagnetics (ANTEM 2027)** in Kelowna, British Columbia, Canada. This flagship conference of IEEE Region 7 brings together the global electromagnetic engineering community to showcase innovations across antenna design, electromagnetic theory, RF & microwave systems, metamaterials, THz technologies, 5G/6G networks, bioelectromagnetics, wireless power transfer, and their applications. ANTEM 2027 convenes leading researchers, engineers, and industry innovators presenting cutting-edge research through technical presentations, workshops, plenary sessions, and an industry exhibition. With eight technical tracks featuring computational electromagnetics, advanced measurement techniques, and AI/ML methods, the symposium addresses today's critical challenges and tomorrow's opportunities. Kelowna's stunning valley setting provides an inspiring backdrop for advancing electromagnetic science and applications. Our theme, **"Waves Rise from the Valley"** reflects the innovation emerging from this region to shape the wireless future. ANTEM 2027 is seeking high quality submissions for papers on, but not limited to, the following areas. Manuscripts may be submitted in the IEEE two-column format with a length of 3 or 4 pages. Only accepted and presented submissions that are in the IEEE format will be submitted for possible inclusion in IEEE Xplore. See the ANTEM website for additional details.

## ANTEM Technical Areas

**Track 1: RF, Microwave, & mm-Wave Components, Circuits and Systems**
High Power Microwave Tubes & Gyrotron; Semiconductor Devices & Processes in RF, Microwaves, and mm-Wave; Active and Passive RF and Microwave Components; Monolithic Integrated & Mixed Signal Circuits for RF & Microwave; Transmission & Guided-Wave Devices; RF Front-End and Transceiver Architectures; RF MEMS

**Track 2: Antennas & Propagation**
Dielectric, Planar & Conformal Antennas, Microstrip and Printed Antennas; Antenna Design Fundamentals; Antenna Arrays, Reflectors, Lenses and Phased Arrays; Metamaterial and Reconfigurable Antennas; Millimeter-wave & Terahertz Antennas; Miniaturized & Substrate-Integrated Antennas; Radar Imaging and Beamforming; Wave Interaction, Scattering and Diffraction; Terahertz & Optical Antennas; THz Generation, Detection & Spectroscopic Analysis

**Track 3: Electromagnetic Theory, Metamaterials and Metasurfaces**
Electromagnetic Theory, Analytical & Asymptotic Methods; Wave Interaction, Scattering & Diffraction; Computational Electromagnetics & Numerical Methods; Inverse Design, Optimization & Surrogate Modelling for EM Structures; Metamaterials & Metasurfaces; Reconfigurable & Programmable Metasurfaces (RIS Hardware & Modelling); Time-Varying & Space-Time Modulated Media; Frequency-Selective Surfaces; Homogenization & Effective-Medium Parameter Extraction; Photonic Crystals & Nano-electromagnetics

**Track 4: Measurements, EMI/EMC & Spectrum Management**
EMI and EMC; EM Safety, Dosimetry, & Biological Exposure Assessment; High-Power Electromagnetics; Computational Methods for Interference Analysis; Antenna Field Pattern Measurements & Validation; High-Power RF Measurement; Interference Testing & Regulatory Compliance Assessment; Radome & Antenna Performance Evaluation; Absorbing Materials & Loss Mechanisms; Resource Allocation and Spectrum Management

**Track 5: Next-Generation Wireless Networks**
RF Systems for Next-Generation Networks; MIMO Systems; Signal Propagation & Channel modelling; Reconfigurable Antenna Arrays; Underwater and Non-Terrestrial Network; ML and AI methods; Next Generation Mobile Communication & Sensing; Modulation, Coding, and Waveform Design; Channel Estimation and Equalization Techniques; Signal Detection and Demodulation Methods; Beamforming and MIMO Signal Processing; Interference Cancellation and Mitigation; Machine Learning for Adaptive Signal Processing; THz Wireless Communication; Microwave Photonics; Quantum Technologies; Optical communication; Cognitive and Software Defined Radio

**Track 6: Microwave Sensing and Applications**
Dielectric Measurement and Characterization; Scattering and Reflection Analysis; Transmission and Absorption Mechanisms; Resonant Sensor Designs; Frequency-selective Sensing Structures; Cavity and Waveguide-based Sensors; Microwave NDT; Arctic Applications; Wearable Wireless Biomedical Networks; Dosimetry and Biological Safety Analysis; Electromagnetic-based Medical Imaging & Sensing; In-Body Medical Devices & Wireless Telemetry; THz Imaging and Sensing; 3D THz Reconstruction & Cross-Sectional Mapping

**Track 7: Wireless Power Transfer and Energy Harvesting**
Inductive Power Transfer (IPT), Capacitive Power Transfer (CPT), and Radiative Power Transfer; Energy Harvesting; NFC, RFID & Passive Electronic Tags; Zero-Power Sensing Systems; RF Power Generation & Rectification Circuits

**Track 8: Emerging Technologies**
Microwave Remote Sensing; Additive Manufacturing of Microwave Antennas; AI/ML for RF & mm-Wave; Electromagnetic Metrology; Radio Astronomy; Terrestrial & Ionospheric Radio Communication; Radar & Imaging Systems; GPS and Indoor Positioning Systems; Cognitive and Software Defined Radio

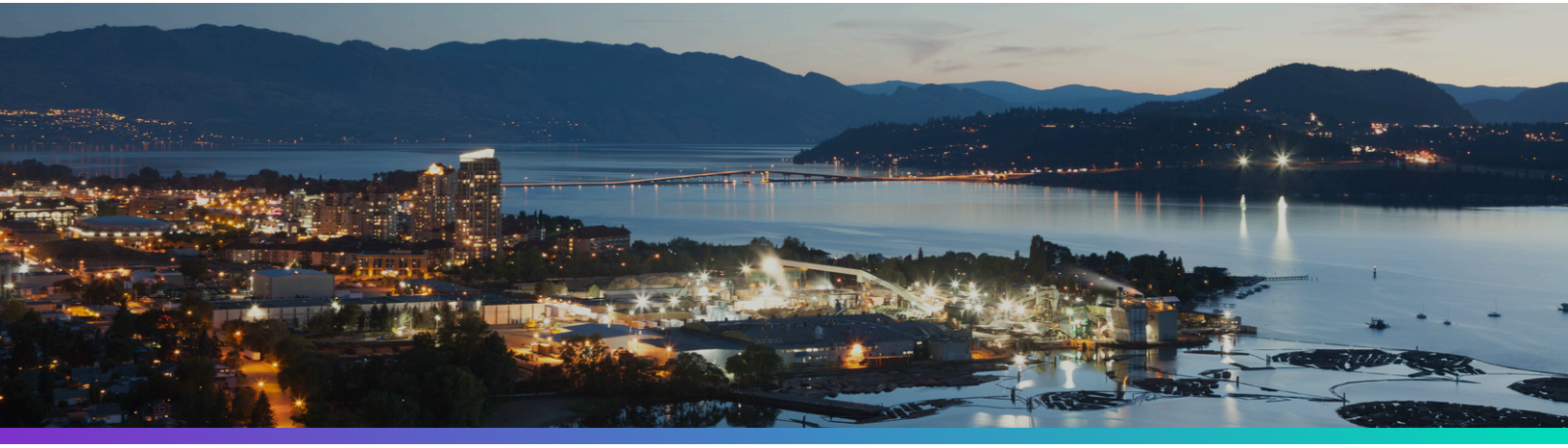
## Important Dates

| Paper Submission Begins | Paper Submission Deadline | Notification of Acceptance | Final Paper Submission | Conference Dates |
|---|---|---|---|---|
| 1st November 2026 | 1st February 2027 | 15th March 2027 | 1st April 2027 | 13th - 16th June 2027 |



ANTEM2027.IEEECANADA.ORG

IEEE MTT-S IEEE MICROWAVE THEORY & TECHNOLOGY SOCIETY IEEE AP-S Antennas and Propagation Society IEEE Canada



## Beyond the Technical Program

**Industry - Academia Mixer**

Bring together researchers and industry leaders in a relaxed, welcoming setting. Exchange ideas, explore new collaborations, and discover how today's research becomes tomorrow's technology. Professors, students, and engineers alike are invited to build lasting partnerships that bridge the gap between academic discovery and real-world application.

**Young Professionals Meetup**

Students, recent graduates, and early-career engineers and researchers are invited to connect with peers, share experiences, and learn from established leaders in the field. Build lasting friendships and professional relationships that will support your growth, open new opportunities, and last well beyond the symposium itself.

**Women in Microwave Meetup**

Join an inclusive gathering celebrating women in microwave and antenna engineering. Share your story, find mentors, and connect with peers across academia and industry. Together, we will strengthen a supportive community, inspire the next generation, and champion diversity within our technical field and beyond.

**Career Networking Evening**

Meet employers, recruiters, and fellow professionals in an informal evening focused on opportunities. Whether you are hiring or job hunting, make connections that move your career forward. Companies can discover and recruit emerging talent, while attendees explore openings across industry, academia, and government labs.

## Awards and Initiatives

**ANTEM Best Conference Paper Award**

**ANTEM Best Student - YP Paper Award**

**ANTEM Best WiM Paper Award**

**ANTEM PhD Student Initiative**

**ANTEM Masters Student Initiative**

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