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DECEMBER 14-18, 2025 KOCHI, KERALA, INDIA

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IEEE Microwave Antennas and Propagation Conference (MAPCON) is a joint flagship conference of IEEE Microwave Theory & Technology (MTT) and IEEE Antenna Propagation (AP) societies in India. This mega-annual event of the radio frequency (RF), microwave, and antenna community provides an international platform to researchers, working professionals, academicians, and industries to showcase their state-of-the-art research/technologies to co-workers/peers. MAPCON 2025, the 4th edition of this series, will be held from 14th to 18th December 2025 at Grand Hyatt Kochi Convention Centre, Kochi, Kerala, and co-organized by the IEEE MTT-S and AP-S Kerala Chapters. MAPCON 2025 will feature technical sessions, poster sessions, special sessions, keynote/plenary/invited talks, workshops, and tutorials. Focused tracks on Young Professionals, Women in Engineering, SIGHT, Student design contests, Start-Up India, India Semiconductor Mission, and Aerospace & Defence Industry Focus, etc. will add to the technical breadth of the conference. Eminent professionals from international space and defence establishments, National Research Organizations, academia, and industries will deliver expert talks and tutorials and organize special sessions related to recent developments in the domain.

CALL FOR PAPER

Authors are invited to submit their original research work in the form of a technical paper (3-4 pages) in the following areas (but not limited to). Detailed instructions on submission can be found on our conference website.

Track-I: RF & Microwave Components, Circuits and Systems

- High power microwave tubes, Gyratron
- Evolution of semiconductor technologies in RF,
- Microwaves, mm-wave, THz · Passive components and circuits
- · Active devices and circuits
- RFICs and MMICs
- · Novel waveguides and new phenomena in waveguides
- Plasmonic devices and their applications
- Microwave, millimeter-wave and THz systems
- Radar, SAR and microwave imaging
- Microwave materials and processing
- Packaging, MCM and 3D manufacturing techniques

- Wireless and cellular architectures, components and circuits
- Mixed signal and wireline ICs
- · Payload technologies for SatCom, navigation and remote sensina
- Medical/industrial applications of microwaves
- · RF systems for emerging telecommunication
- RF technologies for space and defence applications

Track-II: Antennas & Propagation

- · Adaptive, active and smart antennas
- Vehicular and UAV antennas
- MIMO and 5G antennas
- Millimeter-wave & terahertz antennas
- Embedded and wearable antennas
- On-chip antennas
- Millimeter-wave and sub-mm-wave antennas
- · Thz, infrared and optical antennas
- · Radars for UAV
- Ground penetrating radar
- Radar imaging, advances in SAR
- Scattering and diffraction
- Beamforming techniques

Track-III: Electromagnetic Theory, Metamaterials and Metasurfaces

- Electromagnetic theory
- Numerical methods and computational electromagnetics Photonic crystals
- Electromagnetic material properties and measurements Intelligent (and holographic) surfaces
- Frequency-selective surfaces
- Electromagnetic bandgap materials
- Metamaterials and metasurfaces
- - Applications of metamaterials and metasurfaces
 - Nano-electromagnetics

Organized by:

- IIST. Thiruvananthapuram. India ORGANIZING SECRETARIES Debarati Ganguly IIIT Kottayam, India Deepti Das Krishna

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Antenna feeds and matching circuits · Electrically small antennas

RFID antennas and systems

Satellite antennas and payloads

Reconfigurable antennas and arrays

- infrastructure
 - Automotive radars
 - · Microwave ferrite, ferroelectric and MEMS components

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- · Microstrip and printed antennas
- Dielectric resonator antennas
- Antennas arrays and mutual coupling
- · Horn, reflector and reflect-array antennas
 - Slotted and guided wave antennas
 - Metamaterial antennas
 - · Ultra-wideband and multi-band antennas
 - · Phased array antennas

Track-IV: THz & Photonics Technologies

- THz sources
- THz detectors
- THz spectroscopy
- THz imaging
- THz components THz applications
- Optical-pump-THz-probe spectroscopy
- THz sensing and analysis
- THz wireless communication
- THz remote-sensing

Track-V: 5G/6G Research and Beyond

- RF technologies for 5G/6G and beyond
- MIMO and 5G antennas
- Channel modelling
- · Reconfigurable antennas and arrays for 5G/6G
- Wireless and cellular architectures
- · Wireless & mobile communications for 5G/6G
- Non-terrestrial communications
- Underwater communications
- Smart grid communications
- Machine learning for communications
- · Quantum communications and computing Integrated sensing and communications

Track VIII: Electromagnetic Environment and Interference

- Electromagnetic environment
- · Electromagnetic compatibility measurement technologies
- · Electromagnetic compatibility standards
- Electromagnetic radiation hazards
- Electromagnetic compatibility education
- · Computational electromagnetics in electromagnetic compatibility
- · Effects of natural and intentional emissions on system performance
- High-power electromagnetics
- · Spectrum compatibility issues, usage and management

- 3D THz tomography system
- Industrial applications of Thz
- THz space communication
- Photonics technology and systems
- Microwave photonics
- · Quantum technologies
- Plasmonics and nano photonics
- Quantum radar
- Free space optical communication

Track-VI: **Measurement Techniques**

- Advances in antenna measurements Compact range, near field and far field measurements
- High power measurements (multiplication / PIM)
- Microwave and mm-wave measurements
- Electromagnetic interference and compatibility (EMI/EMC) testing and characterization Characterization of antennas/payloads/ radomes
- Microwave absorbers

Track IX: Wireless Power Transfer and Energy Harvesting

- · Near-field inductive and capacitive transfer
- · Far-field and radiative wireless power transfer
- Energy harvesting / scavenging · Materials, components, and systems
- considerations
- Detection, alignment, communications, control
- · High frequency power transmitters and rectifiers
- High frequency coils, rectennas and rectenna arravs
- Backscattering, RFID and electronic tags Devices & circuits for energy harvesting /
- scavenging
- Mobile, wearable and implantable devices



Track-VII: Electromagnetics in Biology & Medicine

- Body-area networks
- Dosimetry and exposure assessment
- · Electromagnetic and mixed-mode imaging and diagnostics
- Therapeutic and rehabilitative applications
 - Implantable and ingestible devices
 - · Human-body interactions with antennas and other electromagnetic devices
 - Millimeter-wave/THz imaging for bio-medical applications
 - Molecular, biological, and multiscale communications

Track-X: Emerging **Technologies and Applications**

- · Point-to-point propagation effects
- · Microwave remote sensing of the Earth
- · Propagation and remote sensing in complex and random media
- · Quantum devices, systems and applications
 - · Microwave photonics and nanotechnology
 - · Software-defined/cognitive radio
 - 3D-printed microwave antennas and structures
- Additive manufacturing technologies
- Flexible Electronics
- · AI/ML for RF & mm-wave
- CubeSat/ NanoSat technologies
- · Propagation and remote sensing in complex and random media
- Weather radar systems

• Paper Submission Starts : 2nd April 2025

• Paper Submission Ends : 7th July 2025

• Notification of Acceptance : 15th September 2025 • Camera-Ready Paper Submission : 15th October 2025

•Exhibition/Workshop/Tutorial Proposals : 15th September 2025



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- **IMPORTANT DATES**