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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 with co-workers/peers. MAPCON 2025, the 4th edition of this series, will be held from 14th to 18th December, 2025 at Lulu International Convention Center, Grand Hyatt, Bolgatty, 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 Initiative, 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, Gyrotron
- 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 sensing
- Medical/industrial applications of microwaves
- RF systems for emerging telecommunication infrastructure
- RF technologies for space and defense applications
- Automotive radars
- Microwave ferrite, ferroelectric and MEMS components

### Track-II: Antennas & Propagation

- 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
- Antenna feeds and matching circuits
- Electrically small antennas
- RFID antennas and systems
- Satellite antennas and payloads
- Reconfigurable antennas and arrays
- 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
- Radar cross section
- Scattering and diffraction
- Beamforming techniques
- Propagation studies and experiments

### Track-III: Electromagnetic Theory, Metamaterials and Metasurfaces

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

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## Track-IV: THz, Photonics & Quantum 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
- 3D THz tomography system
- Industrial applications of Thz
- THz Space Communication
- Photonics technology and systems
- Quantum technologies
- Plasmonics and Nano photonics
- Quantum Radar
- Free space optical communication
- Quantum Communications and Computing
- Quantum Devices, Systems, and Applications
- Quantum Circuit Design
- Quantum Photonics



## 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
- Molecular, biological, and multiscale communications

## 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)
- Characterization of antennas/payloads/ radomes
- Microwave absorbers

## 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

## 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

## 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 arrays
- Backscattering, RFIDs and electronic tags
- Devices & circuits for energy harvesting / scavenging
- Mobile, wearable and implantable devices

## Track-X: Emerging Technologies and Applications

- Microwave remote sensing applications
- Microwave photonics and nanotechnology
- Software-defined/cognitive radio
- 3D-printed microwave antennas and structures
- AI/ML for RF & mm-wave
- CubeSat/ NanoSat technologies
- Point-to-point propagation effects
- Microwave remote sensing of the Earth
- Propagation and remote sensing in complex and random media

## IMPORTANT DATES

• Paper Submission Starts : **2<sup>nd</sup> April 2025**

• Paper Submission Ends : **28<sup>th</sup> July 2025**

• Notification of Acceptance : **15<sup>th</sup> September 2025**

• Camera-Ready Paper Submission : **15<sup>th</sup> October 2025**

• Exhibition/Workshop/Tutorial Proposals : **15<sup>th</sup> September 2025**

## A W A R D S



MAPCON Best Paper Award (Academia & Industry)



MAPCON Best Student Paper Award (1st Position)



MAPCON Student Design Contest Award



MAPCON YP Best Paper Award (Male and Female)



MAPCON Best Student Paper Award (2nd Position)



MAPCON Travel Grants

For more information, kindly visit [ieeemapcon.org](http://ieeemapcon.org)

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