2026 IEEE International MTT Symposia (IMS)

# REVOLUTIONIZING RF

**7 – 12 June 2026**
**Thomas M. Menino Convention and Exhibition Center (MCEC)**
**Boston, MA**
**ims-ieee.org**

# Call for Late Breaking News Papers

**The IEEE International MTT Symposia (IMS) is excited to announce a joint RFSA/RFTT Late Breaking News paper submission for 2026!**

The IEEE MTT-S Radio Frequency Systems and Applications (RFSA) and the IEEE MTT-S Radio Frequency Technology and Techniques Symposiums will both include a *late breaking news* paper submission process. The purpose of this submission is to prioritize and fast track outstanding and timely discoveries in rapidly advancing fields, bringing these innovations to the current IMS rather than needing to delay them until the next cycle. We are opening a late breaking paper submission window, 2 April 2026 through 9 April 2026, 23:59 Hawaii Time, more than four months after the normal submission window.

RFSA
Radio Frequency Systems & Applications

RFTT
Radio Frequency Technology & Techniques

ims
RFSA RFTT

***The IMS Technical Symposium is now the RFSA Symposium and the RFTT Symposium.***

We expect these sessions to be broadly attended by those with varied backgrounds across all of the content that IMS covers, so it is important to well justify the advances the submitted work covers, and provide appropriate context for its position within a rapidly advancing field that is broadly understandable. The format for the submissions is the same four-page papers as regular RFSA and RFTT submissions, and will be reviewed by a panel of reviewers from across the RFTT or RFSA technical program review committee. The reviews will be expedited, with decisions going out to authors by 20 April 2026, and copyright forms and slides due by 1 May 2026.

**Showcase your latest groundbreaking research and results at the most prestigious symposium in the field of RF and microwave engineering!**

**KEY DATES:**

Submission Site Opens:
**2 April 2026**

Submission Deadline:
**9 April 2026, 23:59 Hawaii Time**

Notification of Acceptance:
**20 April 2026**

Copyright Form and Slide Submission Deadline:
**1 May 2026**

*Due to the tight timeline and turnaround times required, the papers must be submitted camera ready, unblinded, and changes to the manuscript after review will not be accepted.*

**For more information:**
**ims-ieee.org/latebreaking**

IEEE MTT-S IEEE MICROWAVE THEORY & TECHNOLOGY SOCIETY

# RFSA Technical Areas

Radio Frequency
Systems & Applications

**RFSA1: Instrumentation and measurement techniques —** Measurement techniques from MHz to THz for materials, linear and nonlinear devices, circuits, and systems; calibration and de-embedding techniques, measurement uncertainty, and over-the-air measurement methods and novel instrumentation.

**RFSA2: Integrated transceivers and phased-arrays —** Design and characterization of complex III-V ICs, silicon ICs, heterogenous systems in the RF to mm-wave band including narrowband and wideband designs; innovative circuits and sub-systems for communications, radar, imaging, and sensing applications; Integrated on-chip and on-package antennas and antenna systems.

**RFSA3: Microwave and Terahertz Photonics, THz systems —** Photonic techniques for the generation, processing, control, and distribution of microwave, mm-wave, and THz signals, Radio-over-fiber links; design and characterization of microwave photonic and THz circuits; interaction between microwaves, THz waves, and optical waves; THz circuits and systems for communications, radar, imaging, and sensing applications.

**RFSA4: Wireless power transmission —** Energy harvesting systems and applications, rectifiers, self-biased systems, combined data and power transfer systems.

**RFSA5: Sensing and RFID systems —** Short range wireless and RFID sensors, gas and fluidic sensors; passive and active tags from HF to millimeter-wave frequencies; RFID systems including wearables and ultra-low-power.

**RFSA6: Microwave and millimeter-wave wireless subsystems and systems —** Microwave/millimeter-wave subsystems such as beamformers; microwave and millimeter-wave (<300 GHz) communication systems, incl. 5G – 6G, with hardware implementation for terrestrial, vehicular, and indoor applications, point-to-point links, cognitive and software-defined radios, MIMO, full-duplex technologies, shared and novel spectrum use, novel modulation schemes, and channel modeling.

**RFSA7: Radar and imaging systems —** RF, millimeter-wave, and sub-THz radar and imaging systems, automotive radars, sensors for intelligent vehicular highway systems, UWB and broadband radar, remote sensing, radiometers, passive and active imaging systems, radar detection techniques, and related signal processing.

**RFSA8: Airborne and space systems —** Sub-systems and systems for remote sensing for earth observation; positioning, navigation, and timing; space exploration, human spaceflight and space transportation; satellite communications including 5G, 6G applications involving aerospace platforms; communication and sensor system for UAVs, high altitude platforms, airplanes, and satellites.

**RFSA9: MHz-to-THz devices circuits, and systems for biological and healthcare applications —** Electromagnetic field interaction at molecular, cellular, tissue and living systems levels; devices, circuits, and systems for characterizations of biological samples; microwave-enhanced chemistry; radar-based physiological sensors and their application; instrumentation and systems for biomedical diagnostic and therapeutic applications, incl. MRI and microwave imaging; wireless, wearable, and implantable devices for health monitoring.

**RFSA10: AI/ML for RF to mmWave —** AI/ML, algorithm implementations, and demonstrations for: spectrum sensing; mobile edge networking; MIMO and array beam operations and management; design and optimization; in-situ sensing, diagnostics, control, reconfiguration of MHz to THz communication and sensing circuits and systems.

**RFSA11: Microwave field-matter interaction, material sensing and high-power applications —** Industrial and scientific applications of microwave energy (e.g., chemistry, metallurgy, ceramic sintering, plasma generation, waste treatment, green materials, energy converters); MHz-to-THz sensing (from microwave microscopy to large surface/volume imaging) of materials for electronics and energy applications; multiphysics modeling of materials processing and characterization.

**RFSA12: Additional innovative MHz-to-THz systems and applications —** Submissions that describe innovative contributions in new and emerging areas of interest to the MTT community not falling under the above categories are encouraged.

# RFTT Technical Areas

Radio Frequency
Technology & Techniques

**RFTT1: Field analysis, guided waves, and computational EM —** Novel guiding, radiating, and electromagnetic structures; new analytical techniques and numerical methods for such structures, and new computational EM methods, incl. EM-coupled multiphysics modeling.

**RFTT2: Circuit and system CAD —** Linear/w nonlinear simulation and design optimization techniques; behavioral modeling; statistical approaches; surrogate modeling; space mapping; model order reduction; uncertainty quantification in simulations; stability analysis; non-EM related multiphysics simulations, design automation, and circuit/component-level inverse design.

**RFTT3: Planar passive components and circuits, excl. filters —** Novel planar transmission-line components; artificial transmission lines, metamaterial structures, and high-impedance surfaces; planar couplers, dividers/combiners, multiplexers, resonators, and lumped-element approaches.

**RFTT4: Planar passive filters —** Planar passive filters, including lumped elements, theoretical filter and multiplexer synthesis methods.

**RFTT5: Integrated passive circuits and filters —** Design and characterization of silicon integrated, III-V integrated passive components and filters, including IPDs.

**RFTT6: Non-planar passive components, filters, and other circuits —** Transmission line components, resonators, filters and multiplexers based on dielectric, waveguide, coaxial, or other non-planar structures.

**RFTT7: Tunable passive circuits and active filters —** Tunable and active filters, tunable phase shifters and couplers.

**RFTT8: Microwave acoustic, ferrite, ferroelectric, phase-change, and MEMS components —** Surface and bulk acoustic wave devices including FBAR devices, bulk and thin-film ferrite components, ferroelectric-based devices, and phase-change devices and components. RF microelectromechanical and micromachined components and subsystems.

**RFTT9: Packaging, MCMs, and 3D manufacturing technologies —** Component and subsystem packaging, assembly methods, multi-chip modules, wafer stacking, 3D interconnect, and integrated cooling; package characterization; novel processes related to inkjet printing, 3D printing, or other additive manufacturing techniques.

**RFTT10: Semiconductor device technologies and modeling —** RF to THz devices on III-V, silicon, and other emerging technologies, incl. 2D devices); MMIC and Si RFIC manufacturing, reliability, failure analysis, yield, and cost; linear and nonlinear device modeling (CAD, compact, physics-based, empirical) including characterization, parameter extraction, and validation.

**RFTT11: HF/VHF/UHF circuits and technologies —** Advances in passive and active circuits (incl. PAs), components, and technologies that operate in the HF, VHF, and UHF frequency ranges ranges (<1 GHz).

**RFTT12: Signal generation, modulators, frequency conversion —** CW and pulsed oscillators in silicon and III-V processes including VCOs, DROs, YTOs, PLOs, and frequency synthesizers, frequency conversion ICs in silicon and III-V processes, such as IQ modulators, mixers, frequency multipliers/dividers.

**RFTT13: Microwave and millimeter-wave low-noise amplifiers, variable-gain amplifiers, and receivers —** LNAs, VGAs, receivers, detectors, integrated radiometers, and low- noise circuit characterization, including cryogenic circuits.

**RFTT14: Low-power (<10 W) amplifiers, below 30 GHz —** Advances in discrete and IC power amplifier devices and design techniques based on Si and III-V devices, demonstrating improved power, efficiency, and linearity for the microwave band (1-30 GHz).

**RFTT15: High-power (>=10 W) RF and microwave amplifiers, below 30 GHz —** Advances in discrete and IC power amplifier devices and design techniques based on III-V and LD-MOS devices, demonstrating improved power, efficiency, and linearity for the microwave band (1-30 GHz); power-combining techniques for SSPA and vacuum electronics.

**RFTT16: Millimeter-wave and THz power amplifiers —** Advances in IC power amplifier circuits, design techniques, and power combining based on Si and III-V compound semiconductor devices demonstrating improved power, efficiency, and linearity for millimeter-wave and THz bands; vacuum electronics for millimeter-wave.

**RFTT17: Linearization and transmitter techniques for power amplifiers —** Power amplifier behavioral modeling; linearization and pre-distortion techniques; envelope-tracking, out phasing, and Doherty transmitters for III-V and silicon technologies.

**RFTT18: Mixed-signal, wireline, and signal shaping circuits —** High-speed mixed-signal components and subsystems, including: PLLs, TDCs, ADCs, DACs, DDSs, and supporting circuits to interface these to the analog world.

**RFTT19: Quantum devices, circuits, and technologies —** Quantum devices and circuits (incl. cryogenic RF circuits); interfaces and technologies for quantum computing and quantum sensing applications

**RFTT20: SubTHz and THz circuits —** SubTHz and THz circuits (300GHz to 1 THz+).