



IEEE Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems

17–20 January 2027 – Grand Hyatt Tampa Bay – Tampa, FL, USA



IEEE



MTT-S
IEEE MICROWAVE THEORY &
TECHNOLOGY SOCIETY

Part of
Radio and Wireless Week

Steering Committee

Conference Chair

Austin Chen,
Infinera

Technical Program Chair

Chung-Tse Michael Wu,
National Taiwan University

Technical Program Co-Chair

Amit Jha,
Black Semiconductor

Publicity Chair

Hong-Yeh Chang,
National Central University

Executive Committee

Yi-Jan Emery Chen,
National Taiwan University

Vadim Issakov,
TU Braunschweig

Chien-Nan Kuo,
National Yang Ming Chiao Tung University

Donald Lie,
Texas Tech University

Nils Pohl,
Ruhr-Universität Bochum

Robert Schmid,
Johns Hopkins Applied Physics Lab

Ickhyun Song,
Hanyang University

Ahmet Cagri Ulusoy,
Karlsruhe Institute of Technology

Václav Valenta,
ESA / ESTEC

Roe Ben Yishay,
Mobileye, An Intel Corporation
Saeed Zeinolabedinzadeh,
Arizona State University

Call For Papers

IEEE Topical Meetings on Silicon Monolithic Integrated Circuits in RF Systems (SiRF) have been at the forefront of advancing silicon technologies for RF, millimeter-wave, and THz applications. RF CMOS and SiGe BiCMOS technologies are well established in a wide range of commercial and defense applications and are rapidly expanding to enable AI-enhanced RF systems and quantum computing. SiRF 2027, marking the 27th edition of the conference, introduces a renewed emphasis on emerging themes in artificial intelligence and quantum technologies, while continuing its strong focus on state-of-the-art RF/millimeter-wave integrated circuits. The conference creates an open, highly interactive dialogue between IC designers and researchers exploring emerging and non-traditional technologies – leveraging mature silicon platforms while addressing the challenges and opportunities of data-driven intelligence and quantum-era hardware. Over three days, SiRF 2027 will highlight recent advances in this dynamic field and provide a focused forum for new ideas and candid discussion through its single-session format. A distinguished lineup of invited speakers will further stimulate discussion with an emphasis on emerging technologies.

SiRF 2027 (www.radiowirelessweek.org/sirf) invites the submission of original papers in the following focus areas:

- 1. AI and Quantum Computing for Emerging RF and Microwave Systems**
 - AI-Assisted and AI-Enabled RF/mm-Wave/THz Integrated Circuits
 - ML-Based Built-In Self-Test (BIST), Calibration, and Adaptation
 - Cryogenic RF and Microwave Integrated Circuits for Quantum Computing
 - Silicon-Based Spin Qubit Control and Readout Electronics
- 2. RF, Millimeter-Wave, and THz Integrated Circuits**
 - Integrated Circuits for B5G/6G Wireless Communication and Sensing Systems
 - Multi-Band/Ultra-Wideband/Reconfigurable RF Front-Ends and Transceivers
 - Oscillators, PLLs, and Frequency Synthesizers
 - Frequency Converters, Modulators, Phase Shifters, and Multi-Throw Switches
- 3. High-Speed ASICs for Wireline and Optical Communications**
 - Broadband Wireline/Optical Transmitters, Receivers, and Transceivers
 - High-Speed/Broadband Front-Ends (TIA, Driver)
 - Advanced Techniques for Equalization and Clock and Data Recovery (CDR)
 - Silicon Photonics and Co-Packaged Optics (CPO)
- 4. Device Technologies, Advanced Packaging, and Heterogeneous Integration**
 - Advanced Bulk CMOS, SOI CMOS, FinFET, and SiGe BiCMOS Technologies and Device Modeling
 - 2.5D/3D IC Packaging and System-in-Package (SiP) Technologies
 - Advanced Heterogeneous Integration Techniques
 - Advanced High-Frequency Measurement and Characterization Techniques

Paper submission instructions can be found at www.radiowirelessweek.org. Submissions should be formatted according to the submission review template available on the RWW website. Authors should indicate preference for oral or poster presentation. All submissions must be received by **22 July 2026**. All accepted papers will be published in a digest and presented papers will be included in the IEEE Xplore® Digital Library. Submissions will be evaluated based on novelty, significance of the work, technical content, interest to the audience, and quality of writing.