



The 19th IEEE Topical Meeting on
Silicon Monolithic Integrated Circuits in RF Systems
20 – 23 January 2019, Orlando, FL, USA



SiRF 2019



IEEE

Call for Papers

SiRF 

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IEEE Topical Meetings on Silicon Monolithic Integrated Circuits in RF Systems have been at the forefront of moving Silicon technologies into microwave and millimeter-wave applications – a development now widely accepted, and of great importance. RF CMOS and Si/SiGe BiCMOS technologies are well established in commercial and increasingly also military applications.

SiRF 2019 will continue this trend, with a renewed emphasis on promoting a dialogue between IC designers and researchers promoting non-standard technologies, exploiting the maturity of Silicon processes, but addressing the challenges of tomorrow. The three days of SiRF 2019 will chronicle recent advances in our dynamic field, and provide the platform for developing new ideas, and candid exchange, facilitated by SiRF's single-session format. As in past years, a line-up of reputed invited speakers will stimulate our discussions, with an emphasis on emerging technologies. For more details, visit: <http://www.radiowirelessweek.org/sirf-home>

We solicit technical papers in the following and similar fields of research:

- **Materials:**
Epitaxy, strain engineering, characterization, stability issues, smart materials.
- **Technologies:**
Nano-technologies incl. CNT, nanowire and graphene; Si-based heterostructures, advanced RF CMOS and Si/SiGe BiCMOS incl. through-Si vias integration; RFMEMS and micromachining for improved RF performance and integrated antennas, RFMEMS/RFIC integration; advanced packaging.
- **Devices:**
Physics, optimization, and scaling limits of SiGe HBTs, RF CMOS, strained-Si CMOS, Si-Ge MOSFETs and MODFETs, mm-wave diodes; advanced passive devices, integrated antennas; nano-devices for micro-/millimeter-wave applications.
- **Circuits:**
Microwave, mm-wave, THz and mixed signal building blocks and multi-functional ICs, integrated transceivers, high-speed DAC and ADC, RFICs, reconfigurable micro-/mm-wave ICs.
- **Si photonics:**
Si-based photonic components, integration with electronic circuits.
- **Applications:**
System-on-Chip (SoC) and System-in-Package (SiP), Flexible electronics; 2-D electronics; ultra-wideband (UWB) frontends, wireless sensor networks, intelligent antennas and antenna array solutions, emerging telecom (e.g. 60 GHz WLAN, E-band) and sensor systems (automotive, security, health monitoring); radio over fiber.
- **Yield, Reliability and Signal Integrity:**
Yield impact of nano-scaling and heterogeneous integration; robustness and reliability of ultra-scaled technologies; substrate noise, on-chip crosstalk; thermal management.
- **Measurement and Modeling:**
Multi-physics modeling, EM simulation of complex RFICs, robust measurement and de-embedding, built-in self-test, self-calibration, high-throughput RFIC testing.

PAPER SUBMISSION GUIDELINE

Submit a **three page** manuscript in PDF format online and indicate clearly the advances over the state-of-the-art. Papers include: 1) the names of all authors and their affiliations, 2) whether this is a student paper, and 3) the mailing address, phone number, fax number, and email address of the corresponding author. Use the template provided on the SiRF website. Accepted papers will be submitted to the Xplore Digital Library.

OPPORTUNITY FOR IEEE JOURNAL PUBLICATION OF EXPANDED PAPERS

A set of selected conference papers is planned to be specially arranged for submission to IEEE Transactions on Microwave Theory and Techniques, for publication in a single issue. Papers will need to be significantly expanded from the conference version and will go through the regular review process for publication.

MEETING DETAILS

SiRF 2019 will be held during Radio and Wireless Week in Orlando, along with the Radio and Wireless Symposium (RWS), the Topical Conference on Power Amplifiers for Wireless and Radio Applications (PAWR), the Topical Meeting on Wireless Sensors and Sensor Networks (WisNet), and the Topical Workshop on the Internet of Space (TWIOS).



Abstract Submission Deadline: 24 July 2018