



# SiRF

# SiRF2010

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## The 10<sup>th</sup> Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems

To be held during the Radio and Wireless Week  
January 11-13, 2010, New Orleans, Louisiana, USA

### *Second Call for Papers*

#### Conference Co-Chairs

Erich Kasper, *University of Stuttgart*  
Robert Weigel, *University of Erlangen*

#### Technical Program Chair

Robert Plana, *LAAS-CNRS*

#### Publicity

Peter Russer, *TU Munich*

#### Finance

Clemens Ruppel, *EPCOS*

#### Student Paper Award

Hermann Schumacher, *Univ. of Ulm*

#### Local Arrangement

Guofu Niu, *Auburn University*

#### US Coordinator

Guofu Niu, *Auburn University*

#### RWW Liaison

George Ponchak, *NASA*

#### Executive Committee

John D. Cressler

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*Korea University*

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Katsuyoshi Washio

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*University of Erlangen*

This 10<sup>th</sup> *Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF2010)* continues to be the only conference devoted to Si-based devices, passives, integrated circuits, and applications for high-frequency systems (<http://www.silicon-rf.org/>).

Over three days, papers and sessions will highlight the significant technological advances of this dynamic field, as well as provide a unique forum for the presentation of new ideas and candid exchange on emerging challenges and opportunities. Invited tutorial talks from international experts will be presented in key topical areas. A student paper competition will be held, and prizes will be given at the conference banquet.

*Technical papers are solicited in the following areas, but all papers related to Si-based RF systems are welcome:*

- **Materials:** Epitaxy, strain engineering, characterization, stability issues, smart materials.
- **Devices:** Physics, optimization, and scaling limits of SiGe HBTs, RF-CMOS, SOI CMOS, strained-Si CMOS, SiGe MOSFETs, Si-based MODFETs, mm-wave diodes, RF CNT devices.
- **IC Technologies:** Novel device structures, HBT and CMOS integration issues, heterogeneous integration, interconnects, fabrication on high-resistivity Si and SOI, packaging issues, IC on polymer/ paper.
- **Circuits:** Microwave and mm-wave building blocks, integrated transceivers, high-speed DAC and ADC, analog/mixed-signal circuit blocks, RF sensors, RF powermeters, RF biosensors.
- **Passives:** Inductors, capacitors, thin film resistors, transmission lines, integrated antennas, transformers.
- **MEMS/NEMS:** RF MEMS, micro-machining for improved passives, integration with Si-based circuits.
- **Reliability Issues:** Yield and reliability concerns in high-frequency Si-based circuits, signal isolation issues, interference, substrate noise, RF impedance mismatch robustness, cooling architecture.
- **Measurement and Modeling:** Multi-physics modeling, electromagnetic simulation of complex RF systems, robust measurement and de-embedding techniques, methods of built-in-self-test and built-in-self-calibration, correlation of high-frequency parameters with easy-to-measure DC/AC parameters.
- **Applications:** system-on-a-chip (SoC) and system-in-a-package (SiP) solutions for mm-wave sub-systems and systems, integration of Si-based photonic elements with electronic circuits, UWB architecture, RFI, wireless sensor architectures, health monitoring, medical diagnostics.
- **Nanoscale microwave:** Nano (CNT, nanowire, dots, graphene)-, quantum-, Multi Gigabit optical-, and THz materials, devices and circuits.

**Submission Deadline: Aug 2, 2009**

#### PAPER SUBMISSION GUIDELINES

Authors must submit a two to four page manuscript in *pdf* format online and must clearly indicate how the work advances the-state-of-the-art. Papers should 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. Papers submitted to SiRF2010 must NOT be submitted to the other two conferences of the *Radio and Wireless Week*.

#### MEETING DETAILS

This meeting will be held during the *Radio and Wireless Week* (<http://radiowirelessweek.org/rww2010/>) in New Orleans with joint sessions between *SiRF* and *Radio and Wireless Symposium (RWS)*. Our popular single session format allows active interactions between all participants. Refereed IEEE conference proceedings will be published, and a best student paper competition will be held.