



# 2017 IEEE



## Compound Semiconductor IC Symposium

INTEGRATED CIRCUITS and DEVICES in

GaAs, InP, GaN, SiGe, and other compound semiconductor and CMOS technologies

October 22–25, 2017

Miami Marriott Biscayne Bay, USA

Sponsored by the IEEE Electron Devices Society



## BREAKING NEWS - CALL FOR PAPERS

### 2017 CSIC Symposium

From its beginning in 1978 as the GaAs IC symposium, the IEEE Compound Semiconductor IC Symposium (CSICS) has become the preeminent international forum for developments in compound semiconductor integrated circuits and devices embracing GaAs, InP, GaN, SiGe, and CMOS technology. Coverage includes all aspects of the technology, from materials, device fabrication, IC design, testing, and system applications. CSICS provides the ideal forum to present the latest results in high-speed digital, analog, microwave, millimeter wave, THz, mixed-mode, and optoelectronic integrated circuits. First-time papers addressing the utilization and application of InP, GaAs, GaN, Silicon, Germanium, SiGe, and other compound semiconductors in military and commercial products are invited. Specific technical areas of interest include:

- High performance devices such as GaN power conversion devices, 700 GHz SiGe HBTs & InP HEMTs
- Novel devices such as tunnel FETs (TFETs), carbon nanotubes, MEMS, graphene & diamond transistors
- Integration of III-V devices on Si
- Optoelectronic and photonic devices such as optical modulators, lasers, photodetectors, and Silicon Photonics
- Device and circuit modeling concepts and implementation / EM and EDA tools
- Thermal management technologies, thermal simulation, and advanced packaging of high-power devices and ICs
- Device and IC manufacturing processes, testing methodologies, & reliability
- Analog, RF, mixed-signal, mm-wave, THz, power conversion and optoelectronic circuit blocks and ICs in III-V, CMOS, SiGe BiCMOS

### Symposium Highlights

High quality technical papers will be selected from worldwide submissions for oral presentation and publication in the Symposium Digest. Invited papers and panel sessions on topics of current importance to the Compound Semiconductor IC community will complete the program. Extended versions of selected papers from the Symposium will be published in a special issue of the *IEEE Journal of Solid State Circuits*.

### Primer Courses – Sunday, October 22

The Symposium will offer two introductory-level primer courses. Introduction to Silicon RFIC Design will be presented by Prof. Waleed Khalil) from 8am to 12pm. This course provides insight into design of principal RF building blocks, namely PAs, LNAs, mixers and oscillators.

Introduction to High Power MMIC Design will be presented by Dr. Charles Campbell from 3pm to 6:30pm. This primer course serves as an introduction to high power microwave monolithic integrated circuit (MMIC) design. Covered material includes reactively-matched and wideband power amplifiers, as well as MMIC control components that one might encounter in modern microwave transmitter architectures such as switches and phase shifters. Topologies for circuit types are presented, analyzed and transformed into a monolithically compatible form. Various aspects and limitations of transistor and MMIC technology are highlighted as circuit functions are developed. Where available, fabricated examples of MMICs will be presented.

### Short Course – Sunday, October 22 (all day)

CSICS offers a short course on Silicon Photonics Technology and Design taught by four industry experts. This course presents an overview of standard and emerging silicon photonic platforms that researchers can access either through multi-project wafer shuttles or arrangements with foundries. Active and passive silicon and hybrid-silicon components, such as polarization management devices, fiber-to-chip couplers, modulators, photodetectors, and lasers, will be reviewed. Organizer: Peter Zampardi, Qorvo, Ph: +1 805 480 5087, E-mail: [pete.zampardi@qorvo.com](mailto:pete.zampardi@qorvo.com)

### **Deadline for Electronic Receipt of Abstracts is Close of Business July 20, 2017**

Authors must submit their breaking news paper (not more than 4 pages including figures and other supporting material) of results not previously published or not already accepted by another conference.

#### The paper must concisely and clearly state:

- The purpose of the work**
- What specific new results have been obtained**
- How it advances the state-of-the-art or the industry**
- References to prior work**

The paper must include: the title, name(s) of the author(s), organization(s) represented, corresponding authors' postal and electronic addresses, and telephone and fax numbers. Please indicate your preference for subcommittee review. The program committee will honor authors' preference where possible, but reserves the right to place the paper in other review categories.

#### **All company and governmental clearances must be obtained prior to submission of the final paper.**

The accepted paper may be used for publicity purposes. Portions of these papers may be quoted in magazine articles publicizing the Symposium. **Please note on the submission if this is not acceptable.**

Authors must submit the camera ready paper electronically using the [www.csics.org](http://www.csics.org) web page. Please note that the **only** accepted file format is **PDF**. Authors will be informed regarding the results of their submissions by July 26, 2017 for publication in the Symposium Technical Digest.

Further questions on final paper submission may be addressed to the Symposium Technical Program Chair:

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CSICS author resources, including paper submission instructions and links to our template and paper submission addresses are available on the CSICS website at:

<http://www.csics.org>