



# CALL FOR PAPERS



## 2009 BIPOLAR/BiCMOS CIRCUITS AND TECHNOLOGY MEETING

Capri, Italy

[www.ieee-bctm.org](http://www.ieee-bctm.org)

Short Course: Monday October 12, 2009, Conference: Tuesday and Wednesday October 13-14, 2009

The Bipolar/BiCMOS Circuits and Technology Meeting (BCTM) is a forum for technical communication focused on the needs and interests of the bipolar and BiCMOS community. Papers covering the design, performance, fabrication, testing and application of bipolar and BiCMOS integrated circuits, bipolar phenomena, and discrete bipolar devices are solicited. All papers must be suitable for a twenty-minute presentation. Text and figures must not have been presented at other conferences or published in any scientific or technical publications prior to BCTM.

In 2009 the conference will be located on the beautiful island of Capri, Italy. It promises to be a unique, informative, and relaxing conference in a new location for BCTM that will offer shorter travel for our European attendees. There has always been both a strong North American and European attendance at BCTM, and the conference is now in a 3-year rotation between the East and the West coasts of North America and Europe. In 2010 the conference will return to the USA and will next be held in Europe in 2012.

### CONFERENCE HIGHLIGHTS

- Short course
- Invited papers on the latest advances and important topics in Bipolar/BiCMOS circuits and technology
- Special session on emerging technologies/new directions in technology and circuits
- Presentation of the BCTM 2008 Best Student Paper Award
- Vendor exhibits
- Banquet
- CD-ROM and proceedings included with registration

Papers are solicited in the following areas:

**ANALOG / DIGITAL CIRCUIT DESIGN:** Analog ICs - Digital ICs - Mixed analog/digital ICs - Novel design concepts and methods - DACs and ADCs - Amplifiers - Integrated filters - Communications ICs - Sensors - Gate arrays - Cell libraries - Voltage references - Analog subsystems within a VLSI chip - Packaging of high-performance ICs.

**RADIO FREQUENCY CIRCUIT DESIGN:** Low Noise Amplifiers - Automatic gain control - VCOs - Mixers - Active gyrators - Power amplifiers - RF DMOS-based circuits - Switches - Noise suppression techniques - Frequency synthesizers - Radio subsystems - Packaging of RF components - Designing with integrated passive components at RF frequencies - Millimeter-wave circuits and systems.

**WIRELINE COMMUNICATIONS:** LAN, WAN, FDDI, Ethernet, Metro, Fiber channel, SONET, ATM, ISDN, xDSL, optical data links - Power-line/phone-line networks - Cable modems, broadband circuits - MUX/DEMUX - Clock and data recovery - Error coding and correction - Crosspoint switches - Laser and modulator drivers - Preamplifiers - AGC amplifiers - Decision circuits - Equalizers - Optical networking ICs.

**DEVICE PHYSICS:** New device physics phenomena in Si, SiGe, and III-V devices - Device design issues and scaling limits - Hot electron effects and reliability physics - Transport and high field phenomena - Noise - Linearity/Distortion - Novel measurement techniques - Operation in extreme environments (low and high temperatures, radiation effects).

**MODELING / SIMULATION:** Improved BJT and HBT models - Behavioral modeling techniques - Parameter extraction methods and test structures - De-embedding techniques - RF and thermal simulation techniques - Modeling of passives, interconnect and packages - Statistical modeling - Device, process and circuit simulation.

**PROCESS TECHNOLOGY:** Advances in processes and device structures demonstrating high speed, low power, low noise, high current, high voltage, etc. - BiCMOS processes - Advanced process techniques - Si and Si-C homojunction bipolar/BiCMOS devices, III-V and SiGe heterojunction bipolar/BiCMOS devices - Fabrication of high-performance passive components including MEMs.

**POWER DEVICES:** Discrete and integrated bipolar/BiCMOS power devices, IGBT, RF power devices including DMOS, high-voltage ICs - Automotive electronics, disc drives, display drivers, power supplies, electric utility, medical electronics, motor controls, regulators, amplifiers, converters, aerospace electronics - BiCMOS circuits for power device control - CAD/modeling of power devices - Packaging of power devices - ESD phenomena - Wide bandgap (e.g., SiC, GaN) devices.

## **STUDENT PRESENTATION OF PAPERS ENCOURAGED**

**BEST STUDENT PAPER AWARD:** Papers presented by students and based upon their own work will be considered for the Best Student Paper Award if the abstract is identified as a student paper at the time of submission. The award presentation will be made at the 2010 BCTM.

**PRE-CONFERENCE PUBLICITY:** The accepted summaries will be used for publicity purposes and portions of these abstracts may be quoted in pre-conference magazine articles publicizing the conference. If this is not acceptable, authors must contact Jan Jopke.

**FURTHER INFORMATION:** BCTM is sponsored by the IEEE Electron Devices Society, in cooperation with IEEE Solid-State Circuits Society. All questions or inquiries for further information regarding this conference should be directed to the Conference Manager, Jan Jopke, [ccsevents@comcast.net](mailto:ccsevents@comcast.net). The 2009 Conference General Chair is Frank Thiel, Zarlink, USA, [frank.thiel@zarlink.com](mailto:frank.thiel@zarlink.com). The Technical Program Chair is David Ngo, RFMD, USA, [dngo@rfmd.com](mailto:dngo@rfmd.com).

**EXHIBITS:** BCTM welcomes exhibits by design, test/measurement, and CAD/modeling vendors related to the topics covered by the conference. Please contact Jan Jopke for details.

**If you know of people who may have a paper to contribute please bring this Call for Papers to their attention.**

## **IMPORTANT DEADLINES FOR AUTHORS**

Monday, April 20, 2009	Deadline for receipt of abstract and summary
Friday, June 12, 2009	Notification of acceptance to be sent by email
Friday, July 24, 2009	Final proceedings manuscript due

## **PREPARATION OF ABSTRACT AND SUMMARY**

Authors must submit a one page cover sheet/abstract and a summary, electronically (PDF only).

The cover sheet and abstract must include:

- 1) Title of presentation
- 2) Principal author name, affiliation, complete address, telephone and FAX numbers, and e-mail address
- 3) Person to whom correspondence should be sent, if other than the principal author
- 4) Identification as regular, invited or student paper
- 5) Suggested area (Analog/Digital Circuit Design; RF Circuit Design; Device Physics; Modeling/Simulation; Process Technology; Power Devices) in which their abstract best fits
- 6) A 35 word factual abstract, which will be used (for accepted papers) in the Advance Program

The summary of the work to be presented at the conference must clearly state:

- i) The purpose of the work
- ii) The manner and degree to which it advances the art
- iii) Specific results which have been obtained and their significance

The summary will consist of up to three pages of text on normal letter-size paper with at least 2 cm margins on all sides and at least 10 point type font, and a fourth page of figures, drawings and photos. Those submitting are urged to give a complete account of the work in the context of its application. The most common causes of rejection are lack of specific results, insufficient description for the work to be understood, and omission of data showing realization of the concept.

The factual abstract is not used in paper selection. It is only used in the Advance Program booklet. Abstracts may be edited without consultation to accommodate the Advance Program format. The abstract should be factual without arguments or claims, and contain 35 or fewer words.

**All submissions will be acknowledged. If you do not receive confirmation of receipt of your submission do not assume that it has been received; contact Jan Jopke for verification.**

The authors of accepted papers will receive an author kit that will include instructions on preparation of an extended abstract of no more than four pages (including figures, eight pages for invited papers) for the Proceedings and CD-ROM of the 2009 BCTM.

**Publication in the BCTM 2009 Proceedings does not preclude a fuller account of the work being published in an IEEE journal, and authors are encouraged to do so. A Special Issue of the IEEE Journal of Solid-State Circuits will include selected papers from BCTM 2009.**

## **SUBMISSION AND CONTACT INFORMATION**

Visit the conference website: [www.ieee-bctm.org](http://www.ieee-bctm.org), or contact:

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