

2003 BIPOLAR/BI CMOS CIRCUITS AND TECHNOLOGY MEETING

FIRST EDITION IN EUROPE

Short Course: September 28, 2003, Conference: September 29-30, 2003

The Bipolar/BiCMOS Circuits and Technology Meeting (BCTM) provides 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.

CONFERENCE HIGHLIGHTS

- Short course
- Invited papers on new directions in Bipolar/BiCMOS circuits and technology
- Special session on emerging technologies
- Presentation of the BCTM 2002 Best Student Paper Award
- Vendor exhibits
- CD-ROM complimentary with registration

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 Active mixers - Active gyrators - Power amplifiers - Switches - Noise suppression techniques - Frequency synthesizers - Radio subsystems - Packaging of RF components - Designing with integrated passive components at RF frequencies — Optical networking ICs

WIRELIN 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.

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 - ESD phenomena.

MODELING/SIMULATION: Improved BJT and HBT models - Behavioral modeling techniques - Parameter extraction methods and test structures - 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, RF power devices, 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.

STUDENT PAPERS

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 2004 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. The 2002 Conference Chair is Colin McAndrew, Motorola, Tempe, AZ. The Technical Program Chair is Ross Teggatz, Texas Instruments, Dallas, TX. The Local Arrangements Chair is Marise Bafleur, LAAS/CNRS, Toulouse, France.

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.

IMPORTANT DEADLINES FOR AUTHORS

Friday, March 7, 2003 Receipt of abstract and summary
Monday, May 19, 2003 Notification of acceptance to be mailed
Friday, July 4, 2003 Receipt of proceedings manuscript

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:

- **Title of presentation**
- **Principal author name, affiliation, complete address, telephone and FAX numbers, and e-mail address**
- **Person to whom correspondence should be sent, if other than the principal author**
- **Identification as regular, invited or student paper**
- **Suggested area (Analog/Digital Circuit Design; RF Circuit Design; Device Physics;**
- **Modeling/Simulation; Process Technology; Power Devices) in which their abstract best fits**
- **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:

- The purpose of the work
- The manner and degree to which it advances the art
- 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 realisation of the concept.

The factual abstract is not used in paper selection. It is only used is 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 2003 BCTM. Publication in the BCTM Proceedings does not preclude a fuller account 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 2003.

SUBMISSION AND CONTACT INFORMATION

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