
CICC 2010 CALL FOR PAPERS



September 19 - 22, 2010
San Jose, CA USA
DoubleTree Hotel

Paper Submission Deadline:
April 19, 2010
For author instructions and
electronic submission visit
our web site at
<http://www.ieee-cicc.org>

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CICC showcases first-published innovative analog and digital circuit techniques covering a broad spectrum of technical topics.

Analog Design: amplifiers, filters, converters...

Biomedical, Actuators, MEMS and Sensors: for applications including aerospace, automotive, environment, energy...

Systems on Chip and 3D: solutions to today's complex digital, mixed signal and packaging design problems...

Memory: variation tolerance, low leakage...

IC Manufacturing: advanced processing and packaging, design impact of process technology selection...

Power Management: Circuit and system architectures for power management and power consumption optimization...

Test, Debug, and Reliability: Design for test for mixed signal circuits and high speed I/O. Reliability/Test issues in leading edge technologies...

Simulation and Modeling: Modeling of active and passive devices, simulation techniques, design productivity, enhancement tools...

Wireless Designs: circuits for cellular, connectivity, broadband, ultra low power, digital consumer broadcasting, millimeter waves, RF MEMS, software defined radio...

Wired Communications: high speed electrical and optical, LAN, WAN, Ethernet, SONET, SerDes, broadband, PLLs, DLLs...

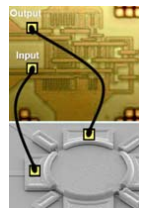
Luncheon Keynote by Ian Wright, of Wrightspeed. He will present "From Pistons and Gears to Electronics and Software: the Coming Transportation Technology Disruption"; explain how this is possible; and how much fun it will be for engineers.

Technical Education on new, state-of-the-art developments is the core of CICC. Over 160 papers, addressing a broad range of circuits, applications, design techniques, tools, test, reliability, and system-on-a-chip. Awards for Best Paper will be given for regular, invited, student, and poster submission categories. **Top-rated CICC papers are eligible to be considered for the IEEE Journal of Solid State Circuits and TCAS. Top-rated Student papers will be awarded complimentary registration.**

Technical Forums on emerging topics of interest by invited experts presenting their progressive research.

Educational Sessions (September 19): three in-depth, full-day tutorials instructed by recognized invited speakers.

An opening Keynote address, Exhibits, interactive Poster-papers and Demonstrations, lively and controversial Panel Discussions.



CICC is soliciting papers in the following areas:

Analog Circuit Design: Amplifiers, voltage references and regulators, opamps, sample-and-hold circuits, continuous and discrete-time filters, oversampled and Nyquist-rate data converters, non-linear analog circuits, mixed analog/digital IC applications, analog circuits for sensor interfaces, low-voltage/low-power analog, and deep submicron issues in analog design.

Systems on Chip and 3D: Designs and methodologies for SoC/ASIC/SiP and 3D, in particular, low power architectures and design techniques, the state of the art in Embedded Processor designs, 3D/multi-chip design and verification and exciting digital chip designs.

Memory: Memory circuits and architectures addressing power-performance trade-offs, V_{min} reduction, resilient design (for example, redundancy, ECC), variations tolerant design, cell stability and low-leakage design. Also of interest are soft error robustness, reliability, memory interface and applications specific memory.

Power Management: Circuit and system architectures for power management and power consumption optimization. Advanced circuit topologies and innovations in switching / linear regulators, leakage management, energy scavenging, wireless power transmission, battery charging and metering, digital control, dynamic power control, and other topical areas related to the challenges of efficient power generation, distribution, and utilization.

Simulation and Modeling: Compact models for active and passive devices, behavioral modeling, signal-integrity modeling and simulation. System and circuit simulation. Parasitic extraction and reduction. Simulation techniques for analog, RF, and mixed-signal circuits. Package modeling. Process variation, statistical, and reliability modeling. Compact models for extreme environment operation. SOI and multiple gate device modeling, novel design tools.

Biomedical, Actuators, MEMS, and Sensors: Advanced ICs for biomedical, aerospace, automotive, energy, environment, and security applications. Interface circuits for emerging technologies in medicine, actuators, MEMS, and sensors are of particular interest. Examples include biosensors and devices, nanotechnology, microchemical sensors, image sensors, OLED's, DNA microarrays, micro- and nanofluidic chips, novel display technologies and organic circuitry.

IC Manufacturing: Special focus on challenges of and alternatives to CMOS scaling, Design for Manufacturability, specialty manufacturing techniques, design impact of process-technology selection or packaging. Advanced manufacturing techniques using any combination of bulk/SOI CMOS, bipolar, non-silicon, and optoelectronics technologies. Evolving chip packaging such as chip stacking, lead-free, flip-chip, and System-in-Package. Tutorial papers are encouraged.

Test, Debug, and Reliability: Debug techniques. DFT (design for test) for analog/mixed signal circuits, equalizers, CDR, and high speed I/O. Design techniques for high reliability applications. Reliability concerns in leading edge technologies, such as soft errors. Innovations in ESD protection. Issues of testability and constraints due to protection of intellectual property or system security.

Wired Communications: Circuits and systems for electrical and optical networks, including: peripheral I/O buses, Ethernet, SONET, SATA, HDMI, PCIe, USB, serial links, backplane, high-speed memory and graphics interfaces, intra-chip and chip-to-chip interconnects, clocking and high-speed low-power blocks for broadband applications; circuit blocks including serializers, deserializers, digital and mixed-signal equalizers, PLLs, DLLs, CDRs, oscillators and integrated photonic transceivers; circuit and system-level solutions for variability for wireline applications.

Wireless Designs: Integrated wireless transceiver architectures and sub-circuits for cellular, connectivity, broadband and low-power communication, millimeter-waves, and beyond, biomedical, smart antennas MIMO, RF MEMS, software-defined and cognitive radio. Papers on RF circuit solutions targeting emerging wireless applications and techniques are particularly encouraged.

For complete instructions on submitting a paper, registration information and general inquiries:

Visit our website at www.ieee-cicc.org

Or you can contact the Conference Office: IEEE Custom Integrated Circuits Conference, 19803 Laurel Valley Place, Montgomery Village, MD, 20886, Telephone: 301/527-0900 x1, Fax: 301/527-0994, Email: cicc@his.com

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Submission of Papers

Paper Submission Deadline is April 19, 2010

Papers must report original and previously unpublished work, including specific results. Papers may be up to 4 pages in length including illustrations, charts, tables and references. Successful submissions concisely explain how the work advances the state-of-the-art and includes schematics, measured results, and sufficient detail to convey key concepts. **Circuit-design papers intended for traditional lecture presentation must include measured experimental results that substantiate performance claims.** Circuit-design papers using only simulation to substantiate performance claims are usually rejected for traditional lecture presentation, but may be considered for poster presentation.

Papers are submitted electronically. **Prior** to preparing your paper for electronic submission, please read the paper preparation and submission guidelines on the CICC website (www.ieee-cicc.org). The submission instructions will be available by February 19. The submission page will be active beginning March 1.

When submitting a paper, please indicate a preference for **traditional lecture** or **poster presentation**, although CICC may assign presentations to either category.

Appropriate company and government clearances **MUST** be obtained prior to submission. **IF A SIGNED COPYRIGHT FORM IS NOT RECEIVED WITH THE SUBMISSION, THE SUBMISSION WILL NOT BE REVIEWED.** Authors of accepted papers will be notified by email by June 19, 2009.

ACCEPTED PAPERS WILL BE PRINTED IN THE PROCEEDINGS WITHOUT OPPORTUNITY FOR FURTHER CHANGE.

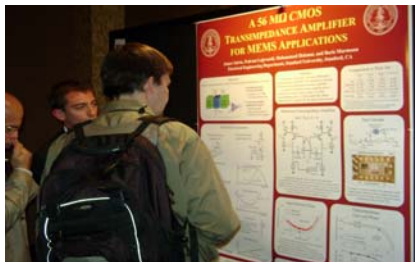
Accepted papers will be used for publicity purposes and portions of these papers may be quoted in pre-conference magazine articles and also via the Web. If this is not acceptable, authors must email CICC at cicc@his.com to decline publicity.

Papers for Poster Presentation

Poster presentations encourage in-depth discussions with the audience and are ideal for the presentation of ongoing research. The Poster Sessions are held during the conference receptions and exhibits, providing an exciting atmosphere and lively discussions between authors and attendees. The acceptance criteria for papers for poster presentation are identical to those for traditional lecture presentation except that the requirement for measured experimental results may be relaxed for papers intended for poster presentation.

Poster Session Demonstrations

Lecture or poster presenters may apply to present a demonstration of their research. Visit the CICC website for additional details.



2010 IEEE Custom Integrated Circuits Conference

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The IEEE Custom Integrated Circuits Conference is sponsored by:



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