



CALL FOR PAPERS

CUSTOM INTEGRATED CIRCUITS CONFERENCE 2000

... the leading technical conference for IC development

**CARIBE ROYALE RESORT
ORLANDO, FL
DATE: MAY 21 - 24, 2000**

The IEEE Custom Integrated Circuits Conference is the premier conference devoted to IC development, showcasing original first published technical work and innovations. It provides a forum for circuit designers, CAD developers, manufacturers and ASIC users to present and discuss exciting new developments, future trends, innovative ideas and recent advancements. CICC is sponsored by the IEEE Solid-State Circuits Society.

CONFERENCE HIGHLIGHTS

- Technical Papers:** The technical program is the focal point of the CICC where new state of the art developments are presented. Approximately 140 papers addressing a broad range of leading-edge circuits, applications, design techniques and tools, test and reliability, fabrication, and system on a chip will be presented.
- Panels:** Discussions and debates by industry leaders on key issues, problems, solutions and potentials of the IC industry.
- Educational Sessions:** Four sessions of invited speakers offer a valuable opportunity for practicing professionals to refresh their skills in traditional integrated circuit design methods, as well as to get acquainted with futuristic design principles like system-on-a-chip and wireless IC design. These tutorials are rated among the best in the industry.
- Conference Events:** Throughout the conference additional events will be organized which will complement the technical character of the conference with appropriate social happenings such as a welcome reception and cocktail party.

PAPERS IN THE FOLLOWING AREAS ARE REQUESTED:

- System-On-a-Chip Design:** Full-system integration on a single chip, demonstration of IP usage, coverage of complete design flow. Complexity demonstrated in both gate count as well as type of functions integrated onto the same IC.
- Analog and Mixed-Signal Circuits and Systems:** Data converters, modulators, filters, high speed analog, low voltage techniques. Mixed analog-digital IC applications, disk read/write channels, RAMDACs.
- Digital Signal Processing:** Digital video and audio, MPEG, image recognition and enhancement. Audio coding and speech recognition. Specialized processing function architectures. Digital filtering, encryption, HDTV, video conferencing, multimedia, graphics controllers, video drivers, and novel DSP algorithm implementations.
- Wireless Communications:** Analog or mixed signal integrated circuits and systems for voice and data communications. Receivers, transmitters, and their functional blocks including LNAs, mixers, limiters, power amplifiers, frequency synthesizers, specialized data conversion devices, RF and IF filters. Mixed signal innovations for auto calibration, adaptive signal processing, modulation and demodulation.
- Networked Communications:** Data, voice, image and video transmission. Digital, analog modulation, equalization, error correction, coding, switching. SONET/SDH, xDSL, LAN/WAN/ATM, set-top receiver, cable modem, high-speed serial links and broadband applications. Advanced read-write channel ICs.
- Embedded Memories:** Use of SRAM, DRAM, EPROM, EEPROM, and ROM in ICs. Innovative memory architectures, sense amplifiers, special memory interfaces, low-power design techniques, and design of memories in new technologies such as SOI or ferroelectric materials

<i>Custom Application Specific Circuits:</i>	Papers detailing custom circuit designs including low power and low voltage design techniques are requested. Innovative designs for cell based or full custom ICs for a variety of applications including automotive, biomedical and consumer applications are of interest. Sensor interface circuits and high performance circuit designs, including dynamic logic, clocking circuits and I/O circuits are encouraged.
<i>Programmable Devices:</i>	Topics of particular interest are innovations in EPLD, FPGA, PLD, PAL, GA device architecture and product features, advances in circuit techniques, device and/or product feature applications, and CAD tools targeting these devices.
<i>High-Level Design & Synthesis:</i>	VHDL and Verilog Design and synthesis techniques, tools and systems-on-a-chip. Logic and high-level synthesis and optimization, innovative design capture techniques, user interfaces. Silicon compilation, module generation, symbolic layout, automatic place and routing techniques, circuit parameter extraction and chip verification.
<i>Simulation, Modeling, and Design Automation:</i>	Circuit, functional, timing, logic simulation and modeling. Analog, RF modeling and simulation. Mixed signal simulation and modeling of analog/digital interfaces. Signal Integrity and Reliability Verification. Clock/Power Network design, synthesis and verification. R(L)C extraction and analysis. Modeling of device/interconnect process and variations.
<i>Fabrication and Assembly:</i>	Advanced process integration techniques for the manufacturing & prototyping of system-on-a-chip IC's using any combination of CMOS, bipolar, SOI, BiCMOS, smart power, Embedded DRAM, SRAM, NVM and GaAs technologies. New and evolving chip packaging like BGA, flipchip and multichip modules. Package modeling, techniques, ESD protection, and fiber optic transceivers.
<i>Testing and Reliability:</i>	Advances in design-for-testability (DFT), fault modeling and grading, IDDQ measurements, scan, BIST and JTAG, parametric characterization, high speed or high frequency measurement techniques and failure analysis.
<i>Library Development and Design Methodology:</i>	Cell library generation and characterization, library migration tools and methodologies, reusable functions, soft and hard cores, Algorithm to Silicon design flows.
<i>IC Design Project Management:</i>	IC design technical project management, design effort estimation, automation support resource estimation, multi-team design efforts, coordination, (world-wide design) center usage.
<i>IP Generation & Management:</i>	IP generation from existing design components, IP methodology implementation, use of IP within conventional CAD flows, IP evaluation.

SUBMISSION OF PAPERS:

Deadline for Papers is December 1, 1999

Prospective authors must submit CAMERA READY papers, up to four pages in length inclusive of all illustrations, charts and tables. Those interested in submitting papers should contact the Conference Office as early as possible to obtain an author's kit and detailed instructions. The address is: CICC, 101 Lakeforest Blvd., Suite 400B, Gaithersburg, MD, 20877, Telephone: (301) 527-0900 x316, Fax: 301-527-0994, email: cicc@his.com, web page: <http://www.ieee.org/conference/cicc>.

ACCEPTED PAPERS WILL BE PRINTED IN THE PROCEEDINGS WITHOUT OPPORTUNITY FOR FURTHER CHANGE. The paper should report original and previously unpublished work, including specific results. Circuit oriented work must include measured experimental results. Deadline for RECEIPT of technical papers is December 1, 1999. Appropriate company and government clearances MUST be obtained prior to submission. Authors of accepted papers will be notified by mail by January 27, 2000.

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 indicate this in the cover letter when submitting the paper for review.

Tutorial Papers: Tutorial papers can have a length of up to 8 pages and must be pre-approved prior to submission. Those interested in submitting a tutorial paper should contact the Technical Program Chair as soon as possible as the number of tutorial slots are limited. Submission of tutorial papers in the area of system-on-a-chip design is encouraged.

Presentations: Authors presenting papers at the CICC Conference will be required to use Powerpoint (IBM compatible-PC format) as the projection medium.

FURTHER INFORMATION:

For complete author kit instructions, registration information, and general inquiries contact the Conference Office: Custom Integrated Circuits Conference, 101 Lakeforest Boulevard, Suite 400B, Gaithersburg, MD, 20877, Telephone: 301/527-0900 x316, Fax: 301/527-0994, email: cicc@his.com, web: <http://www.ieee.org/conference/cicc>.