Foreword

We would like to welcome you to Boston for the 2004 Great Lakes Symposium on VLSI! This is the 14th edition of GLSVLSI, and this year follows successful conferences in New York and Washington D.C. over the last two years. While these locations are not technically on the Great Lakes, GLSVLSI continues to carry the spirit of the original conferences. At the same time, GLSVLSI has expanded into an international conference with submissions from all over the United States and the world. It continues to be a premier conference for publishing innovations in VLSI.

This year’s technical program has been a tremendous success, with 237 submissions to the conference. GLSVLSI has been growing exponentially over the last couple of years, with an over 350% increase in submissions since 2002! In fact, this year we had to move to a dual-track conference in order to accommodate all the great papers that we received. The acceptance rate for this year was quite competitive at about 40%, with a total of 96 papers overall, broken down into 23 full papers, 32 short papers, and 41 posters. Furthermore, we have introduced a tutorial session on “High Performance CMOS Circuits for sub-90nm Designs” to be conducted by Steven Hsu, Sanu Mathew, and Ram Krishnamurthy of Intel Corporation on the last day of the conference. We hope that you can attend.

Congratulations to Xinmiao Zhang and Keshab Parhi for receiving the GLSVLSI 2004 Best Paper Award! Their paper “High-Speed Architecture for Parallel Long BCH Encoders” will be the first presentation of the conference.

We would like to acknowledge Intel Corporation for their generous sponsorship of the Best Paper Award as well as support for the banquet on Monday night. They have agreed to sponsor the student attendees to the banquet, so that they may attend at no additional cost. Thanks to Intel for helping to make GLSVLSI a great venue for students to publish their work!

We would like to thank all of the members of the Technical Program Committee, whose job is to evaluate all of the high quality submissions and determine the program. Special thanks to the members of the Executive Committee, whose efforts made this conference possible: Gang Qu, Rhett Davis, Chris Coulston, and Jagan Narasimhan, in addition to the support of ACM through Donna Baglio and Maritza Nichols.

Finally, the steering committee for GLSVLSI has selected Chicago as the location for next year’s conference. GLSVLSI is returning to its roots on the Great Lakes! Continue to watch the http://www.glsvlsi.org for information and the call for papers. Again, welcome to the conference.

David Garrett  
General Chair

Charles Zukowski  
TPC Co-Chair

John Lach  
TPC Co-Chair
GLSVLSI 2005 will be held in Chicago, Illinois. Original, unpublished papers describing research in the general area of VLSI are solicited. Both theoretical and experimental research results are welcome. Proceedings will be published by the ACM and will be included on the SIGDA compendium CD-ROM.

**Topics of Interest**

- **VLSI Design**: design of ASICs, microprocessors and micro-architectures, embedded processors, analog/digital/mixed-signal systems, multi-chip modules, FPGAs.
- **VLSI Circuits**: analog/digital/mixed-signal circuits, RF and communication circuits, chaos/neural/fuzzy-logic circuits, high-speed/low-power circuits.
- **Computer-Aided Design (CAD)**: hardware/software co-design, logic and behavioral synthesis, logic mapping, simulation and formal verification, layout (partitioning, placement, routing, floorplanning, compaction, etc.), algorithms and complexity analysis.
- **Low Power Design**: circuits, micro-architectural techniques, CAD support, power estimation methodologies and tools.
- **Testing, Reliability, Fault-Tolerance**: digital/analog/mixed-signal testing, design for testability and reliability, online testing techniques, static and dynamic defect- and fault-recoverability.
- **Nanotechnology**: emerging technologies (resonant tunneling devices, single electron transistors, quantum devices, molecular electronics, etc.), circuit design using nanotechnology devices, modeling and simulation tools for nanoelectronic devices and circuits.

*Continue to watch http://www.glsvlsi.org for updated conference dates and submission info.*

**Paper Submission**: Authors are invited to submit full-length (6 pages maximum), original, unpublished papers along with an abstract of at most 200 words. To enable blind review, the author list must be omitted from the main document. Previously published papers or papers submitted for publication to other conferences/journals will not be considered. Electronic submission in PDF format to the www.glsvlsi.org website is required. Author and contact information (name, street/mailing address, telephone, fax, e-mail) must be entered during the submission process.


**Symposium Presentations**: Papers will be accepted for long, short, or poster presentation at the symposium.

**Best Paper Award**: A “Best Paper Award” will be voted on by the technical program committee and will be awarded during the symposium.

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