

call for papers



TOPICS OF INTEREST

Authors are invited to submit original technical papers describing recent and novel research or engineering developments in all areas of design automation. Topics of interest include, but are not limited to:

DESIGN TOOLS TRACK

The Design Tools track (T) is devoted to contributions to the research and development of design tools and their supporting algorithms. Focus is on innovation of specific modeling, analysis and optimization techniques.

- T0.1 Fundamental CAD Algorithms, e.g., BDDs, graph coloring, partitioning
- T1.1 Electrical-level circuit and timing simulation
- T1.2 Discrete simulation
- T1.3 Static timing analysis and timing verification
- T1.4 Power estimation
- T2.1 Testing, fault modeling and simulation, TPG, test validation and DFT
- T2.2 Design and implementation verification (excluding layout verification)
- T3.1 Floorplanning and placement
- T3.2 Global and detailed routing
- T3.3 Module generation and compaction, transistor sizing and cell library optimization, layout verification
- T4.1 Technology-independent, combinational logic synthesis
- T4.2 Technology-dependent logic synthesis, library mapping, interactions between logic design and layout
- T4.3 Sequential and asynchronous logic synthesis and optimization
- T4.4 System, logic and physical synthesis techniques for reconfigurable computing
- T4.5 High-level synthesis
- T5.1 Interconnect and package modeling and extraction
- T5.2 Signal integrity and reliability analysis
- T5.3 Analog and mixed-signal design tools and RF
- T5.4 Microsensor and microactuator design tools
- T5.5 Statistical design and yield maximization
- T6.1 IP protection and watermarking techniques for designs, tools, and algorithms
- T6.2 Frameworks, intertool communication, WWW-based tools and databases

DESIGN METHODS TRACK

The Design Methods track (M) deals with innovative methodologies for the design of electronic circuits and systems, as well as creative experiences with design automation in state-of-the-art designs. Submissions for this track will be judged on how innovatively tools are combined into a new methodology that is effectively applied to real-world design problems. Papers focusing on algorithmic advances in modeling, analysis and optimization should be submitted to the design tools track.

Design methodologies and case studies for specific design tasks

- M1.1 Design entry and specification
- M1.2 Electrical-level simulation and modeling
- M1.3 Discrete simulation and modeling
- M1.4 Static timing and performance analysis
- M1.5 Functional design verification
- M1.6 Testing, test generation and debugging
- M1.7 Physical design, module generation, design for manufacturing
- M1.8 Logic synthesis, including interaction with physical synthesis
- M1.9 High-level and architectural synthesis

Design methodologies and case studies for specific application domains and platforms

- M2.1 Overall design flows and methodologies for specific design applications
- M2.2 Configurable computing, FPGAs and rapid prototyping
- M2.3 Deep sub-micron: signal integrity, interconnect modeling and extraction
- M2.4 High-performance design: timing, clocking and power distribution
- M2.5 Low power design
- M2.6 Analog, mixed signal, and RF design
- M2.7 Process technology development, extraction, modeling and new devices
- M2.8 MEMS, sensors, actuators

Integration and management of DA systems

- M3.1 Management of DA systems, design interfaces, standards
- M3.2 Distributed, networked, and collaborative design
- M3.3 Intellectual property, design re-use and design libraries

EMBEDDED SYSTEMS TOPICS

Embedded Systems are characterized by mixed hardware and software components with limited processing, I/O and storage resources. The increasing role played by software components and their associated support introduces a host of new system design issues. To focus on these, the 39th DAC will have embedded systems sessions covering both the "tools" and the "methods" aspects of the following topics:

- E1 Low-power design: compilation, scheduling and partitioning
- E2 Embedded software: retargetable compilation, memory/cache optimization, real-time single-processor scheduling
- E3 HW/SW co-design: specification, modeling, co-simulation and performance analysis, system-level scheduling and partitioning
- E4 Hardware and software platform design: IP-based design, communication design, embedded HW
- E5 Case studies

SUBMISSION DEADLINES

Panels and Tutorials Nov. 1st, 2001, at 5 pm MST. Regular papers and special topic sessions by Dec. 7th, 2001, 5 pm MST. Student Design Contest Submissions are due Dec. 20th, 5 pm MST.

REQUIREMENTS FOR SUBMISSIONS

All DAC Submissions must be made electronically in PDF format. Reference the DAC web page (www.dac.com) for instructions on electronic submissions. Please submit **ONE PDF** file:

- The paper should contain an abstract of approximately 60 words clearly stating the significant contribution, impact and results of the submission. The paper should be formatted in double columns with a minimum 10pt font, not to exceed 8-pages including all figures, tables and references (format templates are available on the DAC website for your convenience, they are not required). Submissions exceeding the 8 page limit, fonts smaller than 10pt, or identifying the authors or their affiliations will be automatically rejected.

The following information will be needed when submitting your paper:

- Name, affiliation, and complete address for each author
- A designated contact person including his/her phone number, fax number, and email address
- A designated presenter, should the paper be accepted
- A list of topic numbers (taken from the lists above) most clearly matching the content of the paper. This list should be ordered by relevance.
- The following statement: "All appropriate organizational approvals for the publication of this paper have been obtained. If accepted, the author(s) will prepare the final manuscript in time for inclusion in the Conference Proceedings and will present the paper at the Conference".
- Authors of accepted papers must sign a copyright release form for their paper. Authors must also provide MP Associates a copy of their presentation materials and grant permission for the publication of the presentation and presentation materials on the DAC web site.

To permit a blind review, do not include name(s) or affiliation(s) of the author(s) on the manuscript, abstract or bibliographic citations. The papers will be reviewed as finished papers. Preliminary submissions will be at a disadvantage. **Notice of acceptance will be mailed to the contact person by March 8, 2002.**

PANELS, TUTORIALS, SPECIAL TOPICS

Panel and tutorial suggestions should not exceed two pages in length and should describe the topic and intended audience. They should include a list of suggested participants. Tutorial suggestions must include a bulleted outline of covered topics. DAC reserves the right to restructure and modify submitted panel and tutorial suggestions, including moderators and participants. **Panel and tutorial suggestions must be electronically submitted NO later than November 1, 2001 (5:00pm MST).**

Special Topic Sessions may be either independent papers with a common theme or a set of closely related papers describing an overall system. In both cases, independent reviews of each paper and evaluation of the session as a whole will be used to select sessions. **Suggestions for Special Topic Sessions should be submitted along with the list of papers to be included in the session and should describe the session's theme. These submissions must be electronically submitted NO later than December 7, 2001 (5:00pm MST).**

STUDENT DESIGN CONTEST

Submissions of original electronic designs (circuit or system), developed at universities and research organizations after June 2000 and resulting in operational implementations are invited. Submissions should contain the title of the project, a 60-word abstract and a complete description of the design, not exceeding 4000 words in text. The submission should clarify the originality, distinguishing features, and the measured performance metrics of the design. Proof-of-implementation in the form of die or board photographs and measurement data is a must. Submitted designs should not have received awards in other contests. Submissions will be reviewed by a special committee of experts. Selected designs will be presented and exhibited at the conference. **These submissions must be electronically submitted NO later than December 20, 2001 (5:00pm MST).**

Sponsored by:



2002 39th design automation conference®

The Design Automation Conference (DAC) is the world's premier event for the design of electronic circuits and systems. Leading industry experts will be presenting the latest developments in design automation tools and methodologies, silicon solutions, and embedded system-on-chip. DAC also unites EDA users & developers, silicon strategists and embedded system developers for collaboration on tools and design methodologies for effective system and IC design.

Five types of submissions are invited:

regular papers, special topic sessions, student design contest, panels, and tutorials.

VISIT OUR WEBSITE FOR INFORMATION ON THE ELECTRONIC SUBMISSION PROCESS & DEADLINES:

www.dac.com



call for papers

39th design automation conference®

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new orleans, louisiana, usa
june 10-14, 2002



call for papers

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