



## CALL FOR PAPERS

# SEMI-THERM 23

## Semiconductor Thermal Measurement and Management Symposium

Fairmont Hotel, San Jose CA USA

March 20-22, 2007

### About SEMI-THERM

SEMI-THERM is an international forum dedicated to the thermal design and characterization of electronic components and systems. The symposium fosters the exchange of knowledge between practitioners and leading experts from industry, as well as the exchange of information on the latest academic and industrial advances in electronics thermal management.

In its 23rd year, SEMI-THERM will include Topic Sessions, Invited Speakers, an Evening Tutorial, and a Short Course program to address key issues highlighted by attendees at the last symposium. SEMI-THERM actively solicits student papers and awards travel stipends and reduced conference fees. Technical workshops, tutorials and vendor exhibits -- for which SEMI-THERM is well known -- will enhance the technical program. Those papers deemed to be among the best in the conference will be invited to be published in IEEE Transactions on Components and Packaging Technologies.

### Subjects of Particular Interest

The Program Committee is soliciting papers on current thermal management and practical application issues, modeling and measurement of electronic components and systems in the following areas:

- Practical Thermal Solutions for Low-Cost, High-Volume Systems Design
- Package Thermal Design and Components for High-Volume Semiconductor Packages
- Thermal Solutions for Low-Noise Environments
- System-Level and Board-Level Thermal Design
- Solutions for Harsh Environments in Commercial, Defense, and Aerospace Systems
- Characterization and Standardization of Material Property Measurements
- Thermal Integration in the Product Design Process
- Characterization and Modeling of Thermo-Mechanical Stress
- Characterization and Modeling of Components, Boards and Systems
- CFD Analysis of Complex Geometries and Validation
- Temperature and Thermal Property Measurement Techniques
- Transient Thermal Control Methodologies
- Compact Modeling, Model Reduction and Validation
- Roadmaps, Specifications and Traditional Cooling Limits

Selection of papers for presentation is solely based on the extended abstract. The abstract should provide a complete summary of the proposed paper comprising work or result not previously presented or published. The abstract should be between 2 and 5 pages of single spaced text giving the key results, findings and conclusions, supported by additional pages of figures tables and references as appropriate. **Abstracts must demonstrate that proposed papers are appropriate for SEMI-THERM and of high technical quality.**

Abstracts are sought in various application areas and cooling technologies:

**Application Areas:**

- Processors, ICs, and Memory
- Computing Systems
- Optoelectronics and LED Arrays
- Optical Drives and Storage Systems
- Telecom
- Power Semiconductors and IGBTs
- Automotive Electronics
- Hybrid Electric Vehicle Drive Modules
- Consumer Electronics
- Handheld and Portable Systems
- Medical and Biomedical Electronics
- Defense and Aerospace
- Harsh Environments
- Instrumentation and Controls
- Accelerated Testing

**Cooling Technology Advances:**

- Air Cooling
- Composite Materials
- Lid and Heat Spreader Materials
- Heat Sinks
- Liquid and Phase Change Cooling
- Fans and Blowers
- Phase Change Materials
- Thermal Interface Materials
  
- MEMS and Microsystems
- Heat Pipes and Vapor Chambers
- Solid State Active Cooling
- Novel Cooling Technologies
- Nanoscale Applications

The intent of technical papers is to communicate timely and relevant technical information to a technical audience. The paper should present an unbiased description of a certain method or product, discussing both pros and cons. Both subtle and blatant advertisement of any products or services is in direct conflict with the spirit of the Symposium. Examples of the former include repeated references to products or trade names and excessive use of corporate logos and trademarks in graphic illustrations. Photographs of commercial equipment are not permitted unless they add educational value. The SEMI-THERM Program Committee desires that all authors and presenters understand unambiguously that commercialism is inappropriate and will not be tolerated; authors are asked to abide by these constraints when preparing their abstracts, papers, and presentations.

Abstracts must be submitted electronically in RTF, DOC or PDF formats via the SEMI-THERM web site. Check the web site periodically for updated information. Note: An increased number of accepted papers is expected with expanded parallel and poster sessions.

**Author Deadlines**

***Abstract  
Deadline***  
**Sept. 15, 2006**

***Abstract Acceptance  
Notification***  
Nov. 3, 2006

***Photo-ready Full Manuscript  
Due***  
Jan. 12, 2007

Submission of an abstract represents a commitment by you to submit a manuscript, cleared for publication in the Symposium Proceedings by January 12, 2007; and to attend and present the paper at SEMI-THERM. Final manuscripts are expected to be approximately eight pages including tables and figures. The language of the Symposium is English. All data are to be in SI units. IEEE membership is not required to submit a paper.

For further information please contact the Program Chair via email:

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