



May 27 – 30, 2025

24th Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems

Important Dates

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|-----------------------------|------------------------------------|
| Abstract Deadline: | Sept. 16 Sept. 30, 2024 |
| Notification of Acceptance: | Oct. 14, 2024 |
| Draft Paper Submission: | Dec. 16, 2024 |
| Reviews Returned: | Feb. 3, 2025 |
| Final Paper Submission: | Mar. 3, 2025 |



Gaylord Texan
Resort & Convention Center
Dallas, TX, USA

Call for Abstracts

The IEEE ITherm Conference is the leading international conference for scientific and engineering exploration of thermal, thermomechanical, and emerging technology issues associated with electronic devices, packages, and systems. ITherm 2025 will be a physical conference held along with the 75th ECTC. Joint ITherm/ECTC registrations will be available at a significant discount. All abstracts are followed by full papers to be peer reviewed and published in the IEEE Xplore ITherm proceedings. Student first authors will have the opportunity to apply for ITherm travel grants, covering registration and 1 to 3 nights stay at the conference hotel, in order to participate in the Student Poster and Networking Session. ITherm 2025 will also feature keynotes by prominent speakers, vendor exhibits, panel discussions, invited technology talks, ECTC/ITherm joint networking events and short courses, an art-in-science exhibition, and a student design competition. Original papers are solicited in the following areas of interest:

Component-Level Thermal Management

- 3D Packaging & Heterogeneous Integration
- Package-Integrated Thermal Management
- Embedded Cooling
- Hotspot and Impingement Cooling
- Thermal Interface Materials and Heat Spreaders
- Thermoelectric and Peltier Devices
- Heat Pipes, Vapor Chambers and Thermosyphons
- Single / Two-Phase Cold Plates and Heat Sinks
- RF and Power Electronics
- LEDs, Photovoltaics, and Optoelectronics
- Thermal Management of Electric Machines
- Pulsed Power Dissipation

System-Level Thermal Management

- Air Cooling Techniques and Heat Exchangers
- Liquid Cooling Solutions
- Immersion Cooling and Refrigeration
- Pumps, Compressors, Fans, and Blowers
- Phase Change Materials
- Automotive, Batteries, and Thermal Storage
- Mobile and Internet of Things
- Telecommunication Systems
- Space and Aerospace
- Data Center Thermal Management
- Thermal Management in Electric Aircraft
- Modeling of Complex Thermal Systems
- Next-Gen Electronics Systems Co-Design

Mechanics and Reliability

- Thermo-Mechanical Modeling and Simulation
- Mechanics and Reliability of Solder Joints and Interconnects
- Materials Characterization, Processing, and Models
- Failure Mechanics, Fatigue, and Damage Modeling
- Measurement of Deformations, Strains and Stresses
- Shock, Drop and Vibrational Analysis
- TSV / 3D Reliability and Packaging
- Mechanics in Assembly and Manufacturing
- Applied Reliability and Failure Analysis
- Process-Structure-Property Relations / Multi-Scale Analyses
- Accelerated Stress Testing and Modeling
- Lifetime Prognostics and Condition Monitoring

Emerging Technologies and Fundamentals

- Boiling, Evaporation, and Condensation
- Convection in Microchannels, Microgaps, and Jets
- Pulsating / Oscillating and Non-Conventional Heat Pipes
- Nanoscale and Transistor-Level Thermal Transport
- Novel Materials and Fabrication Techniques
- Measurement and Diagnostic Techniques
- Numerical and Experimental Methods, Nano-to-Macro Scale
- Prognostic Health Management and Reliability Analysis
- Wearable, Flexible, and Printed Electronics
- Additive Manufacturing
- Silicon Fabrication for Thermal Management Devices
- Predictive Analytics, Machine Learning, and AI
- Sustainable Electronics and Data Center Decarbonization

ITherm provides an opportunity for industrial and university participation in the form of financial support to ITherm 2025. All contributors will be given strong recognition both onsite and in the conference materials.

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