

Call for papers

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The 19th EuroSimE conference in Thermal, Mechanical & Multiphysics Simulation and Experiments in Micro/Nano-Electronics and Micro/Nano-systems

Organised by **IRT Saint Exupéry**, EuroSimE 2018 will be hosted in the city of **Toulouse**. The conference will address the results of fundamental research and industrial applications for **thermal, mechanical and multiphysics** simulation and experiments of micro/nano-electronics and microsystems.

Free (for conference attendants) short courses will be offered for professional training on April 15, 2018. Three days of technical sessions (April 16–18, 2018) for oral and poster presentations are planned, in parallel with an exhibition of suppliers of experimental characterization equipment, and simulation and optimization softwares, demonstrating their latest features.

Accepted papers will be submitted for inclusion into **IEEE Xplore®** Digital Library. The **best papers** will be selected for publishing in Elsevier magazines on Microelectronics Reliability and Mechatronics. A selection of extended papers will be published in a special issue on Modeling, Simulation and Multi-Physical Experimentation of Micro and Nanosystems of a renowned journal of microtechnologies.

Subjects

- Multi-physics simulation (e.g. thermal, mechanical, thermo-mechanical, vibrational, coupled thermo-fluidic, coupled electro-mechanics, fluid structure interactions)
- Material characterisation, experiments and modelling
- Integrated process modelling
- Simulation-based optimisation, virtual prototyping in product and process design
- Advanced numerical and analytical simulation methodologies and tools
- Multiscale modelling and simulation
- Compact modelling and model order reduction
- Behavioural modelling
- Experimental methods for validation of simulation models
- Failure analysis and failure mode extraction
- Failure criteria and damage modelling for reliability prediction
- Prognostics and Health Monitoring
- Additive Manufacturing 3D Printing, 3D packaging
- Vibration : methods to derive the endurance strength under vibration, FE methods to derive the dynamic response under vibration, material characterization and modeling for FE models under vibration, vibration load profile derivation and transfer to FE models

Applications

- Electronic components, packaging and system integration for industrial, automotive, aerospace, energy, lightning, medicine, agriculture application
- 3-D microsystem packaging, heterogenic and hybrid technology
- Packaging for harsh environments, high temperature and high electrical power
- Piezoelectric, piezoresistive and functional ceramic sensors and components
- MEMS sensors and actuators
- Smart systems integration
- Flip-chip, BGA, CSP, Wafer-Level packages, MCM, Cu/low-k packages
- 3-D integration, TSV-Technology
- Opto-electronic packages, Opto-mechanical devices
- Nano-electronic mechanical devices
- Microfluidics

Important dates

- Abstract submission deadline: **October 1st, 2017**
- Notification of acceptance: December 20, 2017
- Full manuscript deadline: **March 18, 2018**