

Budapest, Hungary
25-27 September 2012

18th THERMINIC

International Workshop on

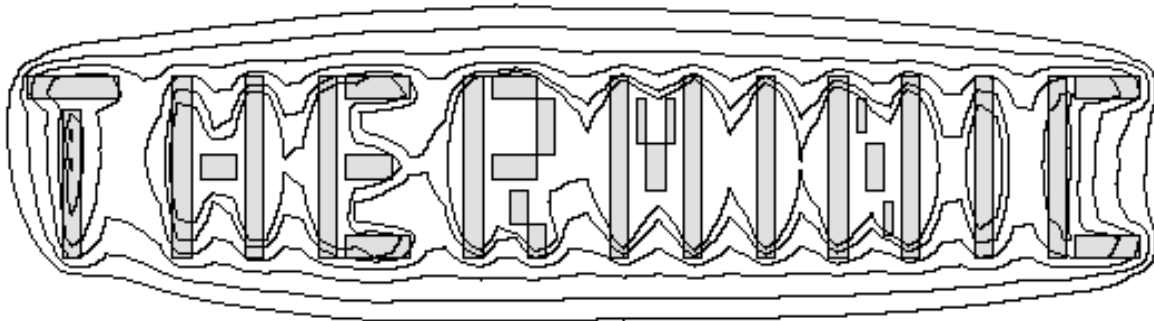
Thermal investigations
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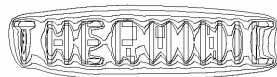
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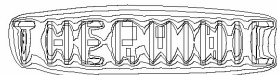
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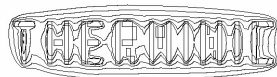
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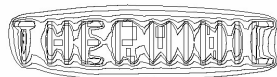
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PREFACE

The **THERMINIC Workshop** is an annual event that makes it possible for researchers from around the world to discuss essential and emerging thermal questions and best practices in the field of microelectronics. These questions are becoming ever more critical with the increasing element density of circuits and with the continual move toward nanotechnology. Dealing effectively with these trends calls for an array of thermal simulation, measurement, and management approaches. Thermal management is expected to become an increasingly dominating cost factor at all levels. The growing power dissipation and mobility of packaged microsystems raise new thermal challenges in the near horizon, making regular discussions among experts in these fields highly desirable. Finally, there is an increasing need for accurate assessment of the boundary conditions used in the analysis of electronic parts, which requires a concurrent solution of the thermal behaviour of a whole system.

Previous THERMINIC Workshops have been held in Grenoble (1995), Budapest (1996), Cannes (1997 and 1998), Rome (1999), Budapest (2000), Paris (2001), Madrid (2002), Aix-en-Provence (2003), Sophia Antipolis (2004), Belgirate (2005), Nice (2006), Budapest (2007), Rome (2008), Leuven (2009), Barcelona (2010), and Paris (2011).

This year, Workshop participants will address the “traditional” thermal management problems as well as thermal-stress-related-reliability issues, emerging novel materials, and advanced modelling and metrology systems, in both the micro- and optoelectronics fields. These issues, including various nanotechnology applications, are of significant importance and of high interest to the engineering community engaged in the field of thermal phenomena in “high-tech” systems.

The programme includes plenary invited talks by Prof. Ephraim Suhir on thermal stress failures in electronics and photonics systems, by Prof. Erik Janzén on silicon carbide as the power device for the future, and by Prof. Ali Shakouri on nanoscale electrothermal energy conversion devices. The programme also includes special sessions on: Dynamic thermometry, Smart power, Thermal stress, and the Terminator project. In total, the schedule comprises 38 oral presentations in 10 sessions, 8 poster presentations, and a vendor session.

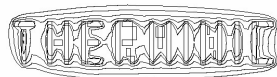
We would like to extend our sincere appreciation to the authors for their valuable contributions to the Workshop. We are also grateful to the members of the Programme Committee who have given of their time and expertise to review and help select the papers contained herein. We hope that you will find the contents of these Proceedings beneficial to your own work.

Márta Rencz
General Chair

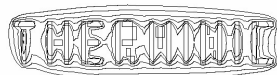
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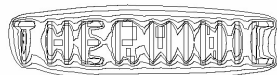
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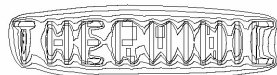
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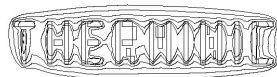
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