

Thermal Investigations of Integrated Circuits and Systems, THERMINIC'09

Microelectronics thermal experts from four continents met in the fall of 2009 at the 15th THERMINIC Workshop in Leuven, Belgium. The event was sponsored by the IEEE Computer Society Test Technology Technical Council and the CMP Laboratory, in cooperation with the IEEE Components, Packaging, and Manufacturing Technology Society, and the European Test Technology Technical Committee. The Workshop had participants from 25 countries.

At THERMINIC, formal workshop proceedings is not published, but it is a tradition that the most valuable papers of the workshop appear in special issues or special sections in leading international journals. These journals are selected according to the nature and scope of the workshop in the actual year. Two journals publish papers of the 15th THERMINIC workshop: this issue in JEP contains a small section and the *Microelectronics Journal* publishes a larger special section based on them. One further paper, Szabo et al., "Design of a Static TIM Tester" has been published already in the March 2010 issue of JEP.

The first paper of this special section authored by Garimella and Harirchian, "Boiling Heat Transfer and Flow Regimes in

Microchannels—A Comprehensive Understanding" presents recent advances achieved in the group of authors leading to better understanding of boiling in microchannels.

In the paper of Martinez-Galvan et al., "Film Thickness and Heat Transfer Measurements in a Spray Cooling System With R134a," experimental measurements and their conclusions are discussed. The measurements in a spray cooling test rig have been carried out for different heat fluxes in the heater and different volumetric spray fluxes of the refrigerant. A relationship has been found between the variation of the heat transfer coefficient and the film thickness along the spray boiling curve.

In the 3rd selected paper by Raghupathy et al. a boundary condition independent thermal model was created for an optoelectronic package, and validated by experiments. The presented method gives a very good case study for such exercises.

I hope that all the presented papers will provide useful information for the readers of JEP who are certainly interested in these important questions of package thermal management.

Marta Rencz
Guest Editor