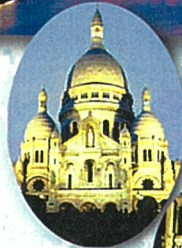
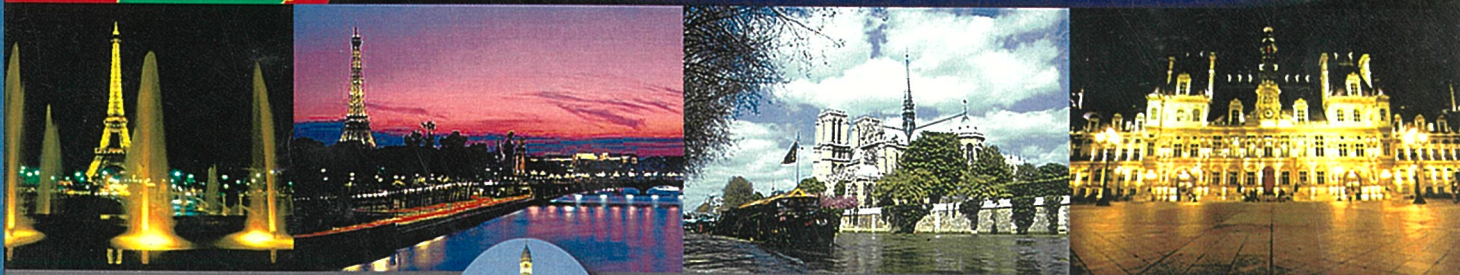
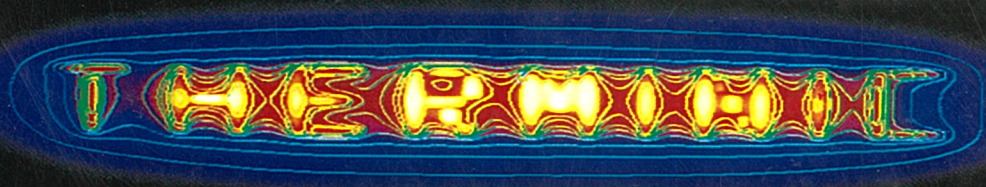


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Sponsored by the IEEE Computer Society Test Technology Technical Council and TIMA Laboratory in cooperation with the IEEE Components, Packaging, and Manufacturing Technology Society and with the DETERMIN Project supported by the European Commission.

Tuesday 25 September 2001

8:00	Registration	
9:30	Welcome address: B. Courtois, TIMA Laboratory, Grenoble, France	
9:40	Invited talk 1: High-Power Robust Semiconductor Electronics Technologies in the New Millennium K. Shenai, U. of Illinois, Chicago, USA Chair: V. Székely, BUTE, Budapest, Hungary	
10:20	Session 1: Dynamic Compact Models Chair: H. Pape, Infineon, Munich, Germany	
10:20	Y.C. Gerstenmaier ¹ , G. Wachutka ² ¹ Siemens AG, Munich, Germany ² Institute for Physics of Electrotechnology, Munich, Germany	Rigorous Model and Network for Transient Thermal Problems
10:40	W. Batty, A.J. Panks, S. David, R.G. Johnsonand, C.M. Snowden U. of Leeds, United Kingdom	Series Acceleration o a Compact Thermal Model and Fast Non Linear Optimisation of Electrothermal Device Design
11:00	T. Franke ¹ , U. Froehler ² ¹ Siemens AG, Munich, Germany ² Infineon, Munich, Germany	Boundary Independent Model for Multichip Packages
11:20	L. Codecasa, D. D'Amore, P. Maffezzoni Politecnico di Milano, Italy	Moment Matching Order Reduction of Discretized Thermal Network
11:40	Break	
12:00	Session 2: System Level Thermal Analysis Chair: K. Azar, Advanced Thermal Solutions, Inc., Norwood, USA	

12:00	J. Parry ¹ , J. Rantala ² , C. Lasance ³ ¹ Flomerics, Hampton Court, United Kingdom ² Nokia, Helsinki, Finland ³ Philips, Eindhoven, The Netherlands	Embedded Tutorial: Temperature and Reliability in Electronics Systems - The Missing Link ?
12:20	V. Eveloy ¹ , J. Lohan ¹ , P. Rodgers ² ¹ Galway-Mayo Institute of Technology, Ireland ² Advanced Thermal Solutions, Norwood, USA	On Numerical Predictive Accuracy for Electronic Component Heat Transfer in Forced Convection
12:40	H. Pape Infineon, Munich, Germany	Treatment of Convection and Radiation without CFD in Thermal Resistance Calculations
13:00	Lunch	
14:30	Vendor's session: B. Courtois, TIMA Laboratory, Grenoble, France	
15:30	Session 3: Advances in Package Cooling Solutions-I Chair: A. Ortega, U. Arizona, USA	
15:30	V. Sartre, M. Lallemand Centre de Thermique de Lyon, France	Embedded Tutorial: State of the Art in Theoretical Investigations on Micro Heat Pipes for the Thermal Control of Microelectronics
15:50	Y. Avenas ¹ , B. Mallet ¹ , C. Gillot ² , A. Bricard ⁴ , C. Schaeffer ¹ , G. Poupon ³ , E. Fournier ² ¹ LEGrenoble, France ² CNES, Toulouse, France ³ CEA/LETI, Grenoble, France ⁴ CEA/GRETh, Grenoble, France	Thermal Spreaders for High Heat Flux Power Devices
16:10	O. Karim, M. Hugon, M. Vergnes, C. Gillot, J-C. Crebier, C. Schaeffer Laboratoire d'Electrotechnique de Grenoble, France	Cooling Device 'Moducal' Thermal Characterisation
16:30	Break	
16:50	Posters session <i>Posters are introduced by one slide in 3 minutes each</i> Chair: M. Rencz, BUTE, Budapest, Hungary	
	P. Fürjes ¹ , Zs. Vizváry ² , Cs. Dücsó ¹ , I. Bársony ¹ ¹ Research Inst. for Technical Physics and Materials Science - MFA, Budapest, Hungary ² BUTE, Budapest, Hungary	Thermal Investigation on a Micro Gas-Flow Sensor
	N. Semmar, C. Boulmer-Leborgne GREMI, Orléans, France	Thermal Behaviour of Electric Component Coating Irradiated by a Laser Beam

	A.N. Shmyryeva ¹ , K.D. Scurtul ¹ , N.V. Starodub ² ¹ National TU of Ukraine "KPI", Kiev, The Ukraine ² Institute of Biochemistry of Ukrainian National Academy of Sciences, Kiev, The Ukraine	Temperature Sensors of Composition Thin Films Based of Cerium Oxide
	N.V. Starodub ¹ , A.N. Shmyryeva ² , K.D. Scurtul ² ¹ Institute of Biochemistry of Ukrainian National Academy of Sciences, Kiev, The Ukraine ² National TU of Ukraine "KPI", Kiev, The Ukraine	Thin-Film Temperature Sensors
	I. Khorunzhii ¹ , A. Ulyashin ¹ , R. Job ¹ , H. Gabor ¹ , W.R. Fahrner ¹ , D. Brunner ² , U. Peschek ² ¹ FernU., Hagen, Germany ² ANCeram GmbH & Co.KG, Bindlach, Germany	Raman Spectra Investigation for AlN Ceramics with Different Thermal Conductivity
	M. Janicki ^{1,2} , P. Kawka ^{1,2} , O. Leon ² , G. de Mey ² , A. Napieralski ¹ ¹ TU of Łódź, Poland ² Ghent U., Belgium	Investigation of Circuit Forced Convection Air Cooling in Low Speed Wind Tunnel
	E. Kehoe, R. Grimes, M. Davies U. of Limerick, Ireland	Mixed Convection Criteria for a Printed Circuit Board
	J.A. Liburdy Oregon State U., Corvallis, USA	Enhanced Heat Transfer Potential Using Jet Arrays and Contoured Surfaces
	Z. Suszynski TU of Koszalin, Poland	Infrared Investigation of Power Transistor
	D.G. Wang NCR Corp., San Diego, USA	Methodology for Junction Temperature Evaluation
	J. Altet ¹ , A. Rubio ¹ , S. Dilhaire ² , J-M. Rampnoux ² , S. Grauby ² , S. Jorez ² , L.D. Patino Lopez ² , W. Claeys ² , J-C. Batsale ³ ¹ U. Politècnica de Catalunya, Barcelona, Spain ² CMOPH/U. Bordeaux I, Talence, France ³ LEPT/ENSAM/CNRS, Talence, France	Characterisation of the Thermal Disturbance Generated by a Periodic Heat Source in an Integrated Circuit: Application to Defect Diagnosis
	X. Chauffleur ¹ , J-P. Fradin ¹ , F. Beaudoin ² , P.E. Perdu ² , R. Desplats ² , D. Lewis ³ ¹ Epsilon Ingénierie, Labège, France ² CNES-THALES laboratory, Toulouse,	Modeling Thermal Laser Stimulation

	France ³ IXL, U. Bordeaux 1, Talence, France	
	Zs. Vizváry ¹ , P. Fürjes ² , I. Bársony ² ¹ BUTE, Budapest, Hungary ² Research Inst. for Technical Physics and Materials Science - MFA, Budapest, Hungary	Thermomechanical Analysis And Optimisation Of Two Beam-Type Hotplates
	W. Batty ¹ , A.J. Panks ¹ , C.E. Christoffersen ² , S. David ¹ , R.G. Johnson ¹ , C.M. Snowden ¹ , M.B. Steer ² ¹ U. of Leeds, United Kingdom ² NCSU, Raleigh, USA	Fully Analytical Compact Thermal Model of Complex Electronic Power Devices and Packages in Coupled Electrothermal CAD
	V. d'Alessandro, N. Rinaldi U. of Naples "Federico II", Italy	Achieving Accuracy in Device and Circuit Electro-Thermal Simulation
	M. Checchetti Microtronics, Milano, Italy	Miniaturised High Power Electronics on THSs: The Indirect Advantages
18:30	Cocktail	

Wednesday 26 September 2001

8:30	Invited talk 2: The Use of H-Adiabatic in Electronics Cooling and other Applications R.J. Moffat , Stanford U., USA Chair: C.J.M. Lasance , Philips Research Laboratories, Eindhoven, The Netherlands	
9:10	Session 4: Advances in Package Cooling Solutions-II Chair: G. De Mey , Ghent U., Belgium	
9:10	S. Kalahasti, Y.K. Joshi U. of Maryland, College Park, USA	Performance Characterization of a Novel Flat Plate Micro Heat Pipe Spreader
9:30	G. Pandraud ¹ , V. Sartre ¹ , M. Lallemand ¹ , F. Michard ² ¹ Centre de Thermique de Lyon, France ² Alcatel Space Industries, Toulouse, France	Modeling of Heat Spreaders Micromachined in Silicon Substrates for Electronics Cooling
9:50	V. Travkin, K.H. Ivan Catton U. of California, Los Angeles, USA	Optimal Design of Heat Rejection Devices
10:10	A. Ortega U. of Arizona, USA	Augmentation of Slot Jet Impingement Cooling of Electronics by Introduction of Controlled Disturbances to the Flow
10:30	Break	
10:50	Panel, Dynamic compact modeling: Where are we and where to go ? Moderator: M. Rencz , MicRed, Budapest, Hungary Panelists: ◦ J. Parry, Hampton Court, United Kingdom	

	◦ M-N. Sabry, Mentor Graphics, Cairo, Egypt ◦ H. Pape, Infineon, Munich, Germany ◦ V. Székely, BUTE, Budapest, Hungary ◦ C.J.M. Lasance, Philips Research Laboratories, The Netherlands	
12:00	Lunch	
13:50	Session 5: Static Measurements Chair: P.E. Raad , Southern Methodist U., Dallas, USA	
13:50	J. Engel ¹ , E.G.T. Bosch ² , A.M. Zoutenbier ¹ ¹ CQM, Eindhoven, The Netherlands ² Philips Research, Eindhoven, The Netherlands	Embedded Tutorial: Uncertainty analysis
14:10	S. Dilhaire, S. Jorez, S. Grauby, L.D. Patino Lopez, J-M. Rampnoux, W. Claeys CPMOH/U. Bordeaux 1, France	Thermal Stress Analysis of Thermoelectric Devices Studied by Speckle Interferometry
14:30	S. Lopez-Buedo, J. Garrido, E. Boemo U. Autónoma de Madrid, Spain	Measurement of FPGA Die Temperature Using Run-time Reconfiguration
14:50	K. Tworus, G. De Mey Ghent U., Belgium	New Approach to Thermal Monitoring of Integrated Circuits
15:10	Z. Suszynski, R. Arsoba, P. Majchrzak TU of Koszalin, Poland	Thermal Diagnostic of Power Thyristor
15:30	C. Brusca ¹ , A. Caddemi ² , N. Donato ² ¹ U. di Palermo, Italy ² U. di Messina, Italy	On Wafer Thermal Investigation of GaAs-Based Microwave Transistors by a Thermoelectric System
15:50	Break	
16:10	Session 6: Static Compact Models Chair: J. Parry , Flomerics, Hampton Court, United Kingdom	
16:10	E.G.T. Bosch Philips, Eindhoven, The Netherlands	Thermal compact models: An alternative approach
16:30	M-N. Sabry Mentor Graphics, Cairo, Egypt	Compact Thermal Models for Electronic Systems
16:50	Y.C. Gerstenmaier ¹ , H. Pape ² , G. Wachutka ³ ¹ Siemens AG, Munich, Germany ² Infineon, Munich, Germany ³ Institute for Physics of Electrotechnology, Munich, Germany	Rigorous Model and Network for Stationary Thermal Problems
17:10	V. Gatto, O. Lottin, Y. Scudeller Laboratoire de Thermocinétique, Nantes, France	3 D Thermal compact model of flexible interconnection systems
17:30	Y. Tal, A. Nabi Heat and Mass Transfer Group, Haifa, Israel	Analytic Derivation of Junction-to-Board Thermal Resistance According to PERIMA

19:00	Banquet "Le Ciel de Paris"	
Thursday 27 September 2001		
8:30	Invited talk 3: Emerging New Roles of CFD Simulation in Competitive Market Environment W. Nakayama, ThermTech International, Kanagawa, Japan Chair: M. Rencz, BUTE, Budapest, Hungary	
9:40	Half-day on Dynamic Measurements	
9:40	Chair: C.J.M. Lasance, Philips Research Laboratories, Eindhoven, The Netherlands Introduction: C.J.M. Lasance, Philips Research Laboratories, Eindhoven, The Netherlands This half-day is organized by the partners of the PROFIT European Project to discuss various issues dealing with Dynamic measurements. A discussion time will follow the presentations of papers and demos.	
9:50	J. Altet ¹ , S. Dilhaire ² , J-M. Rampnoux ² , A. Rubio ¹ , S. Grauby ² , S. Jorez ² , L.D. Patino Lopez ² , W. Claeys ² , S. Volt ³ ¹ U. Politècnica de Catalunya, Barcelona, Spain ² CMOPH/U. Bordeaux I, Talence, France ³ Laboratory of Thermal Studies/ENSMA, Futuroscope, France	Four Different Approaches for the Measurement of the IC Surface Temperature: Application to Thermal Testing
10:10	V. Székely ¹ , M. Rencz ² , L. Pohl ² ¹ BUTE, Budapest, Hungary ² MicReD Ltd, Budapest, Hungary	Novelties in the Theory and Practice of Thermal Transient Measurements
10:30	H. Pape, D. Schweitzer Infineon, Munich, Germany	Thermal Impedance of Packages in Dual Cold Plate Environments
10:50	Break	
11:10	M. Rencz ¹ , V. Székely ² ¹ MicReD Ltd, Budapest, Hungary ² BUTE, Budapest, Hungary	Determining Partial Thermal Resistances in a Heat-Flow Path with the Help of Transient Measurements
11:30	S. Orain ¹ , Y. Scudeller ¹ , T. Brousse ² ¹ Thermique-Energétique, Nantes, France ² Laboratoire de Génie des Matériaux, Nantes, France	Investigation of Structural Effects on Thin Film Thermal Conductivity
11:50	M.G. Burzo, P.L. Komarov, P.E. Raad Southern Methodist U., Dallas, USA	Influence of a Metallic Absorption Layer on the Quality of Thermal Conductivity Measurements by the Transient Thermo-Reflectance Method
12:10	Discussion	
12:45	Lunch	

14:15	Session 7: Thermal and Electro-Thermal Simulation	
	Chair: M-N. Sabry , Mentor Graphics, Cairo, Egypt	
14:15	J. Willemen, M. Gerstenberg, B. Fall, S. Lindenkreuz Robert Bosch GmbH, Reutlingen, Germany	Thermsim: the Integrated Electrothermal ASIC Design Environment
14:25	A. Poppe ¹ , M. Rencz ¹ , V. Székely ² , G. Mezei ² ¹ MicReD Ltd, Budapest, Hungary ² BUTE, Budapest, Hungary	Development of a Platform Independent Electro-Thermal Simulator
14:45	M. Macchiaroli, N. Rinaldi, V. d'Alessandro, G. Breglio, P. Spirito U. of Naples "Federico II", Italy	A New Electro-Thermal Simulation Tool for the Analysis of Bipolar Devices and Circuits
15:05	B. Maj, A. Augustin, A. Kostka TU Darmstadt, Germany	Heat Propagation in H-Bridge Smart Power Chips under Switching Conditions
15:25	J. Huertgen ¹ , P. Hille ¹ , A. Kostka ² ¹ DaimlerChrysler AG, Frankfurt, Germany ² TU Darmstadt, Germany	Modeling of Leakage Currents in the High Temperature Range of CMOS-Devices in Silicon Based Technologies
15:45	Closing remarks	

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