



MOCAS^T

INTERNATIONAL CONFERENCE ON
MODERN CIRCUITS AND SYSTEMS TECHNOLOGIES

4th INTERNATIONAL CONFERENCE ON MODERN CIRCUITS AND SYSTEMS TECHNOLOGIES

May 14-15, 2015

Aristotle University Dissemination Center (ΚΕΔΕΑ)
Thessaloniki

PROGRAM



Organized by the FP7 Marie Curie IAPP Project FTK, the Greek National projects
NANOTRIM and NANOMOS and the Micro & Nano Scientific Society

Thursday, May 14

8:45 - 9:25	Registration
9:25 - 9:45	Welcome Speech from Organizers and University Authorities: <i>Prof. S. Nikolaidis</i> , – Department of Physics, AUTH, Greece <i>Prof. Th. Laopoulos</i> – Vice Rector, AUTH, Greece
9:45-10:45	Keynote Speech <i>"Electrical Characterization of advanced CMOS devices"</i> Prof. Gerard Ghibaudo – IMEP-LAHC, MINATEC-INPG, Grenoble, France Chair: Prof. Charalabos Dimitriadis
10:45-11:20 Coffee Break	
Session 1: The NANOMOS Project Chair: Prof. Charalabos Dimitriadis	
11:20-11:40	<i>"14nm Fully Depleted SOI: Technology, Devices and Scalability"</i> F. Andrieu , S. Morvan, R. Berthelon, M. Cassé, O. Weber, E. Josse, M. Vinet, M. Haond CEA-LETI, Minatec campus, 17 rue des Martyrs, 38054 Grenoble, France STMicroelectronics, 850 rue Monnet, F-38926 Crolles
11:40-12:00	<i>"High performance on-chip RF and mm-wave passive devices on a locally formed porous substrate on the Si wafer"</i> Dr. Androula G. Nassiopoulou NCSR Demokritos, Institute of Nanoscience and Nanotechnology (INN), Aghia Paraskevi, Athens, Greece
12:00-12:20	<i>"Ultra-Low Voltage and Ultra-Low Power Design Aspects of Analog and RF ICs in Advanced CMOS"</i> Prof. Matthias Bucher School of ECE, Technical University of Crete, Greece
12:20-12:40	<i>"Hot carrier degradation modeling of short-channel n-FinFETs suitable for circuit applications"</i> I. Messaris , T.A. Karatsori, N. Fasarakis, S. Nikolaidis, G. Ghibaudo, C. A. Dimitriadis Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece IMEP-LAHC, Minatec, Parvis Louis Néel, 38016 Grenoble Cedex 16, France
12:40-13:00	<i>"Development of Analytical Compact Drain Current Model For 28nm FDSOI MOSFETs"</i> T.A. Karatsori , A. Tsormpatzoglou, C. G. Theodorou, E.G. Ioannidis, S. Haendler, N. Planes, G. Ghibaudo, C.A. Dimitriadis Department of Physics, Aristotle University of Thessaloniki, Greece, IMEP-LAHC Lab. in Minatec, Parvis Louis Néel, 38016 Grenoble Cedex 16, France.
13:00-14:20 Lunch Break and Poster presentation	
Session 2: The FTK project Chair: Dr. Calliope-Louisa Sotiropoulou	
14:20-14:40	<i>"FTK IAPP project: a new approach to real time image processing"</i> Prof. Mauro Dell' Orso Universita' di Pisa, Italy

14:40-15:00	<p>"An FPGA-based Test-Bench for the design verification of the FTK AMchip" Dr. Ali Mirzaei CNRS, Paris, France</p>
15:00-15:20	<p>"Highly Parallelized Pattern Matching Execution for Real Time Image Processing" Mr. Pierluigi Luciano Universita' Degli Studi Di Cassino e Del Lazio Meridionale and INFN Pisa, Italy</p>
15:20-15:40	<p>"The Fast Tracker Processing Unit future evolution" Mr. Christos Gentsos Aristotle University of Thessaloniki, Greece</p>
15:40-16:00	<p>"R & D in Electronics & Industrial Production: Prisma Electronics' contribution to FTK Project" Mr. Dimitris Dimas Prisma Electronics, Greece</p>
16:00-16:30	<p align="center">Coffee Break and Poster presentation</p>
<p align="center">Session 3: IEEE activities and Technology Trends Chair: Dr. Sotirios Goudos</p>	
16:30-16:45	<p>"Activities of the IEEE Greece CAS/SSC Joint Chapter" Prof. Alkis Hatzopoulos IEEE Greece CAS/SSC Joint Chapter Chair</p>
16:45-17:00	<p>"Presentation and activities of the IEEE A.U.Th. Student Branch" Mr Avraam Kyriakidis IEEE AUTH Student Branch Chair</p>
17:00-17:20	<p>"EXOMARS Mission: Developing a Vision System for Future Autonomous Space Exploration Robots" Prof. Dimitrios Soudris National Technical University of Athens (NTUA), School of Electrical & Computer Engineering, Greece</p>
17:20-17:40	<p>"FTK Input Mezzanine and Data Formatter for the Fast Tracker at ATLAS" T. Iizawa, A. Annovi, M. Berreta, R. Brown, M. Getta, S. Gaitatzis, N. Ilic, N. Kimura, K. Kordas, T. Mitani, Y. Okumura, C. Petridou, C.L. Sotiropoulou, L. Tompkins, K. Yorita Waseda University, INFN Sezione di PISA, INFN Laboratori Nazionali di Frascati, Stanford University, Arithotle University of Thessaloniki, Chicago University</p>
17:40-18:00	<p>"Spectrum Allocation using Evolutionary Algorithms" Thomas I. Tegou and Sotirios K. Goudos Department of Physics, Aristotle University of Thessaloniki, Greece</p>
21:00	<p align="center">Conference Dinner (by invitation only)</p>

Friday, May 15

9:45 - 10:00	Registration
10:00-11:00	Keynote Speech
	<p><i>"Efficient prototyping and manufacturing of medical instrumentation through customizable electronic components"</i> Dr. Athanasios Demiris, micro2gen, Athens, Greece</p> <p style="color: #0070c0;">Chair: Ms Christina Galani</p>
11:00-11:30	Coffee Break
	Session 4: Technology Trends Chair: Assist. prof. Dimitrios Tassis
11:30-11:50	<p><i>"Is it time for EDA to level up to the cloud?"</i> Dr. Minas Dasygenis, Lecturer <i>Department of Information in Engineering & Telecommunications, University of Western Macedonia, Greece</i></p>
11:50-12:10	<p><i>"Efficiency of Cryptography for Multi-Algorithm Computation on Dedicated Structures"</i> Nicolaos Sklavos, João Carlos Resende, Ricardo Chaves, Francesco Regazzoni, Osnat Keren <i>KNOSSOSnet Research Group, Computer Informatics & Engineering Department, Technological Educational Institute of Western Greece, Greece</i> <i>INESC-ID, IST, University of Lisbon, Portugal</i> <i>Bar Ilan University, Israel</i> <i>ALaRI Institute, University of Lugano, Switzerland</i></p>
12:10-12:30	<p><i>"Mixed Signal SoC substrate coupling"</i> Dr. Thomas Noulis, Lecturer <i>Department of Physics, Aristotle University of Thessaloniki, Greece</i></p>
12:30-12:50	<p><i>"Displays technology : current and future prospective and challenges"</i> Dr. Ilias Pappas <i>Department of Physics, Aristotle University of Thessaloniki, Greece</i></p>
12:50-13:10	<p><i>"A compact Delay Model for OTFT Switches"</i> Carol de Benito, Rodrigo Picos, Spyridon Nikolaidis, Magali Estrada <i>Physics Dept, Universitat de les Illes Balears, Spain</i> <i>Department of Physics, Aristotle University of Thessaloniki, Greece</i> <i>SEES, CINVESTAV-IPN, Mexico</i></p>
13:10-14:00	Light Lunch and Coffee Break
	Session 5: The NANOTRIM project Chair: Mr Ioannis Messaris
14:00-14:20	<p><i>"NanoTrim A Tool To Reduce Design Cycle Time"</i> Mr. Michalis Tsiambas <i>HELIC S.A., Athens, Greece</i></p>
14:20-14:40	<p><i>"Formal Verification Flow for Low Power Library Development"</i> Prof. John Moondanos, <i>Department of Electrical & Computer Engineering,</i> <i>University of Thessaly, Greece</i></p>

14:40-15:00	<p>"CCSOpt: A continuous Gate-Level Resizing Tool" D. Ntioudis, Ch. Kalonakis, P. Giannakou, Ch. Antoniadis, G. Stamoulis IRETETH/CERTH, Volos, Greece Department of Electrical and Computer Engineering , University of Thessaly, Greece</p>
15:00-15:20	<p>"GDS2trim: Physical Layout Manipulation Utility for continuous transistor sizing" P. Giannakou, Ch. Antoniadis, Ch. Kalonakis, D. Dioudis, G. Stamoulis, IRETETH/CERTH, Volos, Greece Department of Electrical and Computer Engineering , University of Thessaly, Greece</p>
15:20-15:40	<p>"CMOS Digital Gate Pre-Characterization Using Equivalent Inverters" Ch. Galani, A. Tzormpatzoglou, I. Messaris, M. Ntogramatzi, N. Karagiorgos, S. Goudos, S. Nikolaidis Department of Physics, Aristotle University of Thessaloniki, Greece</p>
15:40-16:00	<p>Coffee Break</p>
<p>Session 6: Technology Trends Chair: Ms Maria Ntogramatzi, Ms Theano Karatsori</p>	
16:00-16:20	<p>"High-Energy Micro-grain Silicon Anodes for Lithium-Ion Technology" F. Farmakis, P. Selinis, C. Elmasides, N. Georgoulas, M. Hagen, P. Fanz, A. Kovacs, S. Schiestel NANOMOS Project Democritus University of Thrace, Xanthi, Greece Fraunhofer ICT, Karlsruhe, Germany Limedion GmbH, Mannheim, Germany</p>
16:20-16:40	<p>"Surface-mount device prototyping in education: A feasible alternative to conventional through-hole practice" Dr. Vassilis K. Papanikolaou Civil Engineering Department, Aristotle University of Thessaloniki, Greece</p>
16:40-17:00	<p>"ICT-enhanced teaching of electrical circuits" S. Stavriniades, A. Taramopoulos, E. Hatzikraniotis, D. Psillos University of Thessaly, General Lyceum of N. Zichni, Aristotle University of Thessaloniki, Greece</p>
17:00-17:15	<p>"Electronics Design and Layout Complexity of the ATLAS New Small Wheels" Dr. George Iakovidis Brookhaven, National Laboratory, NY, USA</p>
17:15-17:30	<p>"Level-1 Data Driver Card of the ATLAS New Small Wheel Upgrade" Th. Alexopoulos, P. Gountoumis, A. Koulouris, G. Iakovidis, Department of Physics National Technical University of Athens, Greece, Brookhaven National Laboratory, NY, USA</p>
17:30- 17:40	<p>Student poster Prize delivery Chair: Dr. Calliope-Louisa Sotiropoulou</p>
<p>End of Workshop</p>	