







CALL FOR PAPERS MIXDES 2015

22nd International Conference Mixed Design of Integrated **Circuits and Systems** Toruń, Poland, June 25-27, 2015 http://www.mixdes.org





Organised by:

Department of Microelectronics and Computer Science, Technical University of Łódź, Poland Institute of Microelectronics and Optoelectronics, Warsaw University of Technology, Poland ROS3D Consortium, Institute of Science and Technology Stipendium Military Institute of Aviation Medicine, Poland

in co-operation with:

Poland Section IEEE - ED & CAS Chapter

Section of Microelectronics and Section of Signals, Electronic Circuits and Systems of the Committee of Electronics and Telecommunication of the Polish Academy of Sciences Commission of Electronics and Photonics of Polish National Committee of International Union of Radio Science

INVITED PAPERS

Challenges in Design-oriented Modeling in Biology Christophe Lallement (University of Strasbourg, France)

Energy Efficency Optimization for Digital Applications in 28nm UTBB FDSOI Technology Amara Amara (ISEP, France)

Formal Methods - Support or Scientific Decoration in Software Development? Tomasz Szmuc (AGH University of Science and Technology, Poland)

Prospect and Outlook of Electrostatic Discharge (ESD) Protection in Emerging Technologies Juin J. Liou (University of Central Florida, USA)

Silicon PhotoMultipliers: Introducing the Digital Age in Low Light Detection Prof. Massimo Caccia (Universita' dell'Insubria, Italy)

PAPER SUBMISSION

Full papers should be submitted to the Organising Committee only in electronic form (MS Word, OpenOffice Writer, Rich Text Format, LaTeX or PDF document). The required format is available on the Conference Web page. Authors are asked to indicate the topic into which their papers fall. Papers presented at the conference will be printed in the proceedings directly from the files submitted by the authors.

Deadline for receipt of papers: March 2nd, 2015

REGULAR SESSIONS

Thermal Issues in Microelectronics

Analysis and Modelling of ICs and Microsystems

Microelectronics Technology and Packaging Testing and Reliability

Power Electronics

Signal Processing

Embedded Systems Medical Applications Student Projects

Design of Integrated Circuits and Microsystems Design methodologies. Digital and analogue synthesis. Hardware-software codesign. Reconfigurable hardware. Hardware description languages. Intellectual property-based design. Design reuse.

> Thermal and electro-thermal modelling, simulation methods and tools. Thermal mapping. Thermal protection circuits.

> Simulation methods and algorithms. Behavioural modelling with VHDL-AMS and other advanced modelling languages. Microsystems modelling. Model reduction. Parameter identification.

New microelectronic technologies. Packaging. Sensors and actuators.

Design for testability and manufacturability. Measurement instruments and techniques.

Design, manufacturing and simulation of power semiconductor devices. Hybrid and monolithic Smart Power circuits. Power integration. Wide band gap devices.

Digital and analogue filters, telecommunication circuits. Neural networks. Artificial intelligence. Fuzzy logic. Low voltage and low power solutions.

Design, verification and applications.

Medical and biotechnology applications. Thermography in medicine.

SPECIAL SESSIONS

Biomedical Measurement Technologies

organized by Dr. Olaf Truszczyński, Prof. Marek Prost (Military Institute of Aviation Medicine, Poland) and Prof. Witold Pleskacz (Warsaw University of Technology, Poland)

Issues of Stereoscopic 3D Technologies and Image Acquisition in Current Research and Development

organized by ROS3D Consortium, Institute of Science and Technology Stipendium

Open Source Compact/SPICE Modeling

organised by Dr. Daniel Tomaszewski (Inst. of Electron Techn., Poland) and Dr. Władysław Grabiński (GMC Suisse, Switzerland)

INTERNATIONAL PROGRAMME COMMITTEE

Prof. M. Adamski University of Zielona Góra, Poland Prof. M. Bucher Technical University of Crete, Greece Universitat Politecnica de Catalunya, Spain Prof. J. Cabestany Prof. J.J. Charlot Jean Jacques Charlot Consulting, France Prof. Z. Ciota Lodz University of Technology, Poland LAAS - CNRS, Toulouse, France Prof. J. Collet Prof. A. Dąbrowski Poznań University of Technology, Poland Prof. G. De Mey University of Gent, Belgium (Vice-Chairman) Prof. A. De Vos University of Gent, Belgium Prof. J. Deen McMaster University, Canada Prof. A. Filipkowski Warsaw University of Technology, Poland Dr. D. Foty Gilgamesh Associates, USA Prof. M. Glesner Technische Hochschule Darmstadt, Germany Prof. L. Golonka Wrocław University of Technology, Poland Dr. W. Grabiński GMC. Switzerland Prof. P. Gryboś AGH University of Science and Technology, Kraków, Poland Prof. V. Hahanov Kharkiv National University of Radioelectronics, Ukraine Prof. A. Handkiewicz Poznań University of Technology, Poland Aristotle University of Thessaloniki, Greece Prof. A. Hatzopoulos Dr. S. Hausman Lodz University of Technology, Poland Prof. A. Jakubowski Warsaw University of Technology, Poland Prof. A. Kobus Institute of Electron Technology, Warsaw, Poland Prof. A. Kos AGH University of Science and Technology, Kraków, Poland Dr. Prof. W. Kuźmicz Warsaw University of Technology, Poland (Programme Chairman) Dr. Prof. M. Lobur Lviv Polytechnical National University, Ukraine Dr. M.M. Louerat Université Pierre et Marie Curie, Paris, France Prof. T. Łuba Warsaw University of Technology, Poland Prof. B. Macukow Warsaw University of Technology, Poland Prof. J. Madrenas Universitat Politecnica de Catalunya, Spain Dr. S. Yoshitomi Prof. A. Martinez LAAS - CNRS, Toulouse, France (Honorary Chairman) Prof. J. Zarebski Prof. A. Materka Lodz University of Technology, Poland Prof. M. Zubert Prof. W. Mathis University of Magdeburg, Germany

Prof H.S. Momose Toshiba Corp., Japan Prof. J.M. Moreno Universitat Politecnica de Catalunya, Spain Dr. M. Napieralska Lodz University of Technology, Poland Prof. A. Napieralski Lodz University of Technology, Poland (General Chairman) Prof. J. Nishizawa Semiconductor Research Institute, Japan Dr. J.L. Noullet INSA de Toulouse, France Prof. M. Ogorzałek AGH University of Science and Technology, Kraków, Poland Prof. L. Opalski Warsaw University of Technology, Poland Prof. A. Pfitzner Warsaw University of Technology, Poland Prof. W. Pleskacz Warsaw University of Technology, Poland Dr. B.F. Romanowicz Nano Science and Technology Institute, USA Prof. J.A. Rubio Universitat Politecnica de Catalunya, Spain Prof. J. Rutkowski Silesian University of Technology, Poland Prof. A. Rybarczyk Poznań University of Technology, Poland Swiss Federal Institute of Technology, Switzerland Dr. J.-M. Sallese Prof. D. Sankowski Lodz University of Technology, Poland Prof. N. Stojadinović University of Niš, Serbia Prof. V. Székely Technical University of Budapest, Hungary Prof. T. Szmuc AGH University of Science and Technology, Kraków, Poland Prof. G. Szymański Poznań University of Technology, Poland Prof. M. Tadeusiewicz Lodz University of Technology, Poland D. Tomaszewski Institute of Electron Technology, Warsaw, Poland P. Tounsi INSA de Toulouse, France M. Turowski Robust Chip Inc., USA Prof. R. Ubar Tallinn Technical University, Estonia Prof. G. Wachutka Technische Universität München, Germany Prof. K. Wawryn Technical University of Koszalin, Poland Prof. B. Więcek Lodz University of Technology, Poland

Toshiba Corp., Japan

Gdynia Maritime University, Poland

Lodz University of Technology, Poland

ORGANISING COMMITTEE

Prof. A. Napieralski (Chairman)
Dr. M. Orlikowski (Secretary)
Dr. M. Napieralska (Vice-Chairman)
Dr. G. Jabłoński

M. Piotrowicz

Dr.

Dr. G. Jabłoński Mr. P. Nowak

Mr. Jakub Wawrzyniak Institute of Science and Technology Stipendium, Poland

Prof. W. Kuźmicz Institute of Micro- and Optoelectronics, Warsaw University of Technology, Poland

INQUIRIES

Department of Microelectronics and Computer Science, Lodz University of Technology, Poland

Dr. Mariusz Orlikowski (Conference Secretary)
Lodz University of Technology
Department of Microelectronics and Computer Science
ul. Wólczańska 221/223
90-924 Łódź, Poland

tel.: +48 604397239, fax: +48 426360327 e-mail: mixdes2015@dmcs.p.lodz.pl