2011 Semiconductor Conference Dresden

Technology, Design, Packaging, Simulation and Test

International Conference, Workshop and Table-top Exhibition

September 27 to 28, 2011 - Dresden, Germany

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Welcome Note from Chair of SCD 2011

Dear Friends and Colleagues,

it is a big pleasure for me to welcome you to the IEEE Semiconductor Conference Dresden (SCD) 2011. This year, the program includes plenary sessions, technical papers, poster presentations, a student event and an exhibition. The program covers circuit and system design, packaging, simulation and modeling, measuring and testing, semiconductor materials, technologies and fabrication. You have the opportunity to meet leading players and experts from all over the world. Dresden is well known as one of the largest microelectronic centers in the world. However, Dresden offers much more than sophisticated technologies. Do not miss to visit the beautiful old city centre and other sightseeing highlights such as the Elb-Schloesser, Meissen, Schloss Pillnitz or Schloss Moritzburg. If you have time you may go for an event in one of the concert halls or a hiking trip in the Saechsische Schweiz (30 min by train).

Let’s meet for a drink during the social event! I’m glad that one of the most talented jazz bands in Saxony will present their latest album.

I would like to thank all the persons who have contributed to the successful organization of this event. My special thanks go to Georg Schmidt, Joachim Burghartz, Robert Weigel, Thomas Geßner, Gerhard Fettweis and Dietmar Kissinger for their strong commitments.

Have a great time during the conference and in Dresden!

With best regards,
Frank Ellinger

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F. Ellinger, Technische Universitaet Dresden

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Hermann Eul,
President Intel Mobile Communications

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Local Arrangement
V. Staab, GEROTRON Communication

Exhibit Chairman
G. Schmidt, GEROTRON Communication

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GEROTRON COMMUNICATION GMBH

Venue:
TECHNISCHE UNIVERSITÄT DRESDEN

Technische Universitaet Dresden
Hoersaalzentrum
Bergstr. 64
01069 Dresden, Germany

Conference Content

Dedicated to advances, research, development and applications in the area of wafer manufacturing, circuit design, assembling and system engineering, and radio frequency integrated circuits, technologies and applications as the focus of this year, the overall content of SCD 2011 includes, but is not limited to:

- Circuit and System Design Packaging
- Simulation and Modeling
- Measuring and Testing
- Fabrication, Automation and Reliability
- Semiconductor Materials and Technologies
- Clean Room equipment and Services
- Scientific Paper Presentations (Oral and Interactive Forum)
- Workshops, Tutorials, and Short Courses
- Exhibition and Trade Show
- Industrial Forum
- Networking with Leading Experts from Industry and Universities
- Social Reception

Corresponding applications are in the areas of microwaves, mobile communications, high speed interconnects, navigation, devices for measurements and testing, wireless networks, RFID, optical communication, automotive electronic, memory modules, sensor networks, remote keyless entry, multi-core microprocessors, etc.

Major Topics

Integrated Circuit and System Design:
Mixed-signal, analogue and digital circuits and systems for high speed and/or low power consumption, adaptive power management, RF up to sub-THz, low costs, and advanced performance and density, circuits in More than Moore and Beyond Moore technologies.

Interconnection Technologies:
Wire bonding, flip chip (eutectic/lead-free solders), solder replacement flip chip (ICP, ACP, ACF, NCP), under bump metallurgy, high density substrates, microvia, build-up technologies, substrate metallurgy, embedded passives & actives, wafer/device level, MEMS, 3-D and novel interconnects.

Advanced System and Wafer Level Packaging:
New packaging technologies for single chip, multi-chip, wafer level, power and stacked-die packages addressing fine pitch, high I/O and performance issues, low loss interconnects and bonding techniques.

Optical Devices and Photonics:
Optical component assemblies, electro-optical modules, waveguides, silicon based photonic devices, organic devices.

Semiconductor Technologies, Materials and Processes:
CMOS, SiGe, More than Moore (silicon on insulator, strained silicon, multi-gate transistors) and Beyond Moore including carbon nano tubes, silicon nanowire, organic, polymer and ink-jet printed electronics, power devices (GaN, GaP), advances and application of adhesives, encapsulants, underfills, solder alloys, halogen-free materials, dielectrics, thin films, ceramics, composites, nano-materials, optical materials and characterization techniques, wafer (prime) production.

Assembly and Manufacturing Technologies:
Wafer bumping and thinning, process characterization, cost and cycle time reduction, etc..

Measuring and Testing:
Electrical testing, testing strategies and protocols, physical characterization for process development and process control.

Quality and Reliability:
Component, board and system level reliability assessment, failure analysis, interfacial adhesion, accelerated testing and models, component and system qualification.

Modeling and Simulation:
EDA, TCAD, electrical, thermal, thermo-mechanical, reliability, optical, modeling and simulation for devices, component and system level applications.

Track 1	Tuesday, September 27, 2011	
8.30 - 8.40	**Conference opening**	**Chair: Frank Ellinger; Technische Universitaet Dresden**
	Plenary Session	**Chair: Frank Ellinger; Technische Universitaet Dresden**
8.40 - 9.20	H. Eul, Intel Mobile Communications	The Proliferation of Mobile -> New Challenges for the Semiconductor Industry
9.20 - 10.00	G. Teepe, GLOBALFOUNDRIES	Transformations of the Design Ecosystem - a Foundry Perspective
10.00 - 10.40	J.-M. Chery, ST Microelectronics	Future Challenges and Perspectives for Advanced Semiconductor Manufacturing
10.40 - 11.20	Coffee Break at Exhibition	
	Session 1.1 „Devices and Circuits I“	**Chair: Roland Thewes; Technische Universitaet Berlin**
11.20 - 11.40	Y. Zhang, J. Burghartz; Institute for Microelectronics Stuttgart	Compact, Infinite Input Resistance, Wide Receiving Range, High-to-Low Voltage Receiver Circuits Based on Novel One-DMOS-FET Linear Level-Shifting
11.40 - 12.00	M. Mailand, S. Getzlaff, D. Breitmeyer, R. Richter, U. Meyer, E. Boehme, A. Krasselt; ZMDI, Zentrum Mikroelektronik Dresden , Business Line Medical & SSC	A Flexible, Programmable Sensor Signal Conditioning IC for High-Precision Smart Sensors
12.00 - 12.20	C. Wiegand[1,2], C. Hangmann[2], C. Hedayat[2], U. Hilleringmann[1,2]; [1] University of Paderborn, Department of Sensor Technology [2] Fraunhofer ENAS, Department Advanced System Engineering (ASE)	Modeling and Simulation of Arbitrary Ordered Nonlinear Charge-Pump Phase-Locked Loops
12.20 - 13.20	Lunch Break	
	Session 1.2 „Device Characterization“	**Chair: Simon Deleonibus; CEA-Leti**
13.20 - 14.00	J.J.M. Zaal, W.D. van Driel; Philips Lighting - LightLabs	Reliability of Large Systems (Invited Talk)
14.00 - 14.20	M. Hippler[1], S. Streit[1], J. Lehmann[1], W. Skorupa[1], M. Helm[1], H. Schmidt[1], J. M. J. Lopes[2], J.Schubert[2], S. Mantl[2], H.-P. Huber[3], F. Kienberger[4]; [1] HZDR, Institut fuer Ionenstrahlphysik und Materialforschung, [2] Peter Gruenberg Institute 9 and JARAFIT, Research Center Juelich, [3] Christian Doppler Laboratory for Nanoscopic Methods in Biophysics, University of Linz, [4] Agilent Technologies	Nanoanalysis of Lanthanum Scandate MOS Capacitors Addressing Reliability after Local Current Flow
14.20 - 14.40	R. Lerner, K. Schottmann, G. Kittler Proc.- Dev EF; X-FAB Semiconductor Foundries	Device Engineering for a Modular 650 V Transistor Assortment
14.40 - 15.00	T. Baldauf[1], A. Wei[2], T. Herrmann[2], S. Flachowsky[2], R. Illgen[2], J. Hoentschel[2], M. Horstmann[2], W. Klix[1], R. Stenzel[1] [1]HTW-Dresden, [2] GLOBALFOUNDRIES Dresden Module One LLC	Suppression of the Corner Effects in a 22 nm Hybrid Tri-Gate/ Planar Process
15.00 - 15.40	Coffee Break at Exhibition	
	Session 1.3 „High Speed Systems“	**Chair: Roland Thewes; Technische Universitaet Berlin**
15.40 - 16.20	H. Zirath, Chalmers University	Integrated Receivers for Imaging and Communication Applications above 100 GHz (Invited Talk)
16.20 - 16.40	S. X. Mou, M. Kaixue, Y. K. Seng, B. K. Thangarasu, N. Mahalingam; Circuits and Systems Division, Nanyang Technological University Singapore	A DC to 30GHz Ultra-Wideband CMOS T/R Switch
16.40 - 17.00	R. Wolf, F. Ellinger, W. Cai Chair for Circuit Design and Network Theory Technische Universitaet Dresden	Ultra Low-power CMOS Pulse Generator for Ultra Wideband Impulse Radio
17.00 - 17.20	J.-R. Kropp[1], J. A. Lott[1], N. N. Ledentsov[1], P. Otruba[2], C. Knochenhauer[3], F. Ellinger[3] [1] VI Systems GmbH; [2] EZconn Czech; [3] Chair for Circuit Design and Network Theory, Technische Universitaet Dresden	25 Gb/s Transmission at 850 nm on Multimode Fiber with Low Cost Optical Component Assemblies
17.20 - 17.40	N. Joram[1], A. Barghouthi[1], C. Knochenhauer[1], F. Ellinger[1], C. Scheytt[2]; [1] Chair for Circuit Design and Network Theory, Technische Universitaet Dresden; [2] IHP	Logic Framework for High-Speed Serial Links in SiGe BiCMOS
17.40 - 19.00	**Get Together**	

Tuesday, September 27, 2011		Track 2
Conference opening	**Chair: Frank Ellinger, Technische Universitaet Dresden**	8.30 - 8.40
Plenary Session	**Chair: Frank Ellinger; Technische Universitaet Dresden**	
H. Eul, Intel Mobile Communications	The Proliferation of Mobile -> New Challenges for the Semiconductor Industry	8.40 - 9.20
G. Teepe, GLOBALFOUNDRIES	Transformations of the Design Ecosystem - a Foundry Perspective	9.20 - 10.00
J.-M. Chery, ST Microelectronics	Future Challenges and Perspectives for Advanced Semiconductor Manufacturing	10.00 - 10.40
Coffee Break at Exhibition		10.40 - 11.20
Session 2.1 „3D Integration“	**Chair: Simon Deleonibus; CEA-Leti**	
W. R. Bottoms; SBA Materials	3D IC Integration - Challenges Facing the Industry (Invited Talk)	11.20 - 12.00
S. Endler, T. Hoang, E. A. Angelopoulos, H. Rempp, C. Harendt, J. N. Burghartz; Institute for Microelectronics Stuttgart (IMS CHIPS)	Mechanical Characterisation of Ultra-thin Chips	12.00 - 13.20
Lunch Break		13.20 - 13.20
Session 2.2 „Emerging Devices I“	**Chair: Siegfried Mantl; FZ Juelich**	
A. Ionescu; EPFL	Steep Slope Devices (Invited Talk)	13.20 - 14.00
T. Zaki, J. Butschke, F. Letzkus, H. Richter, J.N. Burghartz, F. Ante, U. Zschieschang, H. Klauk; IMS CHIPS	Circuit Impact of Device and Interconnect Parasitics in a Complementary Low-Voltage Organic Thin-Film Technology	14.00 - 14.20
B. Luessem , S. Reineke , H. Kleemann , P. Sebastian, K. Leo; Institut fuer Angewandte Photophysik, Technische Universitaet Dresden	Doping as a Versatile Tool to Realize Highly Efficient Organic Devices	14.20 - 14.40
B. Richter, U. Vogel, P. Wartenberg, K. Fehse, R. Herold; COMEDD - Center for Organic Materials and Electronic Devices Dresden, Fraunhofer IPMS	OLED-on-CMOS Based Bidirectional Microdisplay for Near-to-eye and Sensor Applications	14.40 - 15.00
Coffee Break at Exhibition		15.00 - 15.40
Session 2.3 „Modeling and Testing“	**Chair: Bernd Meinerzhagen; Technische Universitaet Braunschweig**	
C. Jungemann[1], S.-M. Hong[2]; [1] RWTH Aachen University; [2] Device Laboratory, Samsung Information Systems America	Are THz-SiGe HBTs feasible? A Device Simulation Study (Invited Talk)	15.40 - 16.20
A. Pawlak[1], M. Schroeter[1,2], A. Mukherjee[1], S. Lehmann[1], S. Shou[1], D. Céli[3]; [1] CEDICTechnische Universitaet Dresden; [2] ECE Dept. University of California, San Diego; [3] ST Microelectronics Crolles	Automated Model Complexity Reduction using the HICUM Hierarchy	16.20 - 16.40
A. Hamidian, V. Subramanian, R. Shu, A. Malignaggi, G. Boeck; Microwave Engineering Laboratory, Berlin Institute of Technology	Device Characterization in 90 nm CMOS up to 110 GHz	16.40 - 17.00
L. Lindenmueller, S. Bernet, P. Kleinichen; Power Electronics Laboratory, Institute of Electrical Engineering, Faculty of Electrical and Computer Engineering, Technische Universitaet Dresden	A Novel Topology to Characterize High Voltage IGBTs in a Soft Switching Converter	17.00 - 17.20
J. Hammacher[1], M. Dost[1], B. Seiler[1], L. Scheiter[1], E. Noack[2], S. Rzepka[2], B. Michel[2]; [1] Chemnitzer Werkstoffmechanik GmbH; [2] Micro Materials Center, Fraunhofer ENAS	Correlation Based Local Measurement of Small CTE for High Temperature Power Electronics Packaging	17.20 - 17.40
Get Together		17.40 - 19.00

Track 1	Wednesday, September 28, 2011	
	Session 1.4 „Devices and Circuits II"	**Chair: Siegfried Mantl; FZ Juelich**
9.00 - 9.20	N. Muenzenrieder, C. Zysset, T. Kinkeldei, K. Cherenack, G. Troester; Institute for Electronics, Swiss Federal Institute of Technology Zuerich	A Flexible InGaZnO Based 1-bit SRAM under Mechanical Strain
9.20 - 9.40	H. Richter[1], A. Asif[2], J.N. Burghartz[1,2]; [1] Institut fuer Mikroelektronik Stuttgart (IMS); [2] Institut fuer Nano- und Mikroelektronische Systeme (INES)	Realization of 100 V Ultra-Thin Single-Crystal Silicon LDMOS
9.40 - 10.00	H. Xu, M. Ortmanns; Institute of Microelectronics, University of Ulm	Wide-Band Wide-Input Efficiency-Enhanced CMOS Rectifier with Self Temperature and Process Compensation
10.00 - 10.40	S. Maas; AWR Corp.	Modeling for Wireless PA Development (Invited Talk)
10.40 - 11.20	Coffee Break at Exhibition	
10.40 - 12.30	**Poster Session**	
12.20 - 13.20	Lunch Break	
	Session 1.5 „RF Communication Systems I"	**Chair: Roland Thewes; Technische Universitaet Berlin**
13.20 - 14.00	L. deVreede, Delft University of Technology	Techniques and Technologies for RF Circuit Linearization (Invited Talk)
14.00 - 14.20	S. Glock[1], G. Fischer[1], R. Weigel[1], T. Ussmueller[1], R. Hasholzner[2]; [1] Institute for Electronics Engineering, Friedrich-Alexander University of Erlangen-Nuremberg, [2] Intel Mobile Communications	A State-Based Power Estimation Methodology at System Level for Integrated RF Front-Ends
14.20 - 15.00	S. Heinen, R. Wunderlich; UMIC Research Centre, RWTH Aachen University	High Dynamik Range RF Frontends from Multi-Band Multi-Standard to Cognitive Radio (Invited Talk)
15.00 - 15.40	**Poster Session**	
15.00 - 15.40	Coffee Break at Exhibition	
	Session 1.6 „RF Communication Systems II"	**Chair: Roland Thewes; Technische Universitaet Berlin**
15.40 - 16.20	B.-U. Klepser, Intel Mobile Communications	Digital RF Architecture for RF Transceiver in 65nm (Invited Talk)
16.20 - 16.40	M. Weiss[1], J. Castrillon[2], R. Leupers[2]; [1] Intel Mobile Communications; [2] Inst. for Comm. Tech. and Embedded Systems (ICE), RWTH Aachen	Novel Architecture and Programming Support for High-speed, Low Power, and Flexible Next Generation Communication ICs
16.40 - 17.00	M. Wickert, F. Ellinger; Technische Universitaet Dresden	Passive Signal Combiner ICs on Silicon Substrate for RF-MIMO Applications

Wednesday, September 28, 2011		Track 2
Session 2.4 „Interconnects“	**Chair: Bernd Meinerzhagen; Technische Universitaet Braunschweig**	
J. Hahn[1], F. Koschinsky[1], F. Feustel[1], R. Seidel[1], C. Peters[1], T. Letz[1], O. Witnik[1], M. Friedemann[1], B. Hintze[1], M. Nopper[1], A. Preusse[1], C. Hennesthal[1], G. Talut[1], O. Aubel[1], P. Huebler[1], T. Bolom[2] [1] GLOBALFOUNDRIES Dresden; [2] GLOBALFOUNDRIES, Albany NY	Advanced Barrier and Seed Metallization for Cu BEOL Integration for sub 32nm Node Technologies (Invited Talk)	9.00 - 9.40
H. Wojcik, D. Lehninger, V. Neumann, J. W. Bartha; Institute for Semiconductor and Microsystems Technology Technische Universitaet Dresden	Characterization of Barrier and Seed Layer Integrity for Copper Interconnects	9.40 - 10.00
S. Mueller[1], T. Waechtler[1,2], L. Hofmann[1], A. Tuchscherer[3], R. Mothes[3], O. Gordan[4], D. Lehmann[4], F. Haidu[4], M. Ogiewa[5], L. Gerlich[5], S.-F. Ding[6], S. E. Schulz[1,2], T. Gessner[1,2], H. Lang[3], D. R.T. Zahn[4], X.-P. Qu[6]; [1] Center for Microtechnologies, Chemnitz University of Technology; [2] Fraunhofer Institute for Electronic Nano Systems (ENAS); [3] Department of Inorganic Chemistry, Chemnitz University of Technology; [4] Department of Semiconductor Physics, Chemnitz University of Technology; [5] Fraunhofer Center Nanoelectronic Technologies (CNT); [6] State Key Laboratory of ASIC and System, Department of Microelectronics, Fudan - University, Shanghai	Thermal ALD of Cu via Reduction of CuxO Films for the Advanced Metallization in Spintronic and ULSI Interconnect Systems	10.00 - 10.20
D. Vogel[1], S. Rzepka[1], B. Michel[1], Astrid Gollhardt[2]; [1] Micro Materials Center Chemnitz, Fraunhofer ENAS Chemnitz; [2] Dept. Environmental and Reliability Engineering, Fraunhofer IZM Berlin	Local Stress Measurement on Metal Lines and Dielectrics of BEoL Pattern by Stress Relief Technique	10.20 - 10.40
Coffee Break at Exhibition		10.40 - 11.20
Poster Session		10.40 - 12.30
Lunch Break		12.20 - 13.20
Session 2.5 „Process Technology“	**Chair: Simon Deleonibus; CEA-Leti**	
M. Kaynak[1], M. Wietstruck[1], W. Zhang[1], J. Drews[1], D. Knoll[1], F. Korndoerfer[1], C. Wipf[1], K. Schulz[1], M. v. Suchodoletz[2], K. Zoschke[2], K. Kaletta[2], O. Ehrmann[2], S. Leidich[3], S. Kurth[3] ,B. Tillack[1,4]; [1] IHP; [2] Fraunhofer IZM; [3] Fraunhofer Research Institution for Electronic Nano Systems; [4] Technische Universitaet Berlin	MEMS Module Integration into SiGE BiCMOS Technology for Embedded System Applications (Invited Talk)	13.20 - 14.00
M. Junige, M. Geidel, M. Knaut, M. Albert, J. W. Bartha; Institute of Semiconductor and Microsystems Technology, Technische Universitaet Dresden	Monitoring Atomic Layer Deposition Processes in Situ and in Real Time by Spectroscopic Ellipsometry	14.00 - 14.20
S. López-López[1], J. Munro[2], D. Brown[2], J. Tennyson[1]; [1] Department of Physics and Astronomy, University College London; [2] Quantemol	Simulations of SF6 Plasma Etching in the GEC Reference Cell	14.20 - 14.40
H. Stegmann[1], H. Doemer[1], H. Cai[1], R. Rosenkranz[2], E. Zschech[2]; [1] Carl Zeiss NTS; [2] Fraunhofer Institute for Non-Destructive Testing	Efficient Target Preparation by Combining Laser Ablation and FIB Milling in a Single Tool	14.40 - 15.00
Poster Session		15.00 - 15.40
Coffee Break at Exhibition		15.00 - 15.40
Session 2.6 „Emerging Devices II“	**Chair: Bernd Meinerzhagen; Technische Universitaet Braunschweig**	
O. Seifarth[1], G. Lippert[1], J. Dabrowski[1], G. Lupina[1], W. Mehr[1], M.C. Lemme[2]; [1] IHP Frankfurt/Oder; [2] KTH Stockholm	Graphene Directly Grown on SiO2-Based Insulators	15.40 - 16.00
J. Hofrichter[1], F. Horst[1], B. J. Offrein[1], O. Raz[2], T. de Vries[2], H. J. S. Dorren[2], P. Mechet[3], G. Morthier[3]; [1] IBM Research – Zurich; [2] COBRA Research Institute, Eindhoven University of Technology; [3] Photonics Research Group, INTEC Department, Ghent University – IMEC	Microdisc Lasers Coupled to Silicon Waveguides as Versatile On-Chip Optical Components for Light Generation, Conversion and Detection	16.00 - 16.20
T. Frers[1], T. Hett[1], U. Hilleringmann[1], G. Berth[2], A. Widhalm[2], A. Zrenner[2]; [1] Department of Electrical Engineering and Information Technology, University of Paderborn; [2] Department of Physics, University of Paderborn	Characterization of SiON Integrated Waveguides via FTIR and AFM Measurements	
M. Deppner[1], F. Roemer[1], B. Witzigmann[1], J. Ledig[2], R. Neumann[2], A. Waag[2], M. Strassburg[3], W. Bergbauer[3]; [1] Computational Electronics and Photonics Group, University of Kassel; [2] Institut fuer Halbleitertechnik, Technische Universitaet Braunschweig; [3] Osram Opto Semiconductors	Computational Study of Carrier Injection in III-Nitride Core-Shell Nanowire-LEDs	

Poster Session

Wednesday, September 28, 2011,
10.40 - 12.30 and 15.00 - 15.40

R. Agethen, B. Laemmle, G. Fischer, R. Weigel, D. Kissinger; Institute for Electronics Engineering, University of Erlangen-Nuremberg	Design of an Integrated 60 GHz Cross-Coupled Oscillator in SiGe Technology
O. Arnold, G. Fettweis; Vodafone Chair Mobile Communications Systems, Technische Universitaet Dresden	Resilient Dynamic Task Scheduling for Unreliable Heterogeneous MPSoCs
H. Balasubramaniam, K. Hofmann; Integrated Electronic Systems Lab, Technische Universitaet Darmstadt	A New 60.2 dB 2nd Order Delta Sigma Modulator using Open Loop Buffers based on Current Conveyors
S. Beer, H. Gulan, B. Ripka, P. Pahl, T. Zwick; Karlsruhe Institute of Technology (KIT), Institut fuer Hochfrequenztechnik und Elektronik (IHE)	Packaging and Interconnect Solutions for a Low Cost Surface-Mountable Millimeter-Wave Radar Sensor
V. Fathipour , S. Fathipour, M. Fathipour, M. A. Malakoutian; Device and Simulation Laboratory, Department of Electrical and Computer Engineering, University of Tehran	Analysis of a Novel Strained Si Channel SHOT LDMOS
V. Fathipour , A. Mojab, M. A. Malakoutian, S. Fathipour, M. Fathipour; Device and Simulation Laboratory, Department of Electrical and Computer Engineering, University of Tehran	The Impact of Process Parameter Variations on the Electrical Characteristics of a RESURF LDMOS and its Compact Modeling
M. A. Fenner[1], F. Kienberger[1], H. Tanbakuchi[1], H. Huber[2], P. Hinterdorfer[2]; [1]Agilent Technologies; [2] Christian Doppler Laboratory for Nanoscopic Methods in Biophysics, Johannes Kepler University Linz	Quantitative Measurement of Electric Properties on the Nanometer Scale using Atomic Force Microscopy
F. Flach, S. Volkland, G. Holfeld, J. Schneider, T. Schade; Infineon Technologies Dresden	Fast and Efficient Characterization of Photolithographic Systems by Optical Scatterometry
N. Gay, W. Fischer; High-Frequency Systems Group, Wireless Microsystems Deptartment, Fraunhofer Institute for Photonic Microsystems	A Compact RF / Analog Front-End for Microwave RFID Transponders
M. Geidel, M. Knaut, M. Albert, J. Bartha; Institute of Semiconductors and Microsystems (IHM), Technische Universitaet Dresden	In Situ XPS Investigation of the Chemical Surface Composition during the ALD of Ultra-thin Aluminum Oxide Films
A. Guembel[1], J. Liefke[1], M. Klick[2], L. Eichhorn[2]; [1] Infineon Technologies Dresden, [2] Plasmetrex	Investigation of STI-Etch Process with Hercules Sensor
M. L. Hafiane[1], R. Blachnitz[1], O. Manck[1], Z. Dibi[1], W. Wagner[2]; [1] Institut fuer Technische Informatik und Mikroelektronik, Technische Universitaet Berlin; [2] OUT	In-pixel Implementation of an Area-efficient Analog-Signal-Processing for CMOS-3D Image Sensor
R. Hartl[1], A. Rohatschek[1], W. Stechele[2], A. Herkersdorf[2]; [1] Robert Bosch; [2] Institute for Integrated Systems, Technische Universitaet Muenchen	Improved Backwards Analysis for Architectural Vulnerability Factor Estimation
J. He[1,2], K. Richter[1], A. Jahn[1], J. W. Bartha[1], S. Howitz[2]; [1] Institute of Semiconductor and Microsystems Technology, Technische Universitaet Dresden, [2] Gesellschaft fuer Silizium-Mikrosysteme	Direct Fabrication of Multi-tier Structures in Dielectric Materials for Dual Damascene Processing
R. Hildebrandt, M. Heiß, N. Gay; Fraunhofer IPMS	A Platform for Pervasive RFID-based Sensors
C. Jia[1], D. Reuter[1], Z. Wen[2], M. Baum[3], M. Wiemer[3], T. Gessner[1, 2, 3]; [1] Center for Micro Technologies (ZFM), Chemnitz University of Technology; [2] Microsystem Reasearch Center, Chongqing University; [3] Fraunhofer Research Institute ENAS	FEM Simulation and Its Application in MEMS Design
M. Jung , A. Ferizi , T. Ussmueller, G. Fischer, R. Weigel; Institute for Electronics Engineering, Friedrich-Alexander University of Erlangen-Nuermberg	A Digital Trimmable Comparator for High Precision ADCs in Wireless Sensor Nodes
E. Kaulfersch[1], T. Winkler[1], B. Braemer[2], J. Hammacher[2]; [1] Berliner Nanotest und Design; [2] MMC Chemnitz	Reliability Investigations on Stacked Chip on MEMS
S. Keil[1], D. Eberts[1], T. Igel[1], G. Schneider[1], K. Wilhelm[2], R. Lasch[3], A. Deutschlaender[4]; [1] Infineon Technologies Dresden; [2] Faculty of Business Administration, University of Applied Sciences Dresden; [3] Faculty of Business and Economics, Technische Universitaet Dresden; [4] Faculty of Mechanical Engineering, University of Applied Sciences Stralsund	Innovation and Manufacturing Excellence in Mature Multi-Product Semiconductor Fabrication Facilities via Design for Flow by 3
M. Khan, D. Kalim, R. Negra; RWTH Aachen University	Study on Load Transformation Networks for Differential Common Drain Class-B RF Power Amplifier

C. Knochenhauer[1], R. Wolf[1], B. Sedighi[2] , F. Ellinger[1]; [1] Chair for Circuit Design and Network Theory, Technische Universitaet Dresden; [2] IHP	Fully Integrated Auto-Zero Feedback with Lower Cutoff Frequency below 50 kHz in a 40 GBit/s Transimpedance Amplifier
R. Leitsmann[1], F. Chicker[1], P. Plaenitz[1], C. Radehaus[1], U. Kretzer[2], M. Scheffer-Czygan[2], S. Eichler[2]; 1 GWT-TUD; 2 Freiberg Compound Materials	Charge Transition Levels of Boron and Silicon Impurities in GaAs
H. Milosiu, F. Oehler, M. Eppel; IC Design Analog Systems Department, Fraunhofer Institute for Integrated Circuits (IIS)	Sub-10 µA Data Reception with Low Latency using a 180-nm CMOS Wake-up Receiver at 868 MHz
K. Moebus[1], Y. Zimmermann[1], G. Wedel[1], M. Schroeter[1,2]; [1] Electrical Engineering Department, Technische Universitaet Dresden; [2] Electrical and Computer Engineering, University of California San Diego	Thermal Modeling of BOX/DTI enclosed Power Devices with Green's Function Approach
E. Nadimi[1], R. Oettking[2], P. Plaenitz[2], M. Schreiber[1], C. Radehaus[2]; [1] Institute of Physics, Chemnitz University of Technology; [2] MATcalc GWT-TUD	First-Principles Investigation of the Leakage Current through Strained SiO2 Gate Dielectrics in MOSFETs
M. Nagarajan, K. Ma, K. S. Yeo, S. X. Mou, T. B. Kumar; School of Electrical and Electronic Engineering, Division of Circuits and Systems	A Low Power Wide Tuning Range Low Phase Noise VCO using Coupled LC Tanks
M. Nestler, M. Demmler, T. Dunger, D. Rost, M. Zeuner; Roth & Rau MicroSystems	Yield Improvement by Localized Trimming in Semiconductor and MEMS Manufacturing
V. Neumann, A. Hiess, A. Jahn, U. Merkel, K. Richter, K. Viehweger, C. Wenzel, J. W. Bartha; Institute of Semiconductor and Microsystems Technology, Technische Universitaet Dresden	A Through Silicon Via Concept for Sensor Applications
R. Pfeifer, K. Fehse, U. Vogel, K. Leo; COMEDD - Center for Organic Materials and Electronic Devices Dresden	Improved Optical Outcoupling of OLED Microdisplays by Nanostructured Substrates
K. Pieper, E. Gondro; Infineon Technologies	An Effective Method for Solving the Covariance Equation for Statistical Modeling
F. Poprawa[1], A. Ziroff[1], C. Schindler[1], A. Zanati[1], F. Ellinger[2]; [1] Siemens AG Corporate Technology; [2] Chair for Circuit Design and Network Theory, Technische Universitaet Dresden	A Novel Planar Level Chip Interconnection for Unpackaged MMICs in the Millimeter Wave Frequency Range
M. Richter[1], D. Buettner[1], U. Schilling[1], T. Heinelt[1], T. Worbs[1], T. Kraiss[1], E. Westhaeusler[1], S. Y. Seng[2], S. K. Chan[2], H. S. Chua[2], K. C. Yeo[2], P. Koh[2], S. K. Hiang[2], Tang[3]; [1] Infineon Technologies Dresden; [2] Hermes-Epitek; [3] Hermes-Microvision	Implementation of Early Monitor by Advanced Ebeam Metrology for Charging Damage Failure Mechanism
A. Scade, S. Schmutz; Anvo-Systems-Dresden	DfT Support for Serial Non-volatile sRAM's
A. Schmid[1], J. Bollmann[2], C. Oestreich[2]; [1] Institute of Applied Physics, Technische Universitaet Bergakademie Freiberg; [2] Institute of Electronic and Sensor Materials, Technische Universitaet Bergakademie Freiberg	Determination of the Trap Energy Distribution in Oxynitride Charge Trapping Layers by Temperature Dependent Retention Measurement
E. Schreiber, S. Anger, M. Peichl; Microwaves and Radar Institute, Department for Reconnaissance and Security, DLR - German Aerospace Center	Design of an Integrated Ka Band Receiver Module for Passive Microwave Imaging Systems
R. Shu, V. Subramanian, A. Hamidian, A. Malignaggi, G. Boeck; Microwave Engineering Laboratory, Berlin Institute of Technology	Characterization of LC-tank Circuits for mm-wave Applications in 90 nm CMOS
M. Sorkhabi, S. Toofan; Department of Electric Engineering, Zanjan University	A High Resolution, Multi-Path Gated Ring Oscillator Based Vernier Time-to-Digital Converter
A. Stanitzki[1], J. Scheytt[2]; [1] advICo microelectronics; [2] IHP microelectronics	Discrete-Time RF Phase and Pulse Width Modulation for Power Efficient Switch-Mode Transmitter
A. Strobel, F. Ellinger; Chair for Circuit Design and Network Theory, Technische Universitaet Dresden	An Active Pulsed Reflector Circuit for FMCW Radar Application based on the Switched Injection-Locked Oscillator Principle
Y. Su, G. Liu, A. Trasser, H. Schumacher; Institute of Electron Devices and Circuits, Ulm University	U- and V-band Signal Sources in Si/SiGe Technology

Industrial Forum

Tuesday, September 27, 2011

L. Eichinger Agilent Technologies	3D EM Simulation Tools for RF and High frequency Package Design	11.20 - 12.20
C. G. Andrei ihp microelectronics	Design of a 400 GHz VCO in SiGe Technology	13.20 - 14.20
V. Muehlhaus Dr. Muehlhaus Consulting & Software	EM simulation of integrated inductors and transformers	14.20 - 15.00

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Get together with the Jazz Trio „MiR“

MiR

The music of the Dresdener trio is full of power and joy. It is continuously flowing, forcing in all directions, never stopping. Apart from conventional structures it widens horizons using own compositions, partly free improvisation, and orchestral parts.
The young German trio MiR has found together in a search for individuality among all other piano trios.

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Cancellation of the registration until 14 days before the seminar date, we raise a handling charge of €70,- (plus VAT). With later cancellation and/or nonappearance of the participant we compute the entire conference fee. Of course a representation of the participant is possible.
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