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**Time:** Monday, December 11, 2006, 9:30 - 10:20  
**Place:** Auditorium  

RF-CMOS Integrated Circuits for Wireless Communications  
Georg Boeck  

**A2L-A**  
ANALOG MODELING  
**Time:** Monday, December 11, 2006, 10:40 - 12:20  
**Place:** Auditorium  
**Chair:** Andrei Vladimirescu; *University of Berkeley, USA*  

10:40  
**Distributed RLC Interconnect: Analytical Modelling Expressions for Crosstalk Noise Estimation**  
H J Kadim, L.M. Coulibaly, Liverpool JM University  

11:00  
**A New RF SiCMOS SDD Model for Quantifying Individual Contribution to Distortion from Transistor’s Nonlinear Parameters**  
Ali Abuelmaatti, Iain Thayne, University of Glasgow  

11:20  
**Noise Modeling for Charge Amplification and Sampling**  
Patrick Pittet, Université Claude Bernard Lyon 1; Guo-Neng Lu, UCBL - LENAC; Laurent Quiquerez, UCBL LENAC  

11:40  
**General Model for the Deployment of Time-Delay Elements in Transistorized Electronic Circuits**  
Luis Nero Alves, Universidade de Aveiro; Luis Barbosa, Instituto de Telecomunicações; Rui Aguilar, Universidade de Aveiro  

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**Multiconductor Transmission Lines Sensitivity via Two-Dimensional Laplace Transform**  
Lubomir Brancik, Brno University of Technology  

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**Time:** Monday, December 11, 2006, 10:40 - 12:20  
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11:00  
**Multiparameters Monitoring for Long Term In-Vivo Characterization of Electrode-Tissues Contacts**  
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11:40 Design of Self-Sampling Based ASK Demodulator for Implantable Microsystem
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12:00 Comparison of Transconductance Reduction Techniques for the Design of a Very Large Time-Constant CMOS Integrator
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Time: Monday, December 11, 2006, 10:40 - 12:20
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        Franco Maloberti; University of Pavia, Italy

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Lucien Breems, Robert van Veldhoven, NXP Semiconductors; Kathleen Philips, Philips; Robert Rutten, Gunnar Wetzker, NXP Semiconductors

11:00 Quadrature Mismatch Shaping with a Complex, Data Directed Swapper
Stijn Reekmans, Benoît Catteau, Pieter Rombouts, Ludo Weyten, Ghent University

11:20 Design of Cascaded Continuous-Time Sigma-Delta Modulators
Susana Paton, Manuel Sánchez-Renedo, Universidad Carlos III; Luis Hernandez, Enrique Prefasi, Universidad Carlos III de Madrid; Andreas Wiesbauer, Antonio Di Giandomenico, David San Segundo, Infineon Technologies Austria

11:40 Use of the Step Invariant Transform to Design a 2nd Order Continuous Time Complex Sigma-Delta ADC
Niall Duncan, University College Cork; Anthony Dunne, Freescale Semiconductor; Michael Peter Kennedy, University College Cork

12:00 Sigma-Delta Solutions for Future Wireless Handhelds
Ana Rusu, Ismail Mohammed, Royal Institute of Technology Stockholm

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Place: Poster Area 5

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Time: Tuesday, December 12, 2006, 16:40 - 18:20
Place: Auditorium
Chair: Franco Maloberti; University of Pavia, Italy

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<td>17:20</td>
<td>On the Calibration of AD and DA Converters Based on R/betaR Ladder Networks</td>
<td>Carmine Ciofi, Grazia Carulli, Giuseppe Campobello, Gianluca Cannata, University of Messina</td>
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<tr>
<td>17:40</td>
<td>Continuous-Time Complex Bandpass Delta Sigma Modulator: Key Component for Highly Digitized Receiver</td>
<td>Nejmeddine Jouida, Chiheb Rebai, Adel Ghazel, SUP'COM; Dominique Dallet, Laboratoire IXL</td>
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<td>18:00</td>
<td>Scaling Input Signal Swings of Overloaded Integrators in Resonator-Based Sigma-Delta Modulators</td>
<td>Umut Yazkurt, Bogazici University; Nicolas Beilleau, University of Paris VI; Gunhan Dundar, Bogazici University; Hassan Aboushady, University of Paris VI; Selcuk Talay, Bogazici University; Laurent de Lamarre, University of Paris VI</td>
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**B7L-B**

**TELECOMMUNICATION**

**Time:** Tuesday, December 12, 2006, 16:40 - 18:20  
**Place:** Gallieni I  
**Chair:** Mohamad Obaidat, Monmouth University, Long Branch, USA

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<td>16:40</td>
<td>Secured and Seamless Handoff in Wireless Fourth Generation Systems</td>
<td>F. Zarai, N. Boudriga, Carthage University; Mohammad Obaidat, Monmouth University</td>
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<td>17:00</td>
<td>Design and Implementation in FPGA of MIMO Decoder for a 4G Wireless Receiver</td>
<td>Alberto Jiménez-Pacheco, Ángel Fernández-Herrero, Javier Casajús-Quirós, Universidad Politécnica de Madrid</td>
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<td>17:20</td>
<td>On the Use of a Performance Indicator for Optimal Pilot Positioning in Multicarrier Systems</td>
<td>David Bueche, Patrick Corlay, Marc Gazelet, François-Xavier Coudoux, Marc Slachciak, IEMN</td>
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<td>17:40</td>
<td>Telecommunication Synchronization Development Based on High Level Virtual Prototype</td>
<td>Celine Guilleminot, Laboratoire ICARE; Laurent Andrieux, Laboratoire ICARE and LAAS CNRS</td>
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<td>18:00</td>
<td>A Low Complexity Simulation Algorithm for TH-UWB MMSE RAKE Receiver in NLOS Channel</td>
<td>Marina Marjanovic, José Manuel Páez Borrallo, Universidad Politécnica de Madrid</td>
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**B7L-C**

**HIGH SPEED CIRCUITS**

**Time:** Tuesday, December 12, 2006, 16:40 - 18:20  
**Place:** Gallieni II  
**Chairs:** Nathalie Deltimpe; IXL Lab, Bordeaux, France Thano Stouraitis; University of Patras, Greece

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<td>16:40</td>
<td>A 3-Bits DDS Oriented Low Power Consumption 15 GHz Phase Accumulator in a 0.25 um BICMOS SiGe:C Technology</td>
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Place: Gallieni III
Chair: Eric Kerherve; IXL Lab, Bordeaux, France

16:40 79 GHz Fully Integrated Fully Differential Si/SiGe HBT Amplifier for Automotive
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17:00 A 0.35 um SiGe Low-Noise Amplifier for UWB Receivers with Integrated Interferer
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17:40 A Dual Stage GaAs Amplifier for a K-Band Direct Receiver ...............................................1023
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16:40 Compact Modeling and Applications of CNTFETs for Analog and Digital Circuit Design
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17:00 A Non-Volatile Multi-Level Memory Cell Using Molecular-Gated Nanowire Transistors
Antoine Jalabert, Fabien Clermidy, CEA-LETI; Amara Amara, ISEP

17:20 3D Simulation of Thin-Film Bulk Acoustic Wave Resonators (FBAR)
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17:40 An Improved Isolation W-CDMA Ladder BAW-SMR Filter
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Jean Baptiste Begueret, IXL Laboratory; Caroline Bernier, CEA-LETI

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David Bol, Université catholique de Louvain; José María Quintana, María José Avedillo,
Instituto de Micro electrónica de Sevilla; Jean-Didier Legat, Université catholique de
Louvain

17:00 Pre-Conditioning Free Footless DCVSL for High-Performance Datapaths
Makoto Ikeda, Diakin Hooi, Kunihiro Asada, University of Tokyo

17:20 orBDDS Direct Mapping for Structured Logic Circuits
Reginaldo Tavares, Universidade Estadual do Rio Grande do Sul; Cristina Meinhardt,
Universidade Federal do Rio Grande do Sul; Ricardo Reis, UFRGS

17:40 Bit Error Rate Analysis for Flip-Flop and Latch Based Interconnect Pipelining
Jingye Xu, Masud H. Chowdhury, University of Illinois at Chicago

18:00 Exact Minimum Logic Factoring via Quantified Boolean Satisfiability
Hiroaki Yoshida, Makoto Ikeda, Kunihiro Asada, University of Tokyo
C1L-A  PLEINARY TALK – MARC BELLEVILLE
Time:  Wednesday, December 13, 2006, 08:30 - 09:20
Place:  Auditorium

Evolutions of the Microelectronics Technologies: A Designer Perspective

Marc Belleville

C2L-A  ANALOG DESIGN TECHNIQUES
Time:  Wednesday, December 13, 2006, 09:30 - 10:50
Place:  Auditorium
Chair:  Christian Enz; CSEM, Switzerland

9:30  Designing Analog Circuits with Reduced Biasing Power
Reza Hashemian, Northern Illinois University

9:50  BiCMOS vs. CMOS Operational Amplifiers for High-Speed Pipelined A/D Converters
Cristiano Azzolini, Andrea Boni, University of Parma

10:10  Frequency Response Analysis of Latch Utilized in High-Speed Comparator
Shunsuke Okura, Osaka University; Hajime Shibata, Analog Devices, Inc.; Tetsuro Okura, Kenji Taniguchi, Osaka Univ.

C2L-B  ALGORITHM ARCHITECTURES
Time:  Wednesday, December 13, 2006, 09:30 - 10:50
Place:  Gallieni I
Chair:  Camille Diou; LICM, Metz, France

9:30  A Systolic Inversion Architecture Based on Modified Extended Euclidean Algorithm for GF(2^K) Fields
Apostolos Fournaris, Odysseas Koufopavlou, University of Patras

9:50  Toward a Methodology for Optimizing Algorithm-Architecture Adequacy for Implementation Reconfigurable System
Ting Liu, Camel Tanougast, Serge Weber, Université Henri Poincaré Nancy I

10:10  Applying Low Power Techniques in AES MixColumn/InvMixColumn Transformations
George Selimis, Apostolos Fournaris, Odysseas Koufopavlou, University of Patras

10:30  Lock and Unlock: a Data Management Algorithm for a Security-Aware Cache
Koji Inoue, Kyushu Univ.

C2L-C  CALIBRATION METHODS
Time:  Wednesday, December 13, 2006, 09:30 - 10:50
Place:  Gallieni II

9:30  An Offset and Gain Calibration Method for Time-Interleaved Analog to Digital Converters
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10:30 Implementation and Synthesis of a Sorting Network.................................................1109
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Time: Wednesday, December 13, 2006, 09:30 - 10:50
Place: Gallieni III
Chair: Andreia Cathelin; STMicroelectronics, Grenoble, France

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Place: Gallieni A
Chair: Edoardo Charbon; EPFL, Lausane, Switzerland

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Place: Gallieni B
Chair: Joseph Micallef; University of Malta, Malta

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Time: Wednesday, December 13, 2006, 11:10 - 12:30
Place: Auditorium
Chair: Erik Bruun; Technical University of Denmark, Denmark

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Time:  Wednesday, December 13, 2006, 11:10 - 12:30
Place:  Gallieni I
Chair:  Fabrice Monteiro; LICM, Metz, France

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C3L-C  MEMORY
Time:  Wednesday, December 13, 2006, 11:10 - 12:30
Place:  Gallieni II

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11:30  Cell Ratio Bounds for Reliable SRAM Operation .................................................. 1192
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11:50  Leakage Energy Reduction in Banked Content Addressable Memories ............... 1196
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12:10  Switched Polarity Charge Pump for NOR-Type Flash Memories ......................... 1200
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C3L-D  RF SYSTEMS
Time:  Wednesday, December 13, 2006, 11:10 - 12:30
Place:  Gallieni III
Chair:  Marc Belleville; CEA LETI, Grenoble, France

11:10  An RF-ID Receiver Using SAW Filters for Wideband Synchronisation .............. 1204
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        Rahajandraibe, L2MP; Gilles Bas, STMicroelectronics
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<td>11:50</td>
<td>A New Simple UWB Monocycle Pulse Generator</td>
<td>Yvan Duroc, Tan-Phu Vuong, INPG/ESISAR; Jose Ewerton Pombo de Farias, Glauco Fontgalland, UFCG/CEII/DEE; Alexandre Serres, INPG/ESISAR</td>
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<td>12:10</td>
<td>A Low-Power High-Rate Modulator for Ultra-Wideband Transmitters</td>
<td>Mehdi Salehi, Malek Ashtar University of Technology; Abdolreza Nabavi, Tarbiat Modarres University; Nader Ghadimi, Malek Ashtar University of Technology</td>
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**C3L-E**  
**PROCESSORS & CONTROLLERS**  
**Time:** Wednesday, December 13, 2006, 11:10 - 12:30  
**Place:** Gallieni A  
**Chair:** Makoto Ikeda; *University of Tokyo, Japan*  

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<td>11:10</td>
<td>A Pre-Processing Based Real-Time Address Tracer for Embedded Microprocessors</td>
<td>Yuan-Long Jeang, Tzuu-Shaang Wey, Kun Shan University; Hung-Yu Wang, Ching-Ta Chen, National Kaohsiung University of Applied Sciences</td>
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<td>11:30</td>
<td>Efficient Post-Processing Module for a Chaos-Based Random Bit Generator</td>
<td>Tommaso Addabbo, Massimo Alioto, Ada Fort, Santina Rocchi, Valerio Vignoli, University of Siena</td>
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<td>Hardware-Software Co-design of a Dynamically Reconfigurable FPGA-based Fuzzy Logic Controller</td>
<td>Francisco Fons, Mariano Fons, Enrique Canto, Rovira i Virgili University</td>
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<td>12:10</td>
<td>A Programmable Hardware Cellular Automaton : Example of Data Flow Transformation</td>
<td>Samuel Charbuillot, Annie Perez, Daniele Fronte, L2MP</td>
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**C3L-F**  
**SENSORS II**  
**Time:** Wednesday, December 13, 2006, 11:10 - 12:30  
**Place:** Gallieni B  
**Chair:** Herve Barthelemy; *L2MP, Marseille, France*  

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<td>11:10</td>
<td>A Novel Architecture for Remote Interrogation of Wireless Battery-Free Capacitive Sensors</td>
<td>Michel Nowak, Nicolas Delorme, CEA-LETI; Gilles Jacquemod, LEAT; François Conseil, MBDA</td>
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<td>11:30</td>
<td>A New Polysilicon TFT Capacitive Fingerprint Sensor with Advanced Mismatch Compensation</td>
<td>Cedric Rechatin, Patrick Audebert, CEA/LETI; Nacer Abouchi, Jean-Marc Galvan, CPE/Lyon</td>
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<td>11:50</td>
<td>A Hardware Library for Sensors/Actuators Interfaces in Sensor Networks</td>
<td>Jorge Portilla, Jose Luis Buron, Universidad Politecnica de Madrid; Angel de Castro, Universidad Autonoma de Madrid; Teresa Riesgo, Universidad Politecnica de Madrid</td>
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<td>12:10</td>
<td>MAC Protocol for Low-Power Real-Time Wireless Sensing and Actuation</td>
<td>Jose Afonso, Luis Rocha, Helder Silva, Jose Higino Correia, University of Minho</td>
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<td><strong>C4L-A</strong> ANALOG BUILDING BLOCKS II</td>
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<td>Chair: Mourad Loulou; ENIS, Sfax, Tunisia</td>
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<td>Jordi Bonet-Dalmau, Pere Palà-Schönwälder, UPC-Technical University of Catalonia</td>
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<td>Takeshi Shima, Kanagawa University</td>
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<td>Chair: Ricardo Reis; UFRGS, Porto Alegre, Brazil</td>
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<td>Minghua Shi, Hong Kong University of Science and Technology; Shrutsisagar Chandrasekaran, Brunel University, West London; Amine Bermak, Hong Kong University of Science and Technology; Abbes Amira, Brunel University, West London</td>
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<td>Miguel Litvin, Samiha Mourad, Santa Clara University</td>
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