

2010 IEEE International Behavioral Modeling and Simulation Workshop

(BMAS 2010)

**San Jose, California, USA
23-24 September 2010**



**IEEE Catalog Number: CFP10238-PRT
ISBN: 978-1-4244-8996-1**

Table of Contents

Organizers	v
-------------------	----------

Technical Program Committee	vi
------------------------------------	-----------

Session 1: Modeling for Physical Design

1.1	System Verification of Flexray Communication Networks Through Behavioral Simulations <i>Candice Muller and Maurizio Valle</i>	1
1.2	Automatic Stress Effects Computation Based On A Layout Generation Tool For Analog IC <i>Stephanie Youssef, Damien Dupuis, Ramy Iskander, and Marie-Minerve Louerat</i>	7
1.3	EMI Modeling of a 32-bit Microcontroller in Wait Mode <i>Jean-Pierre Leca, Nicolas Froidevaux, Henri Braquet, and Giles Jacquemod</i>	13
1.4	Circuit Synthesizable Guaranteed Passive Modeling for Multiport Structures <i>Zohaib Mahmood and Luca Daniel</i>	19

Session 2: Modeling for Systems Verification

2.1	Hierarchical Generation of Pin Accurate SystemC Models Based on RF Circuit Schematics <i>Yifan Wang, Zhimiao Chen, and Stefan Heinen</i>	25
2.2	BER and Power Consumption Estimation Based on Hierarchical Modeling of a 2.4 GHz Power Amplifier <i>Lucas Alves da Silva, William Tatinian, and Gilles Jacquemod</i>	31
2.3	Baseband Fading Channel Simulator for Inter-Vehicle Communication Using SystemC-AMS <i>Abdelbasset Massouri, Antoine Leveque, Laurent Clavier, Michel Vasilevski, Andreas Kaiser, and Marie-Minerve Louerat</i>	36

2.4	Radio Receiver Mixer Model for Event-Driven Simulators to Support Functional Verification of RF-SOC Wireless Links <i>Jonathan B. David</i>	42
-----	--	----

Session 3: Modeling of Subsystems

3.1	Battery Lifetime Modelling for a 2.45GHz Cochlear Implant Application <i>William Tatinian, Yannick Vaiarello, and Gilles Jacquemod</i>	48
3.2	Modeling Jitter in Continuous-Time Sigma-Delta Modulators <i>Ahmed Ashry and Hassan Aboushady</i>	53
3.3	Design and Modeling of a Successive Approximation ADC for the Electrostatic Harvester of Vibration Energy <i>Raouf Khalil, Andrii Dudka, Dimitri Galayko, Ramy Iskander, and Philippe Bassett</i>	57

Session 4: General Modeling Methods

4.1	Modeling and Simulation of a Manycore PCR-CE Lab-on-Chip for DNA Sequencing Using SystemC/SystemC-AMS <i>Amr Habib and Francois Pecheux</i>	63
4.2	Fault Injection in Mixed-Signal Environment Using Behavioral Fault Modeling in Verilog-A <i>Seyed-Nematollah Ahmadian and Seyed-Ghassem Miremadi</i>	69
4.3	Fast Dynamic Simulation of VLSI Circuits Using Reduced Order Compact Macromodel of Standard Cells <i>Shivam Priyadarshi, Nikhil Kriplani, T. Robert Harris, and Michael B. Steer</i>	75