

Inhaltsverzeichnis

Keynotes

- 01 Keynote 1 – Experiment Planning for Simulation based Verification 7**
 Monica Rafaila, Infineon Technologies München
- 02 Keynote 2 – Analog-Verifikation – Same procedure as last year? – Weit gefehlt! 8**
 Walter Hartong, Cadence Design Systems, München
- 03 Keynote 3 – Monitoring analog and mixed-signal design emulated on FPGA 9**
 Dejan Nickovic, Austrian Institute of Technology, Wien

Verifikation von Robustheit

- 04 Optimized Disturbance Weighting for Robust System Design under Parameter Uncertainties 10**
 Leandro Gil, Martin Radetzki, Universität Stuttgart

Synthese und Layoutgenerierung

- 05 Power-Down Schematic Synthesis for Analog/Mixed-Signal Circuits 16**
 Maximilian Neuner, Michael Zwerger, Helmut Gräß, Technische Universität München
- 06 Explicit Feature and Edge Insertion for Improved Analog Layout Generators in Advanced Semiconductor Technologies 22**
 Benjamin Prautsch, Uwe Eichler, Torsten Reich, Jens Lienig, Fraunhofer IIS/EAS, Dresden

Analoge Schaltungen in intelligenten Sensorsystemen

- 07 Low-Power High-Gain Operational Amplifier for Analog Image Pre-Processing in Smart Sensor Systems 28**
 Christopher Soell¹, Timo Mai¹, Lan Shi¹, Juergen Roeber¹, Thomas Ussmueller², Robert Weigel¹, Amelie Hagelauer¹,
¹Friedrich-Alexander-Universität Erlangen-Nürnberg; ²Universität Innsbruck, Austria
- 08 Fast and precise on-chip IDDQ current sensor 33**
 Dirk Michael Nuernbergk, Christian Lang, Melexis GmbH, Erfurt
- 09 A 4-GHz LC-Based Voltage Controlled Oscillator & Frequency Divider for use in Neutrino Experiments 39**
 Nina Parkalian¹, Markus Robens¹, Christian Grewing¹, Stefan van Waasen²
¹Forschungszentrum Jülich GmbH; ²Universität Duisburg-Essen

Schaltungen und Technologie

- 10 Dynamic body bias for 22 nm FD-SOI CMOS Technology 44**
 Stefan Nedelcu¹, Matthias Voelker¹, Leonhard Klein¹, Claudia Schuhmann¹, Norbert Schuhmann¹, Johann Hauer¹, Torsten Reich², Sunil Rao²
¹Fraunhofer IIS, Erlangen; ²Fraunhofer IIS/EAS, Dresden

- 11 Switch Bootstrapping in a 1.5 Bit Pipeline Stage** 49
Robert Loehr, Frank Ohnhaeuser, Juergen Roeber, Robert Weigel, Friedrich-Alexander-Universität Erlangen-Nürnberg
- 12 Capacitive Gate Drive Signal Transmission with Transient Immunity up to 300 V/ns** 53
Jonathan Hackel, Achim Seidel, Jürgen Wittmann, Bernhard Wicht, Hochschule Reutlingen

Verifikation von Mixed-Signal Systemen

- 13 Instrumentation of the Control Flow of SystemC AMS – Models for Symbolic Simulation** ... 58
Carna Radojicic, Christoph Grimm, Technische Universität Kaiserslautern
- 14 Metrics for Formal Property Checking Against Undesired Circuit Behavior in Embedded Systems** 64
Michael Rathmair, Florian Schupfer, Technische Universität Wien, Austria

Modellbasierte Entwicklung und Simulation von Systemen

- 15 Modeling of Linear Stimuli for Accelerated Mixed-Signal Simulations** 70
Sara Divanbeigi, Lukas Lee, Enno Röhrig, Markus Olbrich, Erich Barke, Leibniz Universität Hannover
- 16 Fault Injection and Mixed-Level Fault Simulation Performance Evaluation for Analog Circuits – A Case Study** 75
Saed Abughannam, Liang Wu, Wolfgang Müller, Christoph Scheytt, Heinz Nixdorf Institut, Paderborn
- 17 Model Based Design at System-Level of Mixed-Signal SoC for Battery Management System** . 81
Xiao Pan, Christoph Grimm, Technische Universität Kaiserslautern

Poster

- 18 Online verification of AMS Properties** 87
Matthias Sauppe, Erik Markert, Ulrich Heinkel, Technische Universität Chemnitz
- 19 Capacitance to Digital Converter ASIC with Wireless Energy and Wireless Data Transmission for a Medical Implant** 93
Rajeev Ranjan, Bibin John, Dietmar Schroeder, Wolfgang Krautschneider, Technische Universität Hamburg
- 20 Organic Field-Effect and Nanoparticle Thin-Film Transistors: Static Model** 98
Adrián Romero¹, Jesús González², Ulrich Hilleringmann³, Peter Glösekötter¹
¹FH Münster – University of Applied Sciences; ²Universidad de Granada; ³Universität Paderborn
- 21 Model-Based Reference Design Projects with MathWorks' HDL Workflow Advisor for Custom-Specific Electronics with the Zedboard** 104
Martin Versen, Stefan Kipfelsberger, Fatma Sökmen, University of Applied Sciences, Rosenheim