
Sunday February 23, 2025

6pm – 8pm **Dinner**
Konferenzsaal Müggelseeperle

8pm – 9:30pm **Public meeting of the GI/GMM/ITG-Fachgruppe „Testmethoden und Zuverlässigkeit von Schaltungen und Systemen“**
Konferenzsaal Müggelseeperle

Monday February 24th, 2025

7:30am – 8:30am **Registration**

8:30am – 9:40am **Opening & Keynote I**
Chair: *Milos Krstic, IHP*

„SET Analysis and Optimisation Flow for VLSI Circuits based on Static Timing Analysis and Closed-Loop, In-Place Optimisations “

Christos Sotiriou

University of Thessaly, Greece

Coffee break

10:10am – 11:25am **Session 1 – Fault tolerance and Reliability**
Chair: Ulf Schlichtmann

Evolutionary Algorithm-Based Reliability Assessment Methodology for Neural Networks

*Mahdi Taheri und Christian Herglotz**

*BTU Cottbus Senftenberg, Deutschland

N-Modular Redundancy Controller Generator for Adaptive Fault Tolerance Systems

Junchao Chen, Markus Ulbricht* and Milos Krstic*°*

* IHP – Leibniz-Institut für innovative Mikroelektronik, Frankfurt (Oder), Germany

° University Potsdam, Potsdam, Germany

On the Impact of Shift Cycle Simulation on Stress Fault Coverage

*Stephan Eggersglüß**

* Siemens EDA, Hamburg, Germany

11:25am – **Session 2: BIST and On-Chip Sensing**
12:40pm Chair: *Markus Ulbricht, IHP*

Robust DLBIST for Delay Fault Testing under Temperature Variations

*Hanieh Jafarzadeh**, *Florian Klemme**, *Hussam Amrouch*,#*, *Sybille Hellebrand°*,
*Hans-Joachim Wunderlich**

+University of Stuttgart, Pfaffenwaldring 47, 70569 Stuttgart, Germany

°Paderborn University, Warburger Str. 100, 33098 Paderborn, Germany

#Technical University of Munich, TUM School of Computation, Information and
Technology, Chair of AI Processor Design, Munich Institute of Robotics and Machine
Intelligence, Munich, Germany

Latent Fault Detection using Background LBIST

*Juergen Alt**, *Lukas Degle°* and *Ulf Schlichtmann#*

* Infineon Technologies AG Munich, Germany

° Chipglobe Munich, Germany

Chair of Electronic Design Automation TU Munich Munich, Germany

**On-Chip Cross-Layer Sensing for Mission-Mode Monitoring of Resilient Systems:
Towards Silicon Lifecycle Management**

*Fabian Vargas**

* IHP – Leibniz-Institut für innovative Mikroelektronik, Frankfurt (Oder), Germany

12:40pm – **Lunch break**
1:30pm

1:30pm – **Poster 1 / Pitch Session 1:**
1:50pm Chair: *Sebastian Huhn, Siemens EDA GmbH*

**Comparison of Multiple Methods for System-Level Test Program Generation
Targeting Non-functional Properties**

Denis Schwachhofer#*, *Stefan Wagner**, *Steffen Becker*^*, *Matthias Sauer°* and *Iliia Polian#*

* Institute of Software Engineering, University of Stuttgart, Stuttgart, Germany

° Advantest Europe, Boeblingen, Germany

Institute of Computer Engineering and Computer Architecture, University of
Stuttgart, Stuttgart, Germany

^ Technical University of Munich, Heilbronn, Germany

Predicting the Quality of Scan diagnosis: An ML-based Approach

Thilo Windemuth^*, *Alireza Mahzoon**, *Tobias Kilian** and *Ulf Schlichtmann^*

* Infineon Technologies AG, Neubiberg, Germany

^ Technical University of Munich, Munich, Germany

RRAMs: Combining Manufacturing with On-Line Testing

Thiago Santos Copetti and Leticia Maria Bolzani Poehls**,

* Group of Test and Reliability of Emerging Applications, IDS, RWTH Aachen University, Germany

On the Quality of Test Suites for Error Tolerant Applications

Goerschwin Fey, Lutz Schammer*, Gianluca Martino* and Alberto Garcia-Ortiz^*

* Institute of Embedded Systems, Hamburg University of Technology, Hamburg, Germany

^ University of Bremen, Germany

1:50pm – **Poster-Session 1 & Coffee Break**
2:45pm

2:45pm – **Session 3 – Test Systems**
4:00pm Chair: *Sybille Hellebrand, Univ. Paderborn*

Intelligent Device Tester Calibration Based on Gauge Repeatability and Reproducibility

Anand Venkatachalam, Ernst Aderholz^, Matthias Sauer#, Simon Schweizer#, Matthias Werner# and Ilia Polian**

* Institute of Computer Architecture and Computer Engineering, University of Stuttgart, Germany

^ Infineon Technologies AG – Munich, Germany

Advantest Europe GmbH, Boeblingen, Germany

An Automated Test Setup to Expose Electronic Components to Repeatable Temperature Shocks Using LN2 Cooling

Dirk Leiacker, Sebastian Zisch*, Andreas Kramer*, Fabian Meerkötter*, Ferdinand Keil* and Klaus Hofmann**

* Technische Universität Darmstadt, Integrated Electronic Systems Lab, Darmstadt, Germany

4:30pm **Social-Event**

6:00pm **Dinner**
Schlosscafé Köpenick

Tuesday
February 25,
2025

9:00am – **Keynote II**
10:00am Chair: *René Krenz-Bååth, TH-Wildau*

„Aspects of a Holistic View on Test, Safety, and Security in digital Designs“
Wolfgang Ecker (Speaker), Endri Kaya, Jad Al Halabi, Nicolas Gerlin
Infineon Technologies AG Munich, Germany

10:00am – **Poster 2 / Pitch Session 2**
10:15am Chair: *Jürgen Alt, Infineon*

Resistance Test Discovered an Inherent Vulnerability of Cryptographic ASICs to Simple SCA

Alkistis Aikaterini Sigourou, Zoya Dyka*[^] and Ievgen Kabin**

* IHP – Leibniz Institute for High Performance Microelectronics, Frankfurt Oder, Germany

[^] BTU Cottbus-Senftenberg, Cottbus, Germany

Codierung von ausgeglichenen m-aus-n Codes

Benjamin Glätzer and Alexander Benedict Behrens**

* University of Potsdam, Potsdam, Germany

A Cross-Layer Methodology for Assessing Silent Data Corruption Effects on DLA Families

Alessandro Veronesi[^], Milos Krstic^{^§} and Davide Bertozzi*

[^] IHP – Leibniz Institute for High Performance Microelectronics, Frankfurt Oder, Germany

[§] University of Potsdam, Potsdam, Germany

* University of Manchester, UK

10:15am – **Poster-Session 2 & Coffee break**
11:10am

11:10am – **Session 4 – Security und Sensing**
12:00pm Chair: *Fabian Vargas, IHP*

Vulnerable or Not: SCA Test Results Strongly Depend on the Measurement Equipment

Dmytro Petryk, Ievgen Kabin*, and Zoya Dyka*^*

* IHP – Leibniz Institute for High Performance Microelectronics, Frankfurt Oder, Germany

^ BTU Cottbus-Senftenberg, Cottbus, Germany

Kostengünstige Überwachung von Sensordaten in integrierten Systemen

Somayeh Sadeghi-Kohan, Sybille Hellebrand* and Hans-Joachim Wunderlich^*

* Paderborn University, 33098, Paderborn, Germany

^ Consultant, 71083 Herrenberg, Germany

12:00pm – **Schlusswort**
12:15pm

12:15pm – **Lunch**
1:15pm
