



2015 International Symposium on Dependable Integrated Systems



March 16, 2015

Graduate Seminar Room 7F, General Research Building, Kyutech Iizuka Campus
Dependable Integrated Systems Research Center, Kyushu Institute of Technology

■ 09:30~09:40 Opening & Introduction to DISC

Xiaoqing Wen, Professor and Director of DISC, Kyutech, Japan

■ 09:40~10:15 Invited Talk 1

• **On Generating Compact Test Sets**

Sudhakar M. Reddy, Professor, University of Iowa, USA

■ 10:15~10:50 Invited Talk 2

• **High Test Quality and Low Test Costs - Two Challenging Facets of Manufacturing Test**

Nilanjan Mukherjee, Engineering Director, Test Synthesis, Silicon Test Solution, Mentor Graphics, USA

■ 10:50~11:00 Break

■ 11:00~11:35 Invited Talk 3

• **GPU-Based Fault Simulation and Test Generation**

James Chien-Mo Li, Professor, National Taiwan University, Taiwan

■ 11:35~12:10 Invited Talk 4

• **Dependable Traffic Control System in Vietnam**

Bui Huu Phu, Professor and Vice Director, Institute of Applied Mechanics and Informatics, Vietnam Academic of Science and Technology, Vietnam

■ 12:10~13:20 Lunch

■ 13:20~13:55 Invited Talk 5

• **IC Testing Industry - Past, Today, and Future**

Manabu Kimura, CEO, Cloud Testing Service, Inc., Japan

■ 13:55~15:10 DISC Research Presentation I (LSI Design)

Chair: Kohei Miyase, Assistant Professor, DISC, Kyutech, Japan

1. **Hardware-Software Coverification for Complex SoC System Using Synopsys HAPS Platform**

Nana Sutisna, Leonardo Lanante Jr., Yuhei Nagao, Masayuki Kurosaki, and Hiroshi Ochi

2. **Model-based Design Method for Wireless LAN VLSI System with Synopsys Symphony Tool**

Yuji Yokota, Thi Hong Tran, Yuhei Nagao, Masayuki Kurosaki, Hiroshi Ochi, and Baiko SAI

3. **An Optimal Design Method for CMOS Even-Stage Ring Oscillators Containing Latches**

Yusuke Kohara, Tomohiro Fukuda, Kohei Ota, Yutaka Hirakawa, Masaharu Asano, Yoshihiro Kawakami, Yasuhisa Uchida, Hiroki Koike, and Kazuyuki Nakamura

■ 15:10~15:20 Break

■ 15:20~16:35 DISC Research Presentation II (LSI Test)

Chair: Leonardo Lanante, Assistant Professor, DISC, Kyutech, Japan

4. **A Ratio-less Full-complementary 12-transistor SRAM for Ultra-low Supply-voltage Operation**

Takahiro Kondo, Hiromasa Yamamoto, Satoko Hoketsu, Hitoshi Imi, Hitoshi Okamura, Kazuyuki Nakamura

5. **A TPG to Generate Pseudo Random Patterns with an Arbitrary Toggle Rate for Scan BIST**

Takaaki Kato, Senling Wang, Yasuo Sato, and Seiji Kajihara

6. **Techniques for Mitigating Soft Errors in TCAMs**

Infal Syafalni, Tsutomu Sasao, Xiaoqing Wen, and Stefan Holst

■ 16:35~16:40 Closing

Xiaoqing Wen, Professor and Director of DISC, Kyutech, Japan

All presentation files are available for download at <https://dl.dropboxusercontent.com/u/64915293/DISC-15.zip>