16th International Workshop on Post-Binary ULSI Systems

May 13, 2007
University of Oslo, Oslo, Norway

10:30-10:35 Opening Remark

ULSIWS Chair, Tetsuya Uemura, Hokkaido University, Japan

Session 1 Nano Electronics

10:35-11:10

"Carbon Nanotube Transistors for Flexible Electronics" (*invited*)

Fumiyuki Nihey, Nano Electronics Laboratories, NEC Corporation, Japan

11:10-11:35

"Why Inverters and Small Fan-in Voters Are the Most Promising Gates for Nanoelectronics"

Valeriu Beiu and Walid Ibrahim, United Arab Emirates University, College of Information Technology, Al ain, Abu Dhabi, UAE

11:35-12:00

"Analytic Approach to the Operation of RTD Ternary Inverters Based on MML"

Juan Núñez, José M. Quintana and María J. Avedillo, Instituto de Microelectrónica de Sevilla, Centro Nacional de Microelectrónica, Consejo Superior de Investigaciones Cientificas (CSIC) and Universidad de Sevilla, Spain

12:00-1:30 Lunch

Session 2 New-Paradigm VLSI Circuits and Systems

1:30-2:05

"A Massively Parallel Processor Tightly-Coupled with Large-Scale Memory – Beyond the Present Hardware Solution –" (*invited*)

Masami Nakajima, Renesas Technology Corp., Japan

2:05-2:30

"Multiple-Valued Technique in Analog-to-Digital Converters: A Brief Survey"

Takao Waho, Department of Electrical and Electronics Engineering, Sophia University, Japan

2:30-2:55

"On Irreducible Monoids and Other Clones of Multiple-Valued Logic Functions"

Grant R. Pogosyan, Mathematics and Computer Science, International Christian University,

Japan

2:55-3:15 Break

Session 3 Quantum Circuits and Algorithms

3:15-3:40

"Quantum Emotions: a cellular approach"

Martin Lukac and Marek Perkowski, Department of Electrical Engineering, Portland State University, USA

3:40-4:05

"AN EMOTIONAL MIMICKING HUMANOID BIPED ROBOT AND ITS QUANTUM CONTROL BASED ON THE CONSTRAINT SATISFACTION MODEL"

Quay Williams, Scott Bogner, Michael Kelley, Carolina Castillo, Martin Lukac, Dong Hwa Kim, Jeff Allen, Mathias Sunardi, Sazzad Hossain, and Marek Perkowski, Intelligent Robotics Laboratory, Portland State University, USA.

4:05 Closing