

Program of the 9th International Workshop on Boolean Problems

Thursday, September 16, 2010

9:00 - 10:00

Jon T. Butler (Naval Postgraduate School, Monterey, USA):
Bent Function Discovery by Reconfigurable Computer

10:15 - 11:30

Radomir S. Stanković (Dept. of Computer Science, Nis, Serbia), Jaakko T. Astola (Tampere University of Technology, Finland), Helena Astola (Tampere University of Technology, Finland):
Representations of Boolean Functions in Redundant Bases

Bernd Steinbach (Freiberg University of Mining and Technology, Germany), Christian Posthoff (The University of The West Indies, Trinidad & Tobago):
New Results for Sets of Boolean Functions

Bernd Steinbach (Freiberg University of Mining and Technology, Germany), Christian Posthoff (The University of The West Indies, Trinidad & Tobago):
New Results Based on Boolean Models

12:45 - 14:40

Michael D. Miller and Zahra Sasanian (University of Victoria, Canada):
Improving the NCV Realization of Multiple Control Toffoli Gates

Hadi Hosseini and Gerhard W. Dueck (University of New Brunswick, Canada):
Building Large Toffoli Gates: A Billiard Ball Model Approach

Michiel Boes, Alexis De Vos and Jan De Beule (Universiteit Gent, Belgium):
Almost-Classical Quantum Computers

Pawel Kerntopf and Marek Szyprowski (Warsaw University of Technology, Poland):
An Approach to Constructing Hard Reversible Functions

Marek Perkowski (Portland State University, USA), Sazzad Hossain (University of Liberal Arts Bangladesh, Dhaka, Bangladesh), Franklin Zhao (Portland State University, USA):
Minimal Graph Coloring using the Quantum Algorithm of Grover and the Importance of the Quantum Composition/Layout Problem in the Complete Design of Quantum Oracles

15:00 - 16:20

Ilya Levin (Tel Aviv University, Israel), Osnat Keren (Bar Ilan University, Israel):
Transforming FSMs for Synthesis by Fault Tolerant Nano-PLAs

Alexander Finder and Görschwin Fey (University of Bremen, Germany):
Evaluating Debugging Algorithms from a Qualitative Perspective

Liudmila Cheremisinova (National Academy of Sciences, Belarus):
VLSI Regular Structure Folding via Boolean Satisfiability

Liudmila Cheremisinova and Dmitry Novikov (National Academy of Sciences, Belarus):
SAT based Implicative Method of Implementation Checking for Incompletely Specified Boolean Functions

17:00 Excursion: World famous Terra Mineralia

19:30 Workshop Dinner

Friday, September 17, 2010

9:00 - 10:00

Shin-ichi Minato (Hokkaido University, Japan):

Recent Topics on Decision Diagrams and Discrete Structure Manipulation

10:15 - 11:55

Rudolf Berghammer and Stefan Bolus (University Kiel, Germany):

On the Use of Bdds for Solving Problems on Simple Games

Martin Lukac (Tohoku University, Japan), Marek Perkowski (Portland State University, USA), Pawel Kerntopf (Warsaw University of Technology, Poland) and Michitaka Kameyama (Tohoku University, Japan):

GPU Acceleration Methods and Techniques for Quantum Logic Synthesis

Eric Paul (Portland State University, USA), Bernd Steinbach (Freiberg University of Mining and Technology, Germany) and Marek Perkowski (Portland State University, USA):

Application of CUDA in the Boolean Domain for the Unate Covering Problem

Arkadij Zakrevskij (National Academy of Sciences, Belarus):

Minimization of Partial Boolean Functions of Many Variables

13:00 - 14:15

Valentina Ciriani (Universita degli Studi di Milano, Italy), Anna Bernasconi (Universita di Pisa, Italy):

SEPP: a New Compact Three Level Logic Form

Petr Fišer and Jan Schmidt (Czech Technical University in Prague, Czech):

New Ways of Generating Large Realistic Benchmarks for Testing Synthesis Tools

David Toman and Petr Fišer (Czech Technical University in Prague, Czech):

A SOP Minimizer for Logic Functions Described by Many Product Terms Based on Ternary Trees

14:45 - 16:20

Edward Hryniewicz (Silesian University of Technology, Gliwice, Poland):

Walsh Functions in Rectangular Wave Frequency Multiplication

Stanislav Stanković, Milena Stanković, Radomir S. Stanković (Dept. of Computer Science, Nis, Serbia) and Jaakko Astola (Tampere University of Technology, Finland):

Representation of Bent Functions Using Walsh Decision Diagrams

Wolf-Michael Wendler (Ostfalia Fachhochschule, University of Applied Sciences, Germany):

More on Complex Numbers in Finite Fields

Wolf-Michael Wendler (Ostfalia Fachhochschule, University of Applied Sciences, Germany):

Clifford Algebras in Finite Fields and their Application to Dirac's Equation

Wolf-Michael Wendler (Ostfalia Fachhochschule, University of Applied Sciences, Germany):

Algebraic, Geometric and Analytic Properties of Complex Transcendental Functions in Finite Fields