

## Reed-Muller 2007

A workshop on  
Applications of the Reed-Muller Expansion in Circuit Design and  
Representations and Methodology of Future Computing Technology

May 16, 2007, Oslo, Norway

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Preliminary Program

09:00 - 09:10 Opening Remarks

## Session A

09:10 - 09:35 Building Free Binary Decision Diagrams Using SAT Solvers  
Robert Wille, Gorschwin Fey and Rolf Drechsler

09:35 - 10:00 Remarks on the Complexity of Arithmetic Representations of Elementary Functions for Circuit Design  
Radomir S. Stankovi- and Jaakko Astola

10:00 - 10:25 Most Complex Boolean Functions  
Bernd Steinbach

10:25 - 11:00 Refreshment Break and Discussion

## Session B

11:00 - 11:25 Characterization of Some Forms of Symmetry of Boolean Functions in the Reed Muller Spectral Domain  
Claudio Moraga and Radomir S. Stankovi-

11:25 - 11:50 Eigenfunction of Reed-Muller Transformations  
T. Sasao and J. T. Butler

11:50 - 12:15 Estimating the Quality of AND-EXOR Optimization Results  
Sebastian Kinder, Gorschwin Fey and Rolf Drechsler

12:15 - 13:30 Lunch (not included in registration fee)

## Session C

13:30 - 13:55 ESOP Transformation to Majority Gates for Quantum Dot Cellular Automata Logic Synthesis  
David Y. Feinstein and Mitchell A. Thornton

13:55 - 14:20 Some Remarks on Reversible Logic Synthesis  
Pawel Kerntopf

14:20 - 14:45 Realization of Incompletely Specified Functions in Minimized Reversible Cascades  
Manjith Kumar, Bala Iyer, Natalie Metzger, Ying Wang and Marek Perkowski

14:45 - 15:10 Synthesis and Optimization of Reversible Circuits  
Y. Van Rentergem and A. De Vos

15:10 - 15:35 Refreshment Break and Discussion

## Session D

15:35 - 16:00 Search for Universal Ternary Quantum Gate Sets with Exact Minimum Costs  
Normen Giesecke, Dong Hwa Kim, Sazzad Hossain and Marek Perkowski

16:00 - 16:25 Quantum Behaviors: Synthesis and Measurement  
Martin Lukac, Normen Giesecke, Sazzad Hossain, Marek Perkowski and Dong  
Hwa Kim

16:25 - 16:50 Quantum Logic Circuit Simulation Based on the QMDD Data Structure  
David Goodman, Mitchell A. Thornton, David Y. Feinstein and D. Michael Miller

## Plenary Session

16:50 - 17:15 Planning Future RM Workshops