Session 26: Logic Synthesis

Chair: Albert Wang

This session runs through a spectrum of combinational synthesis. The first paper explores the relationship between state encoding and decomposition of logic functions, concentrating especially on FPGAs. The next two papers introduce new variants on BDDs. The fourth paper explores a new method for function-based speedup of circuits. The final paper describes a method of generating random implementations of logic functions to test synthesis systems.

26.1 OPTIMUM FUNCTIONAL DECOMPOSITION USING ENCODING
Rajeev Murgai, Robert K. Brayton, A. Sangiovanni-Vincentelli

26.2 EFFICIENT REPRESENTATION AND MANIPULATION OF SWITCHING FUNCTIONS BASED ON ORDERED KRONECKER FUNCTIONAL DECISION DIAGRAMS
Rolf Drechsler, Andisheh Sarabi, Michael Theobald, Bernd Becker, Marek A. Perkowski

26.3 CALCULATION OF UNATE CUBE SET ALGEBRA USING ZERO-SUPPRESSED BDDS
Shin-ichi Minato

26.4 PERFORMANCE OPTIMIZATION USING EXACT SENSITIZATION
Alexander Saldanha, Heather Harkness, Patrick C. McGeer, Robert K. Brayton, A. Sangiovanni-Vincentelli

26.5 RANDOM GENERATION OF TEST INSTANCES FOR LOGIC OPTIMIZERS
Kazuo Iwama, Kensuke Hino