

Contents

Adiabatic CMOS: Limits of Reversible Energy Recovery and First Steps for Design Automation	1
<i>Ismo Hänninen, Gregory L. Snider, and Craig S. Lent</i>	
Ultrafast All-Optical Reversible Peres and Feynman-Double Logic Gates with Silicon Microring Resonators.	21
<i>Purnima Sethi and Sukhdev Roy</i>	
Design of Reversible Adder-Subtractor and its Mapping in Optical Computing Domain	37
<i>Saurabh Kotiyal, Himanshu Thapliyal, and Nagarajan Ranganathan</i>	
Towards Reversible Basic Linear Algebra Subprograms: A Performance Study	56
<i>Kalyan S. Perumalla and Srikanth B. Yeginath</i>	
Synthesis and Optimization by Quantum Circuit Description Language	74
<i>Mariam Zomorodi-Moghadam, Mohammad-Amin Taherkhani, and Keivan Navi</i>	
An Approach to Reversible Logic Synthesis Using Input and Output Permutations.	92
<i>Kamalika Datta, Indranil Sengupta, Hafizur Rahaman, and Rolf Drechsler</i>	
Synthesis of Reversible Circuits Based on EXORs of Products of EXORs . . .	111
<i>Linh Tran, Ben Schaeffer, Addison Gronquist, Marek Perkowski, and Pawel Kerntopf</i>	
Improved Cube List Based Cube Pairing Approach for Synthesis of ESOP Based Reversible Logic	129
<i>Chandan Bandyopadhyay, Hafizur Rahaman, and Rolf Drechsler</i>	
Author Index	147