Special Issue: Computational Complexity 2003

Guest Editor: Harry Buhrman

Editor’s Foreword

297 Foreword
Harry Buhrman

Special Issue Articles

298 Extremal properties of polynomial threshold functions
Ryan O’Donnell and Rocco A. Servedio

313 Quantum certificate complexity
Scott Aaronson

323 A combinatorial characterization of resolution width
Albert Atserias and Víctor Dalmau

335 Vertex cover might be hard to approximate to within $2 - \varepsilon$
Subhash Khot and Oded Regev

350 The complexity of stochastic sequences
Wolfgang Merkle

358 Proving SAT does not have small circuits with an application to the two queries problem
Lance Fortnow, A. Pavan, and Samik Sengupta

364 Lower bounds for predecessor searching in the cell probe model
Pranab Sen and S. Venkatesh

386 The complexity of Unique $k$-SAT: An Isolation Lemma for $k$-CNFs
Chris Calabro, Russell Impagliazzo, Valentine Kabanets, and Ramamohan Paturi

394 Minimization of decision trees is hard to approximate
Detlef Sieling

Erratum

404 Erratum to “Propagating XML constraints to relations”
Susan Davidson, Wenfei Fan, and Carmem Hara