

# Table of Contents – Part II

## Algorithms, Complexity and Games

On $r$ -Simple $k$ -Path . . . . .	1
<i>Hasan Abasi, Nader H. Bshouty, Ariel Gabizon, and Elad Haramaty</i>	
Low-Depth Uniform Threshold Circuits and the Bit-Complexity of Straight Line Programs . . . . .	13
<i>Eric Allender, Nikhil Balaji, and Samir Datta</i>	
Zero Knowledge and Circuit Minimization . . . . .	25
<i>Eric Allender and Bireswar Das</i>	
A Tight Lower Bound on Certificate Complexity in Terms of Block Sensitivity and Sensitivity . . . . .	33
<i>Andris Ambainis and Krišjānis Prūsīs</i>	
$\tilde{O}(\sqrt{n})$ -Space and Polynomial-Time Algorithm for Planar Directed Graph Reachability . . . . .	45
<i>Tetsuo Asano, David Kirkpatrick, Kotaro Nakagawa, and Osamu Watanabe</i>	
Forbidden Induced Subgraphs and the Price of Connectivity for Feedback Vertex Set . . . . .	57
<i>Rémy Belmonte, Pim van 't Hof, Marcin Kamiński, and Daniël Paulusma</i>	
Network-Based Dissolution . . . . .	69
<i>René van Bevern, Robert Brederbeck, Jiehua Chen, Vincent Froese, Rolf Niedermeier, and Gerhard J. Woeginger</i>	
On Unification of QBF Resolution-Based Calculi . . . . .	81
<i>Olaf Beyersdorff, Leroy Chew, and Mikoláš Janota</i>	
Minimum Planar Multi-sink Cuts with Connectivity Priors . . . . .	94
<i>Ivona Bezákrová and Zachary Langley</i>	
The Price of Envy-Freeness in Machine Scheduling . . . . .	106
<i>Vittorio Bilò, Angelo Fanelli, Michele Flammini, Gianpiero Monaco, and Luca Moscardelli</i>	
On the Complexity of Some Ordering Problems . . . . .	118
<i>Beate Bollig</i>	

The Relationship between Multiplicative Complexity and Nonlinearity .....	130
<i>Joan Boyar and Magnus Gausdal Find</i>	
Dual Connectedness of Edge-Bicolored Graphs and Beyond .....	141
<i>Leizhen Cai and Junjie Ye</i>	
Combinatorial Voter Control in Elections .....	153
<i>Jiehua Chen, Piotr Faliszewski, Rolf Niedermeier, and Nimrod Talmon</i>	
An Improved Deterministic #SAT Algorithm for Small De Morgan Formulas .....	165
<i>Ruiwen Chen, Valentine Kabanets, and Nitin Saurabh</i>	
On the Limits of Depth Reduction at Depth 3 Over Small Finite Fields .....	177
<i>Suryajith Chillara and Partha Mukhopadhyay</i>	
Hitting Forbidden Subgraphs in Graphs of Bounded Treewidth .....	189
<i>Marek Cygan, Dániel Marx, Marcin Pilipczuk, and Michał Pilipczuk</i>	
Probabilistic Analysis of Power Assignments .....	201
<i>Maurits de Graaf and Bodo Manthey</i>	
Existence of Secure Equilibrium in Multi-player Games with Perfect Information .....	213
<i>Julie De Pril, János Flesch, Jeroen Kuipers, Gijs Schoenmakers, and Koos Vrieze</i>	
An Efficient Quantum Algorithm for Finding Hidden Parabolic Subgroups in the General Linear Group .....	226
<i>Thomas Decker, Gábor Ivanyos, Raghav Kulkarni, Youming Qiao, and Miklos Santha</i>	
A Note on the Minimum Distance of Quantum LDPC Codes .....	239
<i>Nicolas Delfosse, Zhentao Li, and Stéphan Thomassé</i>	
Minimum Bisection is NP-hard on Unit Disk Graphs .....	251
<i>Josep Díaz and George B. Mertzios</i>	
Query-Competitive Algorithms for Cheapest Set Problems under Uncertainty .....	263
<i>Thomas Erlebach, Michael Hoffmann, and Frank Kammer</i>	
Streaming Kernelization .....	275
<i>Stefan Fafianie and Stefan Kratsch</i>	
A Reconfigurations Analogue of Brooks' Theorem .....	287
<i>Carl Feghali, Matthew Johnson, and Daniël Paulusma</i>	

Intersection Graphs of L-Shapes and Segments in the Plane .....	299
<i>Stefan Felsner, Kolja Knauer, George B. Mertzios, and Torsten Ueckerdt</i>	
Autoreducibility and Mitoticity of Logspace-Complete Sets for NP and Other Classes .....	311
<i>Christian Glaßer and Maximilian Witek</i>	
Editing to a Connected Graph of Given Degrees .....	324
<i>Petr A. Golovach</i>	
Circuit Complexity of Properties of Graphs with Constant Planar Cutwidth .....	336
<i>Kristoffer Arnsfelt Hansen, Balagopal Komarath, Jayalal Sarma, Sven Skyum, and Navid Talebanfard</i>	
On Characterizations of Randomized Computation Using Plain Kolmogorov Complexity .....	348
<i>Shuichi Hirahara and Akitoshi Kawamura</i>	
New Results for Non-Preemptive Speed Scaling .....	360
<i>Chien-Chung Huang and Sebastian Ott</i>	
Lower Bounds for Splittings by Linear Combinations .....	372
<i>Dmitry Itsykson and Dmitry Sokolov</i>	
On the Complexity of List Ranking in the Parallel External Memory Model .....	384
<i>Riko Jacob, Tobias Lieber, and Nodari Sitchinava</i>	
Knocking Out $P_k$ -free Graphs .....	396
<i>Matthew Johnson, Daniël Paulusma, and Anthony Stewart</i>	
Relating the Time Complexity of Optimization Problems in Light of the Exponential-Time Hypothesis .....	408
<i>Peter Jonsson, Victor Lagerkvist, Johannes Schmidt, and Hannes Uppman</i>	
Affine Consistency and the Complexity of Semilinear Constraints .....	420
<i>Peter Jonsson and Johan Thapper</i>	
Small Complexity Classes for Computable Analysis .....	432
<i>Akitoshi Kawamura and Hiroyuki Ota</i>	
Two Results about Quantum Messages .....	445
<i>Hartmut Klauck and Supartha Podder</i>	
Parameterized Approximations via $d$ -SKEW-SYMMETRIC MULTICUT ....	457
<i>Sudeshna Kolay, Pranabendu Misra, M.S. Ramanujan, and Saket Saurabh</i>	

On the Clique Editing Problem .....	469
<i>Ivan Kováč, Ivana Selečéniová, and Monika Steinová</i>	
On the Complexity of Symbolic Verification and Decision Problems in Bit-Vector Logic .....	481
<i>Gergely Kovászna, Helmut Veith, Andreas Fröhlich, and Armin Biere</i>	
Computational Complexity of Covering Three-Vertex Multigraphs .....	493
<i>Jan Kratochvíl, Jan Arne Telle, and Marek Tesař</i>	
Finding Maximum Common Biconnected Subgraphs in Series-Parallel Graphs .....	505
<i>Nils Kriege and Petra Mutzel</i>	
On Coloring Resilient Graphs .....	517
<i>Jeremy Kun and Lev Reyzin</i>	
Document Retrieval with One Wildcard .....	529
<i>Moshe Lewenstein, J. Ian Munro, Yakov Nekrich, and Sharma V. Thankachan</i>	
An $H_{n/2}$ Upper Bound on the Price of Stability of Undirected Network Design Games .....	541
<i>Akaki Mamageishvili, Matúš Mihalák, and Simone Montemezzani</i>	
Traveling Salesman Problems in Temporal Graphs .....	553
<i>Othon Michail and Paul G. Spirakis</i>	
Inferring Strings from Lyndon Factorization .....	565
<i>Yuto Nakashima, Takashi Okabe, Tomohiro I, Shunsuke Inenaga, Hideo Bannai, and Masayuki Takeda</i>	
Betweenness Centrality – Incremental and Faster .....	577
<i>Meghana Nasre, Matteo Pontecorvi, and Vijaya Ramachandran</i>	
Deterministic Parameterized Algorithms for the Graph Motif Problem .....	589
<i>Ron Y. Pinter, Hadas Shachnai, and Meirav Zehavi</i>	
The Two Queries Assumption and Arthur-Merlin Classes .....	601
<i>Vyas Ram Selvam</i>	
Flexible Bandwidth Assignment with Application to Optical Networks (Extended Abstract) .....	613
<i>Hadas Shachnai, Ariella Voloshin, and Shmuel Zaks</i>	

Approximation Algorithms for Bounded Color Matchings via Convex Decompositions . . . . .	625
<i>Georgios Stamoulis</i>	
Author Index . . . . .	637