

# Table of Contents

## Invited Contributions

Design and Analysis of Dynamic Multithreaded Algorithms . . . . .	1
<i>Charles E. Leiserson</i>	
Cache-Oblivious Algorithms and Data Structures . . . . .	3
<i>Gerth Stølting Brodal</i>	

## Refereed Contributions

Getting the Best Response for Your Erg . . . . .	14
<i>Kirk Pruhs, Patchrawat Uthaisombut, Gerhard Woeginger</i>	
Auctions with Budget Constraints . . . . .	26
<i>Nir Andelman, Yishay Mansour</i>	
Tight Approximability Results for Test Set Problems in Bioinformatics . . . . .	39
<i>Piotr Berman, Bhaskar DasGupta, Ming-Yang Kao</i>	
Robust Subgraphs for Trees and Paths . . . . .	51
<i>Refael Hassin, Danny Segev</i>	
Collective Tree Spanners of Graphs . . . . .	64
<i>Feodor F. Dragan, Chenyu Yan, Irina Lomonosov</i>	
Optimally Competitive List Batching . . . . .	77
<i>Wolfgang W. Bein, Leah Epstein, Lawrence L. Larmore, John Noga</i>	
The Relative Worst Order Ratio Applied to Seat Reservation . . . . .	90
<i>Joan Boyar, Paul Medvedev</i>	
Online Maintenance of $k$ -Medians and $k$ -Covers on a Line . . . . .	102
<i>Rudolf Fleischer, Mordecai J. Golin, Zhang Yan</i>	
Matching Polyhedral Terrains Using Overlays of Envelopes . . . . .	114
<i>Vladlen Koltun, Carola Wenk</i>	
Independent Set of Intersection Graphs of Convex Objects in 2D . . . . .	127
<i>Pankaj K. Agarwal, Nabil H. Mustafa</i>	
Maximizing the Area of Overlap of Two Unions of Disks Under Rigid Motion . . . . .	138
<i>Mark de Berg, Sergio Cabello, Panos Giannopoulos, Christian Knauer, René van Oostrum, Remco C. Veltkamp</i>	

Construction of the Nearest Neighbor Embracing Graph of a Point Set .....	150
<i>M. Y. Chan, Danny Chen, Francis Y.L. Chin, Cao An Wang</i>	
Connectivity of Graphs Under Edge Flips .....	161
<i>Norbert Zeh</i>	
Improvement of Nemhauser-Trotter Theorem and Its Applications in Parametrized Complexity .....	174
<i>Miroslav Chlebík, Janka Chlebíková</i>	
A Simple Linear-Time Modular Decomposition Algorithm for Graphs, Using Order Extension .....	187
<i>Michel Habib, Fabien de Montgolfier, Christophe Paul</i>	
Railway Delay Management: Exploring Its Algorithmic Complexity .....	199
<i>Michael Gatto, Björn Glaus, Riko Jacob, Leon Peeters, Peter Widmayer</i>	
Layered Heaps .....	212
<i>Amr Elmasry</i>	
Melding Priority Queues .....	223
<i>Ran Mendelson, Robert E. Tarjan, Mikkel Thorup, Uri Zwick</i>	
An Algorithm for Cyclic Edge Connectivity of Cubic Graphs .....	236
<i>Zdeněk Dvořák, Jan Kára, Daniel Král', Ondřej Pangrác</i>	
Subexponential-Time Framework for Optimal Embeddings of Graphs in Integer Lattices .....	248
<i>Anders Dessmark, Andrzej Lingas, Eva-Marta Lundell</i>	
New Algorithms for Enumerating All Maximal Cliques .....	260
<i>Kazuhisa Makino, Takeaki Uno</i>	
The Multi-multiway Cut Problem .....	273
<i>Adi Avidor, Michael Langberg</i>	
The Bottleneck Problem with Minimum Quantity Commitments .....	285
<i>Andrew Lim, Zhou Xu</i>	
All-Norm Approximation for Scheduling on Identical Machines .....	298
<i>Yossi Azar, Shai Taub</i>	
Approximation Algorithms for the General Max-min Resource Sharing Problem: Faster and Simpler .....	311
<i>Klaus Jansen</i>	
Approximation Schemes for the Crane Scheduling Problem .....	323
<i>Andrew Lim, Brian Rodrigues, Zhou Xu</i>	

Improved Approximation Algorithms for the Single-Sink Buy-at-Bulk Network Design Problems . . . . .	336
<i>Raja Jothi, Balaji Raghavachari</i>	
A $(2 - c \frac{\log N}{N})$ -Approximation Algorithm for the Stable Marriage Problem . . . . .	349
<i>Kazuo Iwama, Shuichi Miyazaki, Kazuya Okamoto</i>	
Maximizing the Number of Packed Rectangles . . . . .	362
<i>Klaus Jansen, Guochuan Zhang</i>	
Two Space Saving Tricks for Linear Time LCP Array Computation . . . . .	372
<i>Giovanni Manzini</i>	
Fully-Dynamic All-Pairs Shortest Paths: Faster and Allowing Negative Cycles . . . . .	384
<i>Mikkel Thorup</i>	
Faster Deterministic Gossiping in Directed Ad Hoc Radio Networks . . . . .	397
<i>Leszek Gąsieniec, Tomasz Radzik, Qin Xin</i>	
Online Scheduling of Splittable Tasks in Peer-to-Peer Networks . . . . .	408
<i>Leah Epstein, Rob van Stee</i>	
The Optimal Online Algorithms for Minimizing Maximum Lateness . . . . .	420
<i>Patchrawat Uthaisombut</i>	
Power Assignment in Radio Networks with Two Power Levels . . . . .	431
<i>Paz Carmi, Matthew J. Katz</i>	
Pointed Binary Encompassing Trees . . . . .	442
<i>Michael Hoffmann, Bettina Speckmann, Csaba D. Tóth</i>	
On Geometric Structure of Global Roundings for Graphs and Range Spaces . . . . .	455
<i>Tetsuo Asano, Naoki Katoh, Hisao Tamaki, Takeshi Tokuyama</i>	
External Connected Components . . . . .	468
<i>Jop F. Sibeyn</i>	
Cache-Oblivious Data Structures and Algorithms for Undirected Breadth-First Search and Shortest Paths . . . . .	480
<i>Gerth Stølting Brodal, Rolf Fagerberg, Ulrich Meyer, Norbert Zeh</i>	
Simplified External Memory Algorithms for Planar DAGs . . . . .	493
<i>Lars Arge, Laura Toma</i>	
<b>Author Index</b> . . . . .	505