

Table of Contents

Invited Presentations

Algorithmic Approaches to Information Retrieval and Data Mining	1
<i>Christos H. Papadimitriou</i>	
Combinatorial Problems Arising in Massive Data Sets	2
<i>Fan Chung Graham</i>	
Estimating Parameters of Monotone Boolean Functions	3
<i>Michael J. Fischer</i>	
De-amortization of Algorithms	4
<i>S. Rao Kosaraju and Mihai Pop</i>	

Computational Geometry

On Computing New Classes of Optimal Triangulations with Angular Constraints	15
<i>Yang Dai and Naoki Katoh</i>	
Maximum Weight Triangulation and Its Application on Graph Drawing	25
<i>Cao An Wang, Francis Y. Chin and Bo Ting Yang</i>	
The Colored Sector Search Tree: A Dynamic Data Structure for Efficient High Dimensional Nearest-Foreign-Neighbor Queries	35
<i>T. Graf, V. Kamakoti, N. S. Janaki Latha and C. Pandu Rangan</i>	
Space-Efficient Algorithms for Approximating Polygonal Curves in Two Dimensional Space	45
<i>Danny Z. Chen and Ovidiu Daescu</i>	
Parallel Geometric Algorithms in Coarse-Grain Network Models	55
<i>Mikhail J. Atallah and Danny Z. Chen</i>	

Algorithms and Data Structures

On the Bahncard Problem	65
<i>Rudolf Fleischer</i>	
The Ultimate Strategy to Search on m Rays?	75
<i>Alejandro López-Ortiz and Sven Schuierer</i>	
Better Approximation of Diagonal-Flip Transformation and Rotation Transformation	85
<i>Ming Li and Louxin Zhang</i>	

A Cost Optimal Parallel Algorithm for Computing Force Field in N-Body Simulations	95
<i>Guoliang Xue</i>	
Efficient 2 and 3-Flip Neighborhood Search Algorithms for the MAX SAT	105
<i>Mutsunori Yagiura and Toshihide Ibaraki</i>	
Algorithms for Almost-uniform Generation with an Unbiased Binary Source	117
<i>Ömer Eğecioğlu and Marcus Peinado</i>	
Improved Algorithms for Chemical Threshold Testing Problems	127
<i>Annalisa De Bonis, Luisa Gargano and Ugo Vaccaro</i>	
Min-Max-Boundary Domain Decomposition	137
<i>Marcos Kiwi, Daniel A. Spielman and Shang-Hua Teng</i>	
Computational Complexity	
On Boolean Lowness and Boolean Highness	147
<i>Steffen Reith and Klaus W. Wagner</i>	
The Inherent Dimension of Bounded Counting Classes	157
<i>Ulrich Hertrampf</i>	
An Exact Characterization of Symmetric Functions in $\text{qAC}^0[2]$	167
<i>Chi-Jen Lu</i>	
Robust Reductions	174
<i>Jin-Yi Cai, Lane A. Hemaspaandra and Gerd Wechsung</i>	
Approaches to Effective Semi-continuity of Real Functions	184
<i>Vasco Brattka, Klaus Weihrauch and Xizhong Zheng</i>	
On the Power of Additive Combinatorial Search Model	194
<i>Vladimir Grebinski</i>	
Parallel and Distributed Processing, and Switching Networks	
The Number of Rearrangements in a 3-stage Clos Network Using an Auxiliary Switch	204
<i>Frank K. Hwang and Wen-Dar Lin</i>	
Lower Bounds for Wide-Sense Non-blocking Clos Network	213
<i>Kuo-Hui Tsai and Da-Wei Wang</i>	
Multirate Multicast Switching Networks	219
<i>Dongsoo S. Kim and Ding-Zhu Du</i>	

Efficient Randomized Routing Algorithms on the Two-Dimensional Mesh of Buses	229
<i>Kazuo Iwama, Eiji Miyano, Satoshi Tajima and Hisao Tamaki</i>	
Executing Divisible Jobs on a Network with a Fixed Number of Processors	241
<i>Tsan-sheng Hsu and Dian Rae Lopez</i>	

Graph Theory

On the Ádám Conjecture on Circulant Graphs	251
<i>Bernard Mans, Francesco Pappalardi and Igor Shparlinski</i>	
Proof of Toft's Conjecture: Every Graph Containing No Fully Odd K_4 Is 3-Colorable	261
<i>Wenan Zang</i>	
A New Family of Optimal 1-Hamiltonian Graphs with Small Diameter ..	269
<i>Jeng-Jung Wang, Ting-Yi Sung, Lih-Hsing Hsu and Men-Yang Lin</i>	
A Linear-Time Algorithm for Constructing an Optimal Node-Search Strategy of a Tree	279
<i>Sheng-Lung Peng, Chin-Wen Ho, Tsan-sheng Hsu, Ming-Tat Ko and Chuan Yi Tang</i>	
A Graph Optimization Problem in Virtual Colonoscopy	289
<i>Jie Wang and Yaorong Ge</i>	
Approximation and Exact Algorithms for Constructing Minimum Ultrametric Trees from Distance Matrices	299
<i>Bang Ye Wu, Kun-Mao Chao and Chuan Yi Tang</i>	
An Optimal Algorithm for Finding the Minimum Cardinality Dominating Set on Permutation Graphs	309
<i>H. S. Chao, F. R. Hsu and R. C. T. Lee</i>	

Combinatorics and Cryptography

Similarity in Two-Dimensional Strings	319
<i>Ricardo A. Baeza-Yates</i>	
On Multi-dimensional Hilbert Indexings	329
<i>Jochen Alber and Rolf Niedermeier</i>	
Combinatorial Properties of Classes of Functions Hard to Compute in Constant Depth	339
<i>Anna Bernasconi</i>	
Eulerian Secret Key Exchange	349
<i>Takaaki Mizuki, Hiroki Shizuya and Takao Nishizeki</i>	

One-Time Tables for Two-Party Computation 361
Donald Beaver

Author Index 371



<http://www.springer.com/978-3-540-64824-6>

Computing and Combinatorics
4th Annual International Conference, COCOON'98,
Taipei, Taiwan, R.o.C., August 12-14, 1998
Hsu, W.-L.; Kao, M.-Y. (Eds.)
1998, XII, 372 p., Softcover
ISBN: 978-3-540-64824-6