Table of Contents

Recent Developments in Maximum Flow Algorithms (Invited Lecture) 1
A. V. Goldberg

An ϵ - Approximation Algorithm for Weighted Shortest Paths on Polyhedral Surfaces 11
L. Aleksandrov, M. Lanthier, A. Maheshwari, J. R. Sack

Facility Location with Dynamic Distance Functions 23
R. Bhatia, S. Guha, S. Khuller, Y. J. Sussmann

An Approximation Scheme for Bin Packing with Conflicts 35
K. Jansen

Approximations for the General Block Distribution of a Matrix 47
B. Aspvall, M. M. Halldórsson, F. Manne

An Optimal Algorithm for Computing Visible Nearest Foreign Neighbors among Colored Line Segments 59
T. Graf, K. Veezhinathan

Moving an Angle around a Region 71
F. Hoffmann, C. Icking, R. Klein, K. Kriegel

Models and Motion Planning 83
M. de Berg, M. J. Katz, M. Overmars, A. F. van der Stappen, J. Vleugels

Constrained Square-Center Problems 95
M. J. Katz, K. Kedem, M. Segal

Worst-Case Efficient External-Memory Priority Queues 107
G. S. Brodal, J. Katajainen

Simple Confluently Persistent Catenable Lists 119
H. Kaplan, C. Okasaki, R. E. Tarjan

Improved Upper Bounds for Time-Space Tradeoffs for Selection with Limited Storage 131
V. Raman, S. Ramnath

Probabilistic Data Structures for Priority Queues 143
R. Sridhar, K. Rajasekar, C. Pandu Rangan

Extractors for Weak Random Sources and Their Applications (Invited Lecture) 155
D. Zuckerman

Comparator Networks for Binary Heap Construction 158
G. S. Brodal, M. C. Pinotti

Two-Variable Linear Programming in Parallel 169
D. Z. Chen, J. Xu

Optimal Deterministic Protocols for Mobile Robots on a Grid 181
R. Grossi, A. Pietracaprina, G. Pucci

Concurrent Multicast in Weighted Networks 193
G. De Marco, L. Gargano, U. Vaccaro

Some Recent Strong Inapproximability Results (Invited Lecture) 205
J. Håstad

Minimal Elimination of Planar Graphs 210
E. Dahlhaus

Memory Requirements for Table Computations in Partial k-Tree Algorithms 222
B. Aspvall, A. Proskurowski, J. A. Telle

Formal Language Constrained Path Problems 234
C. Barrett, R. Jacob, M. Marathe

Local Search Algorithms for SAT: Worst-Case Analysis 246
E. A. Hirsch

Speed Is More Powerful than Clairvoyance 255
P. Berman, C. Coulston

Randomized Online Multi-threaded Paging 264
S. S. Seiden

Determinant: Old Algorithms, New Insights 276
M. Mahajan, V Vinay

Solving Fundamental Problems on Sparse-Meshes 288
J. F. Sibeyn

Output-Sensitive Cell Enumeration in Hyperplane Arrangements 300
N. Sleumer

Fast and Efficient Computation of Additively Weighted Voronoi Cells for Applications in Molecular Biology 310
H. M. Will

On the Number of Regular Vertices of the Union of Jordan Regions 322
B. Aronov, A. Efrat, D. Halperin, M. Sharir

Distribution-Sensitive Algorithms 335
S. Sen, N. Gupta

Author Index 347