Algorithms and Discrete Applied Mathematics

Third International Conference, CALDAM 2017 Sancoale, Goa, India, February 16–18, 2017 Proceedings



Contents

Optimal Embedding of Locally Twisted Cubes into Grids	1
Polynomial Time Algorithms for Bichromatic Problems	12
Voronoi Diagram for Convex Polygonal Sites with Convex Polygon-Offset Distance Function	24
Optimum Gathering of Asynchronous Robots	37
Improved Bounds for Poset Sorting in the Forbidden-Comparison Regime Arindam Biswas, Varunkumar Jayapaul, and Venkatesh Raman	50
Positional Dominance: Concepts and Algorithms	60
Accurate Low-Space Approximation of Metric k-Median for Insertion-Only Streams	72
Querying Relational Event Graphs Using Colored Range Searching Data Structures	83
Axiomatic Characterization of the Interval Function of a Bipartite Graph Manoj Changat, Ferdoos Hossein Nezhad, and Narayanan Narayanan	96
Analysis of 2-Opt Heuristic for the Winner Determination Problem Under the Chamberlin-Courant System	107
On Structural Parameterizations of Graph Motif and Chromatic Number Bireswar Das, Murali Krishna Enduri, Neeldhara Misra, and I. Vinod Reddy	118
On Chromatic Number of Colored Mixed Graphs	130
Optimizing Movement in Convex and Non-convex Path-Networks to Establish Connectivity	141

On Colouring Point Visibility Graphs	156
Decomposing Semi-complete Multigraphs and Directed Graphs into Paths of Length Two	166
On Rank and MDR Cyclic Codes of Length 2 ^k Over Z ₈	177
Group Distance Magic Labeling of C_n^r	187
Broadcast Graphs Using New Dimensional Broadcast Schemes for Knödel Graphs	193
Incremental Algorithms to Update Visibility Polygons	205
Liar's Domination in 2D	219
Structured Instances of Restricted Assignment with Two Processing Times Klaus Jansen and Lars Rohwedder	230
Elusiveness of Finding Degrees	242
Maximum Weighted Independent Sets with a Budget Tushar Kalra, Rogers Mathew, Sudebkumar Prasant Pal, and Vijay Pandey	254
Demand Hitting and Covering of Intervals	267
Exact and Parameterized Algorithms for (k, i) -Coloring Diptapriyo Majumdar, Rian Neogi, Venkatesh Raman, and Prafullkumar Tale	281
The Graph of the Pedigree Polytope is Asymptotically Almost Complete (Extended Abstract)	294
Induced Matching in Some Subclasses of Bipartite Graphs Arti Pandey, B.S. Panda, Piyush Dane, and Manav Kashyap	308
Hamiltonicity in Split Graphs - A Dichotomy	320

	Contents	XIX
Finding Large Independent Sets in Line of Sight Networks Pavan Sangha and Michele Zito		332
A Lower Bound of the cd-Chromatic Number and Its Complexity M.A. Shalu, S. Vijayakumar, and T.P. Sandhya	/	344
Stability Number and k-Hamiltonian [a, b]-factors Sizhong Zhou, Yang Xu, and Lan Xu		356
Subgraphs with Orthogonal $[0, k_i]_1^n$ -Factorizations in Graphs Sizhong Zhou, Tao Zhang, and Zurun Xu		362
Author Index		371