

## Contents – Part II

### Combinatorial Optimization

Algorithms for the Ring Star Problem . . . . .	3
<i>Xujin Chen, Xiaodong Hu, Zhongzheng Tang, Chenhao Wang, and Ying Zhang</i>	
Price Fluctuation in Online Leasing. . . . .	17
<i>Björn Feldkord, Christine Markarian, and Friedhelm Meyer Auf der Heide</i>	
Novel Scheduling for Energy Management in Microgrid . . . . .	32
<i>Zaixin Lu, Jd Youngs, Zhi Chen, and Miao Pan</i>	
Improved Methods for Computing Distances Between Unordered Trees Using Integer Programming . . . . .	45
<i>Eunpyeong Hong, Yasuaki Kobayashi, and Akihiro Yamamoto</i>	
Touring Convex Polygons in Polygonal Domain Fences . . . . .	61
<i>Arash Ahadi, Amirhossein Mozafari, and Alireza Zarei</i>	
On Interdependent Failure Resilient Multi-path Routing in Smart Grid Communication Network . . . . .	76
<i>Zishen Yang, Donghyun Kim, and Wei Wang</i>	
An Improved Branching Algorithm for $(n, 3)$ -MaxSAT Based on Refined Observations . . . . .	94
<i>Wenjun Li, Chao Xu, Jianxin Wang, and Yongjie Yang</i>	
Faster Algorithms for 1-Mappability of a Sequence . . . . .	109
<i>Mai Alzamel, Panagiotis Charalampopoulos, Costas S. Iliopoulos, Solon P. Pissis, Jakub Radoszewski, and Wing-Kin Sung</i>	
Lexico-Minimum Replica Placement in Multitrees. . . . .	122
<i>K. Alex Mills, R. Chandrasekaran, and Neeraj Mittal</i>	
Graph Editing to a Given Neighbourhood Degree List is Fixed-Parameter Tractable . . . . .	138
<i>Naomi Nishimura and Vijay Subramanya</i>	
A New Graph Parameter to Measure Linearity . . . . .	154
<i>Pierre Charbit, Michel Habib, Lalla Mouatadid, and Reza Naserasr</i>	

Listing Acyclic Subgraphs and Subgraphs of Bounded Girth in Directed Graphs . . . . .	169
<i>Alessio Conte, Kazuhiro Kurita, Kunihiro Wasa, and Takeaki Uno</i>	

Toward Energy-Efficient and Robust Clustering Algorithm on Mobile Ad Hoc Sensor Networks . . . . .	182
<i>Huamei Qi, Tailong Xiao, Anfeng Liu, and Su Jiang</i>	

## Game Theory

The Cop Number of the One-Cop-Moves Game on Planar Graphs . . . . .	199
<i>Ziyuan Gao and Boting Yang</i>	

The Price of Anarchy in Two-Stage Scheduling Games . . . . .	214
<i>Deshi Ye, Lin Chen, and Guochuan Zhang</i>	

Selfish Jobs with Favorite Machines: Price of Anarchy vs. Strong Price of Anarchy. . . . .	226
<i>Cong Chen, Paolo Penna, and Yinfeng Xu</i>	

An Improved Mechanism for Selfish Bin Packing . . . . .	241
<i>Xin Chen, Qingqin Nong, and Qizhi Fang</i>	

## Approximation Algorithm and Graph Theory

Hamiltonian Cycles in Covering Graphs of Trees . . . . .	261
<i>Pavol Hell, Hiroshi Nishiyama, and Ladislav Stacho</i>	

On $k$ -Strong Conflict-Free Multicoloring . . . . .	276
<i>Luisa Gargano, Adele A. Rescigno, and Ugo Vaccaro</i>	

Tropical Paths in Vertex-Colored Graphs . . . . .	291
<i>Johanne Cohen, Giuseppe F. Italiano, Yannis Manoussakis, Kim Thang Nguyen, and Hong Phong Pham</i>	

The Spectral Radius and Domination Number of Uniform Hypergraphs. . . . .	306
<i>Liying Kang, Wei Zhang, and Erfang Shan</i>	

Complexity and Online Algorithms for Minimum Skyline Coloring of Intervals. . . . .	317
<i>Thomas Erlebach, Fu-Hong Liu, Hsiang-Hsuan Liu, Mordechai Shalom, Prudence W.H. Wong, and Shmuel Zaks</i>	

Approximating $k$ -Forest with Resource Augmentation: A Primal-Dual Approach . . . . .	333
<i>Eric Angel, Nguyen Kim Thang, and Shikha Singh</i>	

Parameterized Approximation Algorithms for Some Location Problems in Graphs . . . . .	348
<i>Arne Leitert and Feodor F. Dragan</i>	
Approximation Algorithms for Maximum Coverage with Group Budget Constraints . . . . .	362
<i>Longkun Guo, Min Li, and Dachuan Xu</i>	
<b>Application</b>	
A Simple Greedy Algorithm for the Profit-Aware Social Team Formation Problem . . . . .	379
<i>Shengxin Liu and Chung Keung Poon</i>	
Doctor Rostering in Compliance with the New UK Junior Doctor Contract . . . . .	394
<i>Anna Lavygina, Kris Welsh, and Alan Crispin</i>	
Bounds for Static Black-Peg AB Mastermind . . . . .	409
<i>Christian Glazik, Gerold Jäger, Jan Schiemann, and Anand Srivastav</i>	
Classification Statistics in RFID Systems . . . . .	425
<i>Zhenzao Wen, Jiapeng Huang, Linghe Kong, Min-You Wu, and Guihai Chen</i>	
On the Complexity of Robust Stable Marriage . . . . .	441
<i>Begum Genc, Mohamed Siala, Gilles Simonin, and Barry O’Sullivan</i>	
The Euclidean Vehicle Routing Problem with Multiple Depots and Time Windows . . . . .	449
<i>Liang Song and Hejiao Huang</i>	
Online Algorithms for Non-preemptive Speed Scaling on Power-Heterogeneous Processors . . . . .	457
<i>Aeshah Alsughayyir and Thomas Erlebach</i>	
An Efficient Algorithm for Judicious Partition of Hypergraphs . . . . .	466
<i>Tunzi Tan, Jihong Gui, Sainan Wang, Suixiang Gao, and Wenguo Yang</i>	
On Structural Parameterizations of the Matching Cut Problem . . . . .	475
<i>N.R. Aravind, Subrahmanyam Kalyanasundaram, and Anjeneya Swami Kare</i>	
Longest Previous Non-overlapping Factors Table Computation . . . . .	483
<i>Supaporn Chairungsee and Maxime Crochemore</i>	
Modeling and Verifying Multi-core Programs . . . . .	492
<i>Nan Zhang, Zhenhua Duan, Cong Tian, Hongwei Du, and Kai Yang</i>	

Planar Vertex-Disjoint Cycle Packing: New Structures and Improved Kernel. . . . .	501
<i>Qilong Feng, Xiaolu Liao, and Jianxin Wang</i>	
On the Linearization of Scaffolds Sharing Repeated Contigs. . . . .	509
<i>Mathias Weller, Annie Chateau, and Rodolphe Giroudeau</i>	
A Memetic Algorithm for the Linear Ordering Problem with Cumulative Costs. . . . .	518
<i>Taoqing Zhou, Zhipeng Lü, Tao Ye, and Kan Zhou</i>	
<b>Author Index</b> . . . . .	527

# Contents – Part I

## Network

Filtering Undesirable Flows in Networks . . . . .	3
<i>Gleb Polevoy, Stojan Trajanovski, Paola Grosso, and Cees de Laat</i>	
A Framework for Overall Storage Overflow Problem to Maximize the Lifetime in WSNs . . . . .	18
<i>Guoliang Song, Chen Zhang, Chuang Liu, and Yuna Chai</i>	
Floorplans with Columns . . . . .	33
<i>Katsuhisa Yamanaka, Md. Saidur Rahman, and Shin-Ichi Nakano</i>	
A Parallel Construction of Vertex-Disjoint Spanning Trees with Optimal Heights in Star Networks . . . . .	41
<i>Shih-Shun Kao, Jou-Ming Chang, Kung-Jui Pai, Jinn-Shyong Yang, Shyue-Ming Tang, and Ro-Yu Wu</i>	
Protein Mover's Distance: A Geometric Framework for Solving Global Alignment of PPI Networks . . . . .	56
<i>Manni Liu and Hu Ding</i>	
On the Profit-Maximizing for Transaction Platforms in Crowd Sensing . . . . .	70
<i>Xi Luo, Jialiang Lu, Guangshuo Chen, Linghe Kong, and Min-You Wu</i>	
A New Approximation Algorithm for the Maximum Stacking Base Pairs Problem from RNA Secondary Structures Prediction . . . . .	85
<i>Aizhong Zhou, Haitao Jiang, Jiong Guo, and Daming Zhu</i>	

## Approximation Algorithm and Graph Theory

Approximation Algorithms for the Generalized Stacker Crane Problem . . . . .	95
<i>Jianping Li, Xiaofei Liu, Weidong Li, Li Guan, and Junran Lichen</i>	
Fast Approximation Algorithms for Computing Constrained Minimum Spanning Trees . . . . .	103
<i>Pei Yao and Longkun Guo</i>	
Trajectory-Based Multi-hop Relay Deployment in Wireless Networks . . . . .	111
<i>Shilei Tian, Haotian Wang, Sha Li, Fan Wu, and Guihai Chen</i>	

A Local Search Approximation Algorithm for a Squared Metric $k$ -Facility Location Problem . . . . .	119
<i>Dongmei Zhang, Dachuan Xu, Yishui Wang, Peng Zhang, and Zhenning Zhang</i>	
Combinatorial Approximation Algorithms for Spectrum Assignment Problem in Chain and Ring Networks . . . . .	125
<i>Guangting Chen, Lei Zhang, An Zhang, and Yong Chen</i>	
Mixed Connectivity of Random Graphs . . . . .	133
<i>Ran Gu, Yongtang Shi, and Neng Fan</i>	
Conflict-Free Connection Numbers of Line Graphs . . . . .	141
<i>Bo Deng, Wenjing Li, Xueliang Li, Yaping Mao, and Haixing Zhao</i>	
The Coloring Reconfiguration Problem on Specific Graph Classes . . . . .	152
<i>Tatsuhiko Hatanaka, Takehiro Ito, and Xiao Zhou</i>	
<b>Combinatorial Optimization</b>	
Minimizing Total Completion Time of Batch Scheduling with Nonidentical Job Sizes . . . . .	165
<i>Rongqi Li, Zhiyi Tan, and Qianyu Zhu</i>	
New Insights for Power Edge Set Problem . . . . .	180
<i>Benoît Darties, Annie Chateau, Rodolphe Giroudeau, and Mathias Weller</i>	
Extended Spanning Star Forest Problems . . . . .	195
<i>Kaveh Khoshkhan, Mehdi Khosravian Ghadikolaei, Jérôme Monnot, and Dirk Oliver Theis</i>	
Faster and Enhanced Inclusion-Minimal Cograph Completion . . . . .	210
<i>Christophe Crespelle, Daniel Lokshantov, Thi Ha Duong Phan, and Eric Thierry</i>	
Structure of Towers and a New Proof of the Tight Cut Lemma . . . . .	225
<i>Nanao Kita</i>	
On the Complexity of Detecting $k$ -Length Negative Cost Cycles . . . . .	240
<i>Longkun Guo and Peng Li</i>	
A Refined Characteristic of Minimum Contingency Set for Conjunctive Query . . . . .	251
<i>Dongjing Miao and Zhipeng Cai</i>	

Generalized Pyramidal Tours for the Generalized Traveling Salesman Problem. . . . .	265
<i>Michael Khachay and Katherine Neznakhina</i>	
The 2-Median Problem on Cactus Graphs with Positive and Negative Weights . . . . .	278
<i>Chunsong Bai and Liying Kang</i>	
The Eigen-Distribution of Weighted Game Trees . . . . .	286
<i>Shohei Okisaka, Weiguang Peng, Wenjuan Li, and Kazuyuki Tanaka</i>	
A Spectral Partitioning Algorithm for Maximum Directed Cut Problem . . . . .	298
<i>Zhenning Zhang, Donglei Du, Chenchen Wu, Dachuan Xu, and Dongmei Zhang</i>	
Better Approximation Ratios for the Single-Vehicle Scheduling Problems on Tree/Cycle Networks. . . . .	313
<i>Yuanxiao Wu and Xiwen Lu</i>	
An Efficient Primal-Dual Algorithm for Fair Combinatorial Optimization Problems. . . . .	324
<i>Viet Hung Nguyen and Paul Weng</i>	
Efficient Algorithms for Ridesharing of Personal Vehicles . . . . .	340
<i>Qian-Ping Gu, Jiajian Leo Liang, and Guochuan Zhang</i>	
Cost-Sharing Mechanisms for Selfish Bin Packing . . . . .	355
<i>Chenhao Zhang and Guochuan Zhang</i>	
<b>Application</b>	
Modelling and Solving Anti-aircraft Mission Planning for Defensive Missile Battalions . . . . .	371
<i>Trang T. Nguyen, Trung Q. Bui, Bang Q. Nguyen, and Su T. Le</i>	
Perspectives of Big Data Analysis in Urban Railway Planning: Shenzhen Metro Case Study. . . . .	386
<i>Keke Peng, Caiwei Yuan, and Wen Xu</i>	
Cloning Automata: Simulation and Analysis of Computer Bacteria . . . . .	401
<i>Chu Chen, Zhenhua Duan, Cong Tian, and Hongwei Du</i>	
Research on Arrival Integration Method for Point Merge System in Tactical Operation . . . . .	417
<i>Yannan Qi, Xinglong Wang, and Chen Chen</i>	
Repair Position Selection for Inconsistent Data . . . . .	426
<i>Xianmin Liu, Yingshu Li, and Jianzhong Li</i>	

Unbounded One-Way Trading on Distributions with Monotone Hazard Rate . . . . .	439
<i>Francis Y.L. Chin, Francis C.M. Lau, Haisheng Tan, Hing-Fung Ting, and Yong Zhang</i>	
Generalized Bidirectional Limited Magnitude Error Correcting Code for MLC Flash Memories. . . . .	450
<i>Akram Hussain, Xinchun Yu, and Yuan Luo</i>	
Optimal Topology Design of High Altitude Platform Based Maritime Broadband Communication Networks . . . . .	462
<i>Jianli Duan, Tiange Zhao, and Bin Lin</i>	
On Adaptive Bitprobe Schemes for Storing Two Elements . . . . .	471
<i>Deepanjan Kesh</i>	
<b>Author Index . . . . .</b>	<b>481</b>



Combinatorial Optimization and Applications  
11th International Conference, COCOA 2017, Shanghai,  
China, December 16-18, 2017, Proceedings, Part II  
Gao, X.; Du, H.; Han, M. (Eds.)  
2017, XVIII, 529 p. 88 illus., Softcover  
ISBN: 978-3-319-71146-1