

SEA2011 – 10th International Symposium on Experimental Algorithms

May 5 – 7, 2011
ORTHODOX ACADEMY OF CRETE
CHANIA, GREECE

ORGANIZERS **PANOS PARDALOS** (PARDALOS@UFL.EDU)
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Social Program

May 04	19:30 - 21:00	Welcome Reception
May 06	14:30 - 22:00	Half day excursion to the Holy Monastery of Agia Triada, Venizelos' graves and free time at Chania city
May 06	20:00 - 22:30	Creten night
May 08	09:00 - 18:00	Post conference tour to Heraklion (€10 per person)

Technical Program

Thursday, May 5, 2011

08:00-13:00 *Registration, Conference Registration Desk*

07:30-08:30 *Breakfast*

Chair: Panos M. Pardalos

08:30-09:30 **Approximability of Symmetric Bimatrix Games and Related Experiments**
Kontogiannis, Spyros; Spirakis, Paul

Chair: Panos M. Pardalos

09:30-09:50 **Experimental Evaluation of Algorithms for the Orthogonal Milling Problem with Turn Costs**
de Souza, Cid; de Assis, Igor

09:50-10:10 **Path Trading: Fast Algorithms, Smoothed Analysis, and Hardness Results**
van der Zwaan, Gijsbert Ruben Johan; Röglin, Heiko; Berger, André

10:10-10:30 **GRASP with path-relinking for data clustering: a case study for biological data**
Silva, Ricardo; Frinhani, Rafael; Mateus, Geraldo; Festa, Paola; Resende, Mauricio

10:30- 10:50 **Restart strategies for GRASP with path-relinking heuristics**
Resende, Mauricio; Ribeiro, Celso

10:50-11:10 **Online Dictionary Matching with Variable-Length Gaps**
Haapasalo, Tuukka; Silvasti, Panu; Sippu, Seppo; Soisalon-Soininen, Eljas

11:10-11:30 *Coffee break*

Chair: Paul Spirakis

11:30-11:50 **Dynamic Arc-Flags in Road Networks**
D'Angelo, Gianlorenzo; Frigioni, Daniele; Vitale, Camillo

11:50-12:10 **An Iterative Refinement Algorithm for the Minimum Branch Vertices Problem**
Silva, Ricardo; Silva, Diego; Mateus, Geraldo; Gonçalves, José Fernando; Resende, Mauricio; Festa, Paola

12:10-12:30 **On Minimum Changeover Cost Arborescences**
Gualandi, Stefano; Galbiati, Giulia; Maffioli, Francesco

12:30-12:50 **Logical Errors Localization Based on Invariants - NO SHOW**
Daryabari, Mojtaba; Minaei-Bidgoli, Behrouz; Parvin, Hamid

12:50-13:10 **Compressed String Dictionaries**
Cnovas, Rodrigo; Claude, Francisco; Navarro, Gonzalo; Martínez, Miguel; Brisaboa, Nieves

Thursday, May 5, 2011

- 13:10-13:30 **Combinatorial Optimization for Weighing Matrices with the Ordering Messy Genetic Algorithm**
Simos, Dimitris; Koukouvinos, Christos
- 13:30-13:50 **Improved Automated Reaction Mapping**
Kouri, Tina; Mehta, Dinesh
- 14:00-15:30 *Lunch*
- Chair:** David Williamson
- 15:30-15:50 **Hierarchical Delaunay Triangulation for Meshing**
Ye, Shu; Daniels, Karen
- 15:50-16:10 **Identifying Algorithmic Vulnerabilities through Simulated Annealing**
Andrew Johnson, Dinesh Mehta, Ramakrishna Thurimella
- 16:10-16:30 ~~**Experiments with LAGRASP Heuristic for Set k-Covering**~~ - CANCELED
Pessoa, Luciana; Resende, Mauricio; Ribeiro, Celso
- 16:30-16:50 **A Lagrangian Relaxation Based Branch-and-Bound Approach for Protein Design**
Canzar, Stefan ; Toussaint, Nora; Klau, Gunnar
- 16:50-17:10 **Sequencing and Scheduling for Filling Lines in Dairy Production**
Gellert, Torsten; Hohn, Wiebke; Mohring, Rolf

Friday, May 6, 2011

08:00-13:00 *Registration, Conference Registration Desk*

07:30-08:30 *Breakfast*

Chair: Steffen Rebennack

08:30-09:30 **Polyolithic Modeling and Solution Approaches Using Algebraic Modeling Systems**
Kallrath, Josef

Chair: Alexandra Newman

09:30-09:50 **An experimental evaluation of incremental and hierarchical k-median algorithms**
Williamson, David; Nagarajan, Chandrashekhar

09:50-10:10 **Engineering the Modulo Network Simplex Heuristic for the Periodic Timetabling Problem**
Goerigk, Marc; Schöbel, Anita

10:10-10:30 **Practical Compressed Document Retrieval**
Valenzuela, Daniel; Navarro, Gonzalo; Puglisi, Simon

10:30- 10:50 **Influence of Pruning Devices on the Solution of Molecular Distance Geometry Problems**
Mucherino, Antonio; Lavor, Carlile; Malliavin, Therese; Liberti, Leo; Nilges, Michael; Maculan, Nelson

10:50-11:10 **An Experimental Evaluation of Treewidth at most Four Reductions**
Koster, Arie; Hein, Alexander

11:10-11:30 *Coffee break*

Chair: Mauricio Resende

11:30-11:50 **A Hub-Based Labeling Algorithm for Shortest Paths on Road Networks**
Delling, Daniel; Abraham, Ittai; Goldberg, Andrew; Werneck, Renato

11:50-12:10 **Hierarchy Decomposition for Faster User Equilibria on Road Networks**
Luxen, Dennis; Sanders, Peter

12:10-12:30 **Matching in Bipartite Graph Streams in a Small Number of Passes**
Kliemann, Lasse

12:30-12:50 **Beyond Unit Propagation in SAT Solving**
Kaufmann, Michael; Kottler, Stephan

12:50-13:10 **Designing Difficult Office Space Allocation Problem Instances with Mathematical Programming**
Ulker, Ozgur; Landa-Silva, Dario

13:10-13:30 **Speed Dating: An Algorithmic Case Study Involving Matching and Scheduling**
Katz, Bastian; Rutter, Ignaz; Strasser, Ben; Wagner, Dorothea

13:30-14:30 *Lunch*

Saturday, May 7, 2011

08:00-13:00 *Registration, Conference Registration Desk*

07:30-08:30 *Breakfast*

Chair: Alexandra Newman

08:30-09:30 **Metaheuristic Optimization: Algorithm Analysis and Open Problems**
Yang, Xin-She

Chair: Dinesh Mehta

09:30-09:50 **A Branch-Cut-and-Price Algorithm for the Capacitated Arc Routing Problem**
Martinelli, Rafael; Pecin, Diego; Poggi, Marcus; Longo, Humberto

09:50-10:10 **A Biased Random Key Genetic Algorithm approach for Unit Commitment Problem**
Roque, Luís; Fontes, Dalila; Fontes, Fernando

10:10-10:30 **A Sliding Time Window Heuristic for Open Pit Mine Block Sequencing**
Cullenbine, Christopher; Wood, . Kevin; Newman, Alexandra

10:30- 10:50 ~~**Fuzzy Clustering the Backward Dynamic Slices of Programs to Identify the Origins of Failure**~~ - NO SHOW
Vahidi-Asl, Mojtaba; Zareie, Farzaneh; Saeed, Parsa

10:50-11:10 **Listing All Maximal Cliques in Large Sparse Real-World Graphs**
Eppstein, David; Strash, Darren

11:10-11:30 *Coffee break*

Chair: Miguel Martinez

11:30-11:50 **Networks with Prescribed Collective Properties**
Gounaris, Chrysanthos; Rajendran, Karthikeyan; Kevrekidis, Ioannis;
Floudas, Christodoulos

11:50-12:10 **Efficient Algorithms for Distributed Detection of Holes and Boundaries in Wireless Networks**
Schieferdecker, Dennis; Wagner, Dorothea; Völker, Markus

12:10-12:30 **Explanations for the Cumulative Constraint: an Experimental Study**
Schulz, Jens; Heinz, Stefan

12:30-12:50 **Algorithm Engineering for Optimal Alignment of Protein Structure Distance Matrices**
Wohlers, Inken ; Rumen, Andonov; Rumen; Klau, Gunnar

12:50-13:10 **Efficient Routing in Road Networks with Turn Costs**
Geisberger, Robert; Vetter, Christian

Saturday, May 7, 2011

13:10-13:30 **Generating Time Dependencies in Road Networks**

Meinert, Sascha; Wagner, Dorothea

13:30-13:50 **An Empirical Evaluation of Extendible Arrays**

Joannou, Stelios; Raman, Rajeev

14:00-15:30 *Lunch*

Chair: Jens Schulz

15:30-15:50 **Recoverable Robust Knapsacks: the Discrete Scenario Case**

Büsing, Christina; Koster, Arie; Kutschka, Manuel

15:50-16:10 **A Column Generation Approach to Scheduling of Periodic Tasks**

Althaus, Ernst; Naujoks, Rouven; Thaden, Eike

16:10-16:30 **A Parallel Multi-start Search Algorithm for Dynamic Traveling Salesman Problem**

Li, Weiqi

16:30-16:50 **Customizable Route Planning**

Delling, Daniel; Pajor, Thomas; Goldberg, Andrew; Werneck, Renato