

CTW09 Program

Traveling Salesman Problem

Lecture Hall A, Tue 2, 08:45–10:15

SESSION CHAIR: M. Bruglieri

1. *C. Dong, C. Ernst, G. Jaeger, D. Richter, P. Molitor*
Effective Heuristics for Large Euclidean TSP Instances Based on Pseudo Backbones
2. *M. Casazza, A. Ceselli, M. Nunkesser*
Efficient Algorithms for the Double Traveling Salesman Problem with Multiple Stacks
3. *M. Bruglieri, A. Colomi, A. Lue*
The Parking Warden Tour Problem

Graph Theory I

Lecture Hall B, Tue 2, 08:45–10:15

SESSION CHAIR: H. Gropp

1. *I. Sau, D. Thilikos*
On Self-Duality of Branchwidth in Graphs of Bounded Genus
2. *S. Nikolopoulos, C. Papadopoulos*
A Simple Linear-Time Recognition Algorithm for Weakly Quasi-Threshold Graphs
3. *H. Gropp*
From Sainte-Laguë to Claude Berge — French Graph Theory in the Twentieth Century

Combinatorial Optimization

Lecture Hall A, Tue 2, 10:30–12:30

SESSION CHAIR: V. Lozin

1. *J. Maßberg, T. Nieberg*
Colored Independent Sets
2. *V. Lozin*
A Note on the Parameterized Complexity of the Maximum Independent Set Problem
3. *G. Nicosia, A. Pacifici, U. Pferschy*
On Multi-Agent Knapsack Problems
4. *L. Simonetti, Y. Frota, C. Souza*
An Exact Method for the Minimum Caterpillar Spanning Problem

Coloring I

Lecture Hall B, Tue 2, 10:30–12:30

SESSION CHAIR: C. Picouleau

1. *R. Machado, C. de Figueiredo*
NP-Completeness of Determining the Total Chromatic Number of Graphs that do not contain a Cycle with a Unique Chord
2. *R. Kang, T. Müller*
Acyclic and Frugal Colourings of Graphs
3. *P. Petrosyan, H. Sargsyan*
On Resistance of Graphs
4. *E. Bampas, A. Pagourtzis, G. Pierrakos, V. Syrgkanis*
Colored Resource Allocation Games

Cutting & Packing

Lecture Hall A, Tue 2, 14:00–15:30

SESSION CHAIR: F. Marinelli

1. *C. Arbib, F. Marinelli, C. Scoppola*
A Lower Bound for the Cutting Stock Problem with a Limited Number of Open Stacks
2. *H. Fernau, D. Raible*
Packing Paths: Recycling Saves Time
3. *J. Schneider, J. Maßberg*
Rectangle Packing with Additional Restrictions

Paths

Lecture Hall B, Tue 2, 14:00–15:30

SESSION CHAIR: F. Usberti

1. *F. Usberti, P. França, A. França*
The Open Capacitated Arc Routing Problem
2. *M. Maischberger*
Optimising Node Coordinates for the Shortest Path Problem
3. *R. Bhandari*
The Sliding Shortest Path Algorithms

Quadratic Programming

Lecture Hall A, Tue 2, 15:45–16:45

SESSION CHAIR: R. Cordone

1. *W. Ben-Ameur, J. Neto*
A Polynomial-Time Recursive Algorithm for some Unconstrained Quadratic Optimization Problems
2. *J. Schuele, H. Ewe, K.-H. Kuefer*
Finding Tight RLT Formulations for Quadratic Semi-Assignment Problems

Trees

Lecture Hall B, Tue 2, 15:45–16:45

SESSION CHAIR: K. Cameron

1. *V. Borozan, W.F. de La Vega, Y. Manoussakis, C. Martinhon, R. Muthu, A. Abouelaoualim, R. Saad*
Colored Trees in Edge-Colored Graphs
2. *K. Cameron, J. Fawcett*
Intermediate Trees

Plenary Session I

Lecture Hall A, Tue 2, 16:45–17:30

SESSION CHAIR: J. Lee

1. *A. Lodi*
Bilevel Programming and Maximally Violated Valid Inequalities

Integer Programming

Lecture Hall A, Wed 3, 08:45–10:15

SESSION CHAIR: G. Nannicini

1. *R. Schultz*
Decomposition Methods for Stochastic Integer Programs with Dominance Constraints
2. *S. Kosuch, A. Lisser*
On a Two-Stage Stochastic Knapsack Problem with Probabilistic Constraint
3. *G. Cornuéjols, L. Liberti, G. Nannicini*
Improved Strategies for Branching on General Disjunctions

Graph Theory II

Lecture Hall B, Wed 3, 08:45–10:15

SESSION CHAIR: G. Katona

1. *G. Katona, I. Horváth*
Extremal Stable Graphs
2. *V.A. Leoni, M.P. Dobson, Gr. Nasini*
Recognizing Edge-Perfect Graphs: some Polynomial Instances
3. *M. Freitas, N. Abreu, R. Del-Vecchio*
Some Infinite Families of Q -Integral Graphs

Applications

Lecture Hall A, Wed 3, 10:30–12:30

SESSION CHAIR: G. Righini

1. *A. Ceselli, R. Cordone, M. Cremonini*
Balanced Clustering for Efficient Detection of Scientific Plagiarism
2. *V. Cacchiani, A. Caprara, M. Fischetti*
Robustness in Train Timetabling
3. *F. Roda, L. Liberti, F. Raimondi*
Combinatorial Optimization Based Recommender Systems
4. *G. Righini, R. Cordone, F. Ficarelli*
Bounds and Solutions for Strategic, Tactical and Operational Ambulance Location

Coloring II

Lecture Hall B, Wed 3, 10:30–12:30

SESSION CHAIR: A. Lyons

1. *E. Hoshino, C. de Souza, Y. Frota*
A Branch-and-Price Approach for the Partition Coloring Problem
2. *M. Soto, A. Rossi, M. Sevaux*
Two Upper Bounds on the Chromatic Number
3. *F. Bonomo, G.A. Durán, J. Marengo, M. Valencia-Pabon*
Minimum Sum Set Coloring on some Subclasses of Block Graphs
4. *A. Lyons*
Acyclic and Star Colorings of Joins of Graphs and an Algorithm for Cographs

Exact Algorithms

Lecture Hall A, Wed 3, 14:00–15:30

SESSION CHAIR: L. Bianco

1. H. Fernau, S. Gaspers, D. Kratsch, M. Liedloff, D. Raible
Exact Exponential-Time Algorithms for Finding Biclques in a Graph
2. L. Bianco, M. Caramia
An Exact Algorithm to Minimize the Makespan in Project Scheduling with Scarce Resources and Feeding Precedence Relations
3. R. Macedo, C. Alves, V. de Carvalho
Exact Algorithms for Vehicle Routing Problems with Different Service Constraints

Networks I

Lecture Hall B, Wed 3, 14:00–15:30

SESSION CHAIR: S. Pickl

1. D. Lozovanu, S. Pickl
Algorithmic Solutions of Discrete Control Problems on Stochastic Networks
2. L. Belgacem, I. Charon, O. Hudry
Routing and Wavelength Assignment in Optical Networks by Independent Sets in Conflict Graphs
3. A. Guedes, L. Markenzon, L. Faria
Recognition of Reducible Flow Hypergraphs

Complexity

Lecture Hall A, Wed 3, 15:45–16:45

SESSION CHAIR: R. Schrader

1. A. Scazzari, F. Tardella
On the Complexity of Graph-Based Bounds for the Probability Bounding Problem
2. B. Engels, S. Krumke, R. Schrader, C. Zeck
Integer Flow with Multipliers: The Special Case of Multipliers 1 and 2

Polyhedra

Lecture Hall B, Wed 3, 15:45–16:45

SESSION CHAIR: C. Gentile

1. R. Stephan
Classification of 0/1-Facets of the Hop Constrained Path Polytope Defined on an Acyclic Digraph
2. A. Galluccio, C. Gentile, M. Macina, P. Ventura
The k -Gear Composition and the Stable Set Polytope

Plenary Session II

Lecture Hall A, Wed 3, 16:45–17:30

SESSION CHAIR: U. Faigle

1. M. Habib
Diameter and Center Computations in Networks

Polynomial-time Algorithms

Lecture Hall A, Thu 4, 08:45–10:15

SESSION CHAIR: M. Bodirsky

1. M. Bodirsky, G. Nordh, T. von Oertzen
Integer Programming with 2-Variable Equations and 1-Variable Inequalities
2. D. Müller
Faster Min-Max Resource Sharing and Applications
3. A. Bettinelli, L. Liberti, F. Raimondi, D. Savourey
The Anonymous Subgraph Problem

Graph Theory III

Lecture Hall B, Thu 4, 08:45–10:15

SESSION CHAIR: F. Bonomo

1. A. Rafael, F.-T. Desamparados, J.A. Vilches
The Number of Excellent Discrete Morse Functions on Graphs
2. F. Bonomo, G.A. Durán, L.N. Grippo, M.D. Safe
Partial Characterizations of Circle Graphs
3. T. Shigezumi, Y. Uno, O. Watanabe
A Replacement Model for a Scale-Free Property of Cliques

Graph Theory IV

Lecture Hall A, Thu 4, 10:30–12:30

SESSION CHAIR: V. Giakoumakis

1. A. Darmann, U. Pferschky, J. Schauer, G. Woeginger
Combinatorial Optimization Problems with Conflict Graphs

2. J.M. Sigarreta, I. Gonzalez Yero, S. Bermudo, J.A. Rodríguez-Velázquez
On the Decomposition of Graphs into Offensive k -Alliances

3. M. Brinkmeier
Increasing the Edge Connectivity by One in $O(\lambda_G n^2 \log^{(*)} n)$ Expected Time

4. V. Giakoumakis, O. El Mounir
Enumerating all Finite Sets of Minimal Prime Extensions of Graphs

Networks II

Lecture Hall B, Thu 4, 10:30–12:30

SESSION CHAIR: F. Tarissan

1. C. Bentz
On Planar and Directed Multicuts with few Source-Sink Pairs
2. F. Usberti, J. Gonzalez, C.L. Filho, C. Cavellucci
Maintenance Resources Allocation on Power Distribution Networks with a Multi-Objective Framework
3. E. Grande, P.B. Mirchandani, A. Pacifici
Column Generation for the Multicommodity Min-cost Flow Over Time Problem
4. F. Tarissan, C. La Rota
Inferring Update Sequences in Boolean Gene Regulatory Networks

Bioinformatics

Lecture Hall A, Thu 4, 14:00–15:30

SESSION CHAIR: N. Maculan

1. N. Van Cleemput, G. Brinkmann
NANOCONES – A Classification Result in Chemistry
2. A. Mucherino, C. Lavor, N. Maculan
The Molecular Distance Geometry Problem Applied to Protein Conformations
3. G. Collet, R. Andonov, N. Yanev, J.-F. Gibrat
Protein Threading

Clustering

Lecture Hall B, Thu 4, 14:00–15:30

SESSION CHAIR: K. Dhyan

1. J. Correa, N. Megow, R. Raman, K. Suchan
Cardinality Constrained Graph Partitioning into Cliques with Submodular Costs
2. F. Liers, G. Pardella
A Simple MAX-CUT Algorithm for Planar Graphs
3. E. Amaldi, S. Coniglio, K. Dhyan
 k -Hyperplane Clustering Problem: Column Generation and a Metaheuristic

Games

Lecture Hall A, Thu 4, 15:45–16:15

SESSION CHAIR: S. Pickl

1. U. Faigle, J. Voss
A System-Theoretic Model for Cooperation and Allocation Mechanisms

Matrices

Lecture Hall B, Thu 4, 15:45–16:15

SESSION CHAIR: M. Habib

1. L.A. Vinh
Distribution of Permanent of Matrices with Restricted Entries over Finite Fields

Discussion

Lecture Hall A, Thu 4, 16:15–16:45

SESSION CHAIRS: A. Lodi, J. Lee

Plenary Session III

Lecture Hall A, Thu 4, 16:45–17:30

SESSION CHAIR: A. Lodi

1. J. Lee
On the Boundary of Tractability for Nonlinear Discrete Optimization