

# Program

Tuesday, June 6<sup>th</sup>

10:50 – 11:00

Opening Session (Lecture Room D)

11:00 – 12:00

O. Schaudt: Coloring H-free graphs: structure, algorithms, open problems (Lecture Room D, Chair: U. Faigle)

## Lecture Room D

**Domination** **Chair: B. Randerath**

	Authors	Title
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14:00-14:30	C. Brause and M. Henning	Independent Domination in Bipartite Cubic Graphs
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14:30-15:00	E. Camby and G. Caporossi	Research on the Price of Connectivity for the vertex cover problem and the dominating set problem, with the help of the system GraphsInGraphs
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15:00-15:30	M. Nakanishi	Domination structure with nonempty minimal edge set for cubic graphs
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**Submodularity** **Chair: S. Pickl**

	Authors	Title
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16:00-16:30	T. Kesselheim and A. Tönnis	Submodular Secretary Problems: Cardinality, Matching, and Linear Constraints
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16:30-17:00	B. Peis, J. Verschae and A. Wierz	The Greedy Algorithm for Capacitated Covering Problems
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17:00-17:30	S. Raach and S. de Vries	Geometry of gross substitutes valuations
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## Lecture Room E

**Graph algorithms I** **Chair: R. Cordone**

	Authors	Title
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14:00-14:30	V. Bindewald and M. Mühlenthaler	Robust Bipartite Matching Augmentation
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14:30-15:00	A. Igarashi, F. Meunier and A. Pass-Lanneau	Computing kernels in graphs with a clique-cutset
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15:00-15:30	G. Ramakrishna, K. Kothapalli, S.C. Reguntas, S.H. Tondomkers and D. Dutta	An Efficient Ear Decomposition Algorithm
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**Graph algorithms II** **Chair: A. Ceselli**

	Authors	Title
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16:00-16:30	S. Chakraborty, S. Jo and S.R. Satti	Improved Space-efficient Linear Time Algorithms for Some Classical Graph Problems
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16:30-17:00	S. Chakraborty and N. Jha	Exact Algorithms for Maximum Transitive Subgraph Problem
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17:00-17:30	H.A. Sedding	Scheduling of Time-Dependent Asymmetric Nonmonotonic Processing Times permits an FPTAS
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# Wednesday, June 7<sup>th</sup>

## Lecture Room D

### Structural graph theory I

Chair: G. Righini

	Authors	Title
9:00-9:30	M. Groshaus and L. Montero	Distances between bicliques and structural properties of bicliques in graphs
9:30-10:00	I. G. Yero	k-metric antidimension in graphs and anonymity in social networks
10:00-10:30	T.D. Doan, C. Brause and I. Schiermeyer	2-proper connection number of graphs

### Structural graph theory II

Chair: F. Vallentin

	Authors	Title
11:00-11:30	S. Pirzada and H. Ganie	Brouwer's conjecture on the sum of Laplacian eigenvalues of a graph
11:30-12:00	B. Manthey and V.M.J.J. Reijnders	Probabilistic Properties of Highly Connected Random Geometric Graphs
12:00-12:30	R. Marinescu-Ghemeci	Radio connectivity of graphs

## Lecture Room E

### Applications of comb. optimization I

Chair: L. Liberti

	Authors	Title
9:00-9:30	P. Detti, G. Nicosia, A. Pacifici and G. Zabalo Manrique de Lara	Robust single machine scheduling with a flexible maintenance activity
9:30-10:00	R. Cordone, G. Righini and A. Taverna	Upper and lower bounds for the Swath Segment Selection Problem
10:00-10:30	D. Thomopulos, W. van Ackooij, C. D'Ambrosio, L. Liberti, R. Taktak and S. Toubaline	A path-based formulation for the Hydro Unit Commitment and Scheduling problem

### Applications of comb. optimization II

Chair: A. Pacifici

	Authors	Title
11:00-11:30	M. Casazza, A. Ceselli and R. Wolfler Calvo	Inventory rebalancing in bike-sharing systems
11:30-12:00	S. Basso, M. Casazza and A. Ceselli	Heuristics for a Green Orienteering Problem
12:00-12:30	A. Ceselli, M. Fiore, M. Premoli and S. Secci	Dynamic Cloudlet Assignment Problem: a Column Generation Approach

14:00 – 18:30

Trip

18:30 - <0:30

Dinner

# Thursday, June 8<sup>th</sup>

## Lecture Room D

### Matroids, polytopes, Markov process

Chair: B. Manthey

	Authors	Title
9:00-9:30	D. Ermel and M. Walter	Parity Polytopes and Binarization
9:30-10:00	A. Baum and Y. Zhu	The Axiomatization of Affine Oriented Matroids Reassessed
10:00-10:30	D. Lozovanu and S. Pickl	Determining the Optimal Pure Strategies for Average Markov Decision Problem

## Lecture Room E

### Approximation algorithms

Chair: J. Hurink

	Authors	Title
9:00-9:30	A.M.C. Ficker, F. Spieksma and G.J. Woeginger	The Transportation Problem with Conflicts
9:30-10:00	S. Klootwijk and B. Manthey	Probabilistic Analysis of Facility Location on Random Shortest Path Metrics
10:00-10:30	M. Bruglieri, R. Cordone and V. Caurio	A metaheuristic for the Minimum Gap Graph Partitioning Problem

11:00 – 12:00

S. Fiorini: A  $3/2$  approximation algorithm for tree augmentation via Chvátal-Gomory cuts (Chair: B. Peis)

### Nonlinear optimization

Chair: W. Kern

	Authors	Title
14:00-14:30	E. Bettiol, L. Létocart, F. Rinaldi and E. Travers	Simplicial Decomposition for Large-Scale Quadratic Convex Programming
14:30-15:00	S. Hossain and A. Suny	Determination of Large Sparse Derivative Matrices: Structural Orthogonality and Structural Degeneracy

### Fixed parameter tractability

Chair: H. Röglin

	Authors	Title
14:00-14:30	T. Böhnlein, S. Kratsch and O. Schaudt	Revenue maximization in Stackelberg Pricing Games: Beyond the combinatorial setting
14:30-15:00	O. Schaudt and F. Senger	The Parameterized Complexity of the Equidomination Problem
15:00-15:30	C. Buchheim and J. Prünte	Complexity of K-Adaptable Stochastic Programming

15:30 – 16:00

Closing Session (Lecture Room D)