

**8:35 · ESA****hall A**

Mordecai Golin · John Iacono · Stefan Langerman · Ian Munro · Yakov Nekrich:  
*Dynamic Trees with Almost-Optimal Access Cost*

Gramoz Goranci · Monika Henzinger · Dariusz Leniowski:  
*A Tree Structure For Dynamic Facility Location*

Gramoz Goranci · Monika Henzinger · Pan Peng:  
*Dynamic Effective Resistances and Approximate Schur Complement on Separable Graphs*

*session chair: Laszlo Kozma***8:35 · ESA****hall B**

Rajiv Raman · Saurabh Ray:  
*Planar Support for Non-Piercing Regions and Applications*

Nabil Mustafa · Saurabh Ray:  
*On a Problem of Danzer*

Hu Ding · Manni Liu:  
*On Geometric Prototype And Applications*

*session chair: Joachim Spoerhase***9:00 · WABI****hall C**

Qiuyi (Richard) Zhang · Satish Rao · Tandy Warnow:  
*New absolute fast converging phylogeny estimation methods with improved scalability and accuracy*

Riccardo Dondi · Manuel Lafond · Celine Scornavacca:  
*Reconciling multiple genes trees via segmental duplications and losses*

*session chair: Sven Rahmann***9:50 · Coffee break****10:10 · ESA****hall A**

Hicham El-Zein · Meng He · Ian Munro · Bryce Sandlund:  
*Improved Time and Space Bounds for Dynamic Range Mode and Least Frequent Element*

Shay Solomon · Nicole Wein:  
*Improved Dynamic Graph Coloring*

Dani Dorfman · Haim Kaplan · Laszlo Kozma · Seth Pettie · Uri Zwick:  
*Improved bounds for multipass pairing heaps and path-balanced binary search trees*

*session chair: Konstantin Makarychev***10:10 · ESA****hall B**

Sunil Arya · Guilherme D. Da Fonseca · David Mount:  
*Approximate Convex Intersection Detection with Applications to Width and Minkowski Sums*

Cameron Chalk · Austin Luchsinger · Robert Schweller · Tim Wylie:  
*Self-Assembly of Any Shape with Constant Tile Types using High Temperature*

Jean-Daniel Boissonnat · Siddharth Pritam · Divyansh Pareek:  
*Strong Collapse for Persistence*

*session chair: Subhash Suri*

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**10:10 · WABI****hall C**

Yohei M. Rosen · Benedict J. Paten:  
*An average-case sublinear exact Li and Stephens forward algorithm*

Tuukka Norri · Bastien Cazaux · Dmitry Kosolobov · Veli Mäkinen:  
*Minimum segmentation for pan-genomic founder reconstruction in linear time*

Mohammed El-Kebir:  
*Parsimonious migration history problem: Complexity and algorithms*

*session chair: Sven Rahmann*

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**10:10 · ALGO CLOUD invited talk****hall D**

Roger Wattenhofer:  
*Algorithms for and against the Cloud*

*session chair: Yann Disser*

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**11:25 · Break**

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**11:30 · ALGO keynote talk****hall A**

Claire Mathieu:  
*Stable Matching in Practice*

*session chair: Yossi Azar*

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**12:30 · Lunch**

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**14:00 · ESA****hall A**

Hsien-Chih Chang · Pawel Gawrychowski · Shay Mozes · Oren Weimann:  
*Near-Optimal Distance Preserver for Planar Graphs*

Michael Dinitz · Michael Schapira · Gal Shahaf:  
*Large Low-Diameter Graphs are Good Expanders*

Arnold Filtser · Ofer Neiman:  
*Light Spanners for High Dimensional Norms via Stochastic Decompositions*

*session chair: Konstantin Makarychev*

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**14:00 · ESA****hall B**

Steven Chaplick · Minati De · Alexander Ravsky · Joachim Spoerhase:  
*Approximation Schemes for Geometric Coverage Problems*

Vít Jelínek · Michal Opler · Pavel Valtr:  
*Generalized Coloring of Permutations*

Michael Matheny · Jeff M. Phillips:  
*Practical Low-Dimensional Halfspace Range Space Sampling*

*session chair: Guilherme D. Da Fonseca*

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**14:00 · WABI****hall C**

Hooman Zabeti · Tamon Stephen · Bonnie Berger · Leonid Chindelevitch:  
*A duality-based method for identifying elemental balance violations in metabolic network models*

Kai Dührkop · Marie A. Lataretu · W. Timothy J. White · Sebastian Böcker:  
*Heuristic algorithms for the maximum colorful subtree problem*

Szymon Majewski · Michał Aleksander Ciach · Michał Startek · Wanda Niemyska · Błażej Miasojedow · Anna Gambin:  
*The Wasserstein distance as a dissimilarity measure for mass spectra with application to spectral deconvolution*

session chair: Leena Salmela

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**14:00 · ALGO CLOUD****hall D**

K. Subramani · B. Caskurlu · A. Velasquez:  
*Minimization of Testing Costs in Capacity-Constrained Database Migration*

K. Kulkarni · A. Pagourtzis · K. Potika · P. Potikas · D. Souliou:  
*Community Detection via Minimum Spanning Tree Computations*

S. Aiyar · K. Gupta · R. Rajaraman · B. Shen · Z. Sun · R. Sundaram:  
*Colocation, Colocation, Colocation: Optimizing Placement in the Hybrid Cloud*

session chair: Dora Souliou

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**15:15 · Coffee break****15:35 · ESA****hall A**

Matthias Englert · David Mezlaf · Matthias Westermann:  
*Online Makespan Scheduling with Job Migration on Uniform Machines*

Waldo Gálvez · José A. Soto · José Verschae:  
*Symmetry exploitation for Online Machine Covering with Bounded Migration*

Giorgio Lucarelli · Benjamin Moseley · Nguyen Kim Thang · Abhinav Srivastav · Denis Trystram:  
*Online Non-Preemptive Scheduling to Minimize Weighted Flow-time on Unrelated Machines*

session chair: Leah Epstein

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**15:35 · ESA****hall B**

Nicolas Auger · Vincent Jugé · Cyril Nicaud · Carine Pivoteau:  
*On the Worst-Case Complexity of TimSort*

J. Ian Munro · Sebastian Wild:  
*Nearly-Optimal Natural Mergesort: Practically Fast Sorting Methods That Optimally Adapt to Existing Runs*

Bo Zhou · Yi-Jen Chiang · Chee Yap:  
*Soft Subdivision Motion Planning for Complex Planar Robots*

session chair: Simon Puglisi

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**15:35 · WABI****hall C**

Martin S. Engler · Bertrand Caron · Lourens Veen · Daan P. Geerke · Alan E. Mark · Gunnar W. Klau:  
*Multiple-choice knapsack for assigning partial atomic charges in drug-like molecules*

Morteza Chalabi Hajkarim · Eli Upfal · Fabio Vandin:  
*Differentially mutated subnetworks discovery*

Nikolai Karpov · Salem Malikic · Md. Khaledur Rahman · S. Cenk Sahinalp:  
*A multi-labeled tree edit distance for comparing "clonal trees" of tumor progression*

session chair: Alberto Policriti

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**15:35 · ALGO CLOUD****hall D**

M. Benter · T. Knollmann · F.M. auf der Heide · A. Setzer · J. Sundermeier:  
*A Peer-to-Peer based Cloud Storage supporting orthogonal Range Queries of arbitrary Dimension*

F. Neumann · S. Polyakovskiy · M. Skutella · L. Stougie · J. Wu:  
*A Fully Polynomial Time Approximation Scheme for Packing While Traveling*

M. Charikar · Y. Naamad · J. Rexford · X.K. Zou:  
*Multi-Commodity Flow with In-Network Processing*

session chair: Martin Skutella

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**16:50 · Break****17:00 · ESA****hall A**

Dimitrios Gkenosis · Nathaniel Grammel · Lisa Hellerstein · Devorah Kletenik:  
*The Stochastic Score Classification Problem*

Marek Cygan · Artur Czumaj · Marcin Mucha · Piotr Sankowski:  
*Online Facility Location with Deletions*

János Balogh · József Békési · György Dósa · Leah Epstein · Asaf Levin:  
*A new and improved algorithm for online bin packing*

session chair: Matthias Englert

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**17:00 · ESA****hall B**

Rajesh Chitnis · Andreas Emil Feldmann · Pasin Manurangsi:  
*Parameterized Approximation Algorithms for Bidirected Steiner Network Problems*

Barnaby Martin · Daniël Paulusma · Erik Jan van Leeuwen:  
*Disconnected Cuts in Claw-free Graphs*

Iyad Kanj · Christian Komusiewicz · Manuel Sorge · Erik Jan van Leeuwen:  
*Solving Partition Problems Almost Always Requires Pushing Many Vertices Around*

session chair: Shay Mozes

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**17:00 · WABI poster session****in front of hall B****18:15 · Break****18:20 · ESA business meeting****hall A**

**8:35 · ESA****hall A**

Amariah Becker · Philip N. Klein · David Saulpic:

*Polynomial-time approximation schemes for  $k$ -center,  $k$ -median, and capacitated vehicle routing in bounded highway dimension*

T-H. Hubert Chan · Haotian Jiang · Shaofeng H.-C. Jiang:

*A Unified PTAS for Prize Collecting TSP and Steiner Tree Problem in Doubling Metrics*

Markus Chimani · Tilo Wiedera:

*Cycles to the Rescue! Novel Constraints to Compute Maximum Planar Subgraphs Fast**session chair: Martin Skutella***8:35 · ESA****hall B**

Bart M. P. Jansen · Astrid Pieterse:

*Polynomial Kernels for Hitting Forbidden Minors under Structural Parameterizations*

Arijit Ghosh · Sudeshna Kolay · Gopinath Mishra:

*FPT algorithms for embedding into low complexity graphic metrics*

Bart M. P. Jansen · Jesper Nederlof:

*Computing the Chromatic Number Using Graph Decompositions via Matrix Rank**session chair: Erik Jan van Leeuwen***8:35 · ALGO CLOUD****hall D**

D. Vatsalan · D. Karapiperis · A. Gkoulalas-Divanis:

*An Overview of Big Data Issues in Privacy-Preserving Record Linkage*

A. Gazis · E. Katsiri:

*Web Frameworks Metrics for Data Handling and Visualization*

K. Giannakopoulou:

*Algorithms for Cloud-based Smart Mobility**session chair: Vassilis Verykios***9:00 · WABI****hall C**

Tamal K. Dey · Sayan Mandal:

*Protein classification with improved topological data analysis*

Saugata Basu · Filippo Utro · Laxmi Parida:

*Essential simplices in persistent homology and subtle admixture detection**session chair: Veli Mäkinen***9:50 · Coffee break****10:10 · ESA****hall A**

Sara Ahmadian · Umang Bhaskar · Laura Sanità · Chaitanya Swamy:

*Algorithms for Inverse Optimization Problems*

Luca Becchetti · Andrea Clementi · Pasin Manurangsi · Emanuele Natale · Francesco Pasquale · Prasad Raghavendra · Luca Trevisan:

*Average whenever you meet: Opportunistic protocols for community detection*

Viatcheslav Korenwein · André Nichterlein · Rolf Niedermeier · Philipp Zschoche:

*Data Reduction for Maximum Matching on Sparse Graphs: Theory and Experiments**session chair: Subhash Suri*

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**10:10 · ESA****hall B**

Stefan Kratsch · Florian Nelles:

*Efficient and adaptive parameterized algorithms on modular decompositions*

Yixin Cao · Ashutosh Rai · R.B. Sandeep · Junjie Ye:

*A Polynomial Kernel for Diamond-Free Editing*

Fedor V. Fomin · Petr A. Golovach · Jean-Florent Raymond:

*On the tractability of optimization problems on H-graphs**session chair: Danny Hermelin*

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**10:10 · WABI****hall C**

Barak Sternberg · Roded Sharan:

*A dynamic algorithm for network propagation*

Ryan A. Leo Elworth · Chabrielle Allen · Travis Benedict · Peter Dulworth · Luay Nakhleh:

*D<sub>GEN</sub>: A test statistic for detection of general introgression scenarios*

Stéphane Chrétien · Christophe Guyeux · Serge Moulin:

*l<sub>1</sub>-penalised ordinal polytomous regression estimators with application to gene expression studies**session chair: Gunnar Klau*

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**10:10 · ALGO CLOUD****hall D**

A. Gkoulalas-Divanis · V. Kagklis · E. Stavropoulos:

*A Frequent Itemset Hiding Toolbox*

P. Vlantis · A. Delis:

*On-line Big-Data Processing for Visual Analytics with Argus-Panoptes**session chair: Christos Zaroliagis*

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**11:00 · ALGO CLOUD business meeting****hall D**

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**11:25 · Break**

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**11:30 · ALGO keynote talk****hall A**

Tim Roughgarden:

*How Computer Science Informs Modern Auction Design**session chair: Hannah Bast*

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**12:30 · Lunch**

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**14:00 · ESA track A best student paper****hall A**

Maximilian Probst:

*On the Complexity of the (Approximate) Nearest Colored Node Problem**session chair: Yossi Azar*

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**14:00 · ESA track B best student paper****hall B**

Max Bannach · Sebastian Berndt:

*Practical Access to Dynamic Programming on Tree Decompositions**session chair: Hannah Bast*

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**14:25 · Break**

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**14:30 · ESA track A best paper**

**hall A**

Jacob Holm · Giuseppe F. Italiano · Adam Karczmarz · Jakub Łącki · Eva Rotenberg:  
*Decremental SPQR-trees for Planar Graphs*

*session chair: Yossi Azar*

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**14:55 · ESA track B best paper**

**hall A**

Daniel R. Schmidt · Bernd Zey · François Margot:  
*An Exact Algorithm for the Steiner Forest Problem*

*session chair: Hannah Bast*

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**15:20 · ESA Test-of-Time Award**

**hall A**

James Abello · Adam L. Buchsbaum · Jeffery R. Westbrook

*session chair: Ulrich Meyer*

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**15:45 · Break**

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**16:00 · Walk to Market Square**

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**17:00 · ALGO excursion**

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**19:00 · ALGO banquet**

**8:35 · ESA****hall A**

Yun Kuen Cheung · Richard Cole:  
*Amortized Analysis of Asynchronous Price Dynamics*

Euiwoong Lee · Sahil Singla:  
*Optimal Online Contention Resolution Schemes via Ex-Ante Prophet Inequalities*

Tung Mai · Vijay V. Vazirani:  
*Finding Stable Matchings that are Robust to Errors in the Input*

*session chair: Grzegorz Herman***9:00 · ESA****hall B**

Johannes K. Fichte · Markus Hecher · Stefan Woltran · Markus Zisser:  
*Weighted Model Counting on the GPU by Exploiting Small Treewidth*

Corrie Jacobien Carstens · Michael Hamann · Ulrich Meyer · Manuel Penschuck · Hung Tran · Dorothea Wagner:  
*Parallel and I/O-efficient Randomisation of Massive Networks using Global Curveball Trades*

*session chair: Matthias Müller-Hannemann***9:00 · IPEC****hall D**

Julien Baste · Ignasi Sau · Dimitrios M. Thilikos:  
*A complexity dichotomy for hitting small planar minors parameterized by treewidth*

Bas A.M. van Geffen · Bart M. P. Jansen · Arnoud A. W. M. de Kroon · Rolf Morel:  
*Lower Bounds for Dynamic Programming on Planar Graphs of Bounded Cutwidth*

*session chair: Magnus Wahlström***9:50 · Coffee break****10:10 · ESA****hall A**

Lucas Boczkowski · Amos Korman · Yoav Rodeh:  
*Searching a Tree with Permanently Noisy Advice*

Umang Bhaskar · Phani Raj Lolakapuri:  
*Equilibrium Computation in Atomic Splittable Routing Games with Convex Cost Functions*

Alon Eden · Michal Feldman · Amos Fiat · Tzahi Taub:  
*Truthful Prompt Scheduling for Minimizing Sum of Completion Times*

*session chair: Vijay Vazirani***10:10 · ESA****hall B**

Yan Gu · Yihan Sun · Guy Blelloch:  
*Algorithmic Building Blocks for Asymmetric Memories*

Mayank Goswami · Dzejla Medjedovic · Emina Mekic · Prashant Pandey:  
*Buffered Count-Min Sketch on SSD: Theory and Experiments*

Roberto Grossi · Luca Versari:  
*Round-Hashing for Data Storage: Distributed Servers and External-Memory Tables*

*session chair: Melanie Schmidt*



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**10:10 · WABI****hall C**

Christina Boucher · Travis Gagie · Alan Kuhnle · Giovanni Manzini:  
*Prefix-free parsing for building big BWTs*

Nicola Prezza · Nadia Pisanti · Marinella Sciortino · Giovanna Rosone:  
*Detecting mutations by eBWT*

Lavinia Egidi · Felipe A. Louza · Giovanni Manzini · Guilherme P. Telles:  
*External memory BWT and LCP computation for sequence collections with applications*

*session chair: Veli Mäkinen*

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**10:10 · IPEC****hall D**

Karl Bringmann · Thore Husfeldt · Måns Magnusson:  
*Multivariate Analysis of Orthogonal Range Searching and Graph Distances Parameterized by Treewidth*

Juho-Kustaa Kangas · Mikko Koivisto · Sami Salonen:  
*A Faster Tree-Decomposition Based Algorithm for Counting Linear Extensions*

Lars Jaffke · O-Joung Kwon · Torstein J. F. Strømme · Jan Arne Telle:  
*Generalized distance domination problems and their complexity on graphs of bounded mim-width*

*session chair: Christophe Paul*

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**11:25 · Break**

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**11:30 · ALGO keynote talk****hall A**

Mihai Pop:  
*From Clustering to Variant Discovery: Algorithmic Opportunities in Microbiome Research*

*session chair: Esko Ukkonen*

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**12:30 · Lunch**

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**14:00 · ESA****hall A**

Sankardeep Chakraborty · Anish Mukherjee · Venkatesh Raman · Srinivasa Rao Satti:  
*A Framework for In-place Graph Algorithms*

Nicolas Bonichon · Prosenjit Bose · Jean-Lou De Carufel · Vincent Despre · Hill Darryl · Michiel Smid:  
*Improved Routing on the Delaunay Triangulation*

Alexander van der Grinten · Elisabetta Bergamini · Oded Green · David A. Bader · Henning Meyerhenke:  
*Scalable Katz Ranking Computation in Large Dynamic Graphs*

*session chair: Stefan Funke*

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**14:00 · ESA****hall B**

Diptarka Chakraborty · Debarati Das · Michal Koucky · Nitin Saurabh:  
*Space-Optimal Quasi-Gray Codes with Logarithmic Read Complexity*

Shilpa Garg · Tobias Mömke:  
*A QPTAS for Gapless MEC*

Dominik Kempa · Alberto Policriti · Nicola Prezza · Eva Rotenberg:  
*String Attractors: Verification and Optimization*

*session chair: Amihod Amir*

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**14:00 · WABI****hall C**

Jouni Sirén · Erik Garrison · Adam M. Novak · Benedict Paten · Richard Durbin:  
*Haplotype-aware graph indexes*

Mehrdad Mansouri · Julian Booth · Margaryta Vityaz · Cedric Chauve · Leonid Chindelevitch:  
*PRINCE: Accurate approximation of the copy number of tandem repeats*

Mai Alzamel · Lorraine A.K. Ayad · Giulia Bernardini · Roberto Grossi · Costas S. Iliopoulos · Nadia Pisanti · Solon P. Pissis ·  
Giovanna Rosone:  
*Degenerate string comparison and applications*

*session chair: Cinzia Pizzi*

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**14:00 · IPEC****hall D**

Junjie Luo · Hendrik Molter · Ondrej Suchy:  
*A Parameterized Complexity View on Collapsing  $k$ -Cores*

Saket Saurabh · Meirav Zehavi:  
*Parameterized Complexity of Multi-Node Hubs*

Kitty Meeks · Fiona Skerman:  
*The parameterised complexity of computing the maximum modularity of a graph*

*session chair: Christian Komusiewicz*

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**15:15 · Coffee break**

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**15:35 · ESA****hall A**

Marvin Künnemann:  
*On Nondeterministic Derandomization of Freivalds' Algorithm: Consequences, Avenues and Algorithmic Progress*

Sebastian Brandt · Seth Pettie · Jara Uitto:  
*Fine-grained Lower Bounds on Cops and Robbers*

Isaac Goldstein · Moshe Lewenstein · Ely Porat:  
*Improved Space-Time Tradeoffs for  $k$ SUM*

*session chair: Ian Munro*

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**15:35 · ESA****hall B**

Xiaoyu He · Neng Huang · Xiaoming Sun:  
*On the Decision Tree Complexity of String Matching*

Amihod Amir · Gad M. Landau · Shoshana Marcus · Dina Sokol:  
*Two-Dimensional Maximal Repetitions*

Michał Gańczorz · Paweł Gawrychowski · Artur Jeż · Tomasz Kociumaka:  
*Edit Distance with Block Operations*

*session chair: Thomas Erlebach*

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**15:35 · WABI****hall C**

Martin D. Muggli · Simon J. Puglisi · Christina Boucher:  
*A succinct solution to Rmap alignment*

Till Hartmann · Sven Rahmann:  
*Spalter: A meta machine learning approach to distinguish true DNA variants from sequencing artefacts*

Riku Walve · Pasi Rastas · Leena Salmela:  
*Kermit: Guided long read assembly using coloured overlap graphs*

*session chair: Esko Ukkonen*

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**15:35 · IPEC****hall D**

Lucas Isenmann · Florian Barbero · Jocelyn Thiebaut:

*On the Distance Identifying Set meta-problem and applications to the complexity of identifying problems on graphs*

David Eppstein · Daniel Lokshtanov:

*The Parameterized Complexity of Finding Point Sets with Hereditary Properties*

Júlio Araújo · Victor A. Campos · Carlos Vinícius G. C. Lima · Vinícius Fernandes Dos Santos · Ignasi Sau · Ana Silva:

*Dual parameterization of Weighted Coloring**session chair: Erik Jan van Leeuwen*

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**16:50 · Break****17:00 · ESA****hall A**

Fedor V. Fomin · Fahad Panolan · M. S. Ramanujan · Saket Saurabh:

*On the Optimality of Pseudo-polynomial Algorithms for Integer Programming*

Michał Pilipczuk · Erik Jan van Leeuwen · Andreas Wiese:

*Quasi-polynomial time approximation schemes for packing and covering problems in planar graphs**session chair: Lisa Hellerstein*

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**17:00 · ESA****hall B**

Michael Jarret · Stacey Jeffery · Shelby Kimmel · Alvaro Piedrafita:

*Quantum Algorithms for Connectivity and Related Problems*

Gábor Ivanyos · Anupam Prakash · Miklos Santha:

*On learning linear functions from subset and its applications in quantum computing**session chair: Shay Mozes*

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**17:00 · PACE awards****hall D****17:50 · Break****18:00 · Walk to City Hall****19:00 · ALGO reception**

**9:00 · IPEC****hall A**

Max Bannach · Till Tantau:  
*Computing Kernels in Parallel: Lower and Upper Bounds*

Akanksha Agrawal · Pallavi Jain · Lawqueen Kanesh · Pranabendu Misra · Saket Saurabh:  
*Exploring the Kernelization Borders for Hitting Cycles*

Hubie Chen · Bart M. P. Jansen · Astrid Pieterse:  
*Best-case and Worst-case Sparsifiability of Boolean CSPs*

*session chair: Marcin Pilipczuk***9:25 · ALGOSENSORS****hall C**

Avery Miller:  
*Local Gossip and Neighbour Discovery in Mobile Ad Hoc Radio Networks*

Christina Kolb · Daniel Jung · Jannik Sundermeier · Christian Scheideler:  
*Competitive Routing in Hybrid Communication Networks*

**10:15 · Coffee break****10:35 · IPEC****hall A**

David Eppstein · Elham Havvaei:  
*Parameterized Leaf Power Recognition via Embedding into Graph Products*

Édouard Bonnet · Nicolas Bousquet · Pierre Charbit · Stéphan Thomassé · Rémi Watrigant:  
*Parameterized Complexity of Independent Set in H-Free Graphs*

*session chair: Michał Pilipczuk***10:35 · WAOA****hall B**

Neil Olver · Kirk Pruhs · Kevin Schewior · Rene Sitters · Leen Stougie:  
*The Itinerant List Update Problem*

Barbara Geissmann:  
*Longest Increasing Subsequence under Persistent Comparison Errors*

*session chair: Leah Epstein***10:35 · ALGOSENSORS****hall C**

Tung-Wei Kuo:  
*On the Approximability and Hardness of the Minimum Connected Dominating Set with Routing Cost Constraint*

Federico Corò · Gianlorenzo D'Angelo · Cristina. M Pinotti:  
*On the Maximum Connectivity Improvement problem*

**10:35 · ATMOS****hall D**

Tomas Lidén:  
*Reformulations for integrated planning of railway traffic and network maintenance*

Nuno Sousa · Luís Alçada-Almeida · João Coutinho-Rodrigues:  
*Large scale railway renewal planning with a multiobjective modeling approach*

*session chair: Sabine Storandt*

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## 11:25 · Break

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### 11:30 · ALGO keynote talk

hall A

Stefan Kratsch · Magnus Wahlström

session chair: Christophe Paul

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## 12:30 · Lunch

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### 14:00 · IPEC

hall A

Stefan Kratsch · Shaohua Li · Dániel Marx · Marcin Pilipczuk · Magnus Wahlström:  
*Multi-budgeted directed cuts*

Christian Komusiewicz · Dieter Kratsch · Van Bang Le:  
*Matching Cut: Kernelization, Single-Exponential FPT, and Exact Exponential Algorithms*

Charis Papadopoulos · Spyridon Tzimas:  
*Subset Feedback Vertex Set on Graphs of Bounded Independent Set Size*

session chair: Danny Hermelin

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### 14:00 · WAOA

hall B

Artur Czumaj · Yishay Mansour · Shai Vardi:  
*Sublinear graph augmentation for fast query implementation*

Julien Bensmail · Dorian Mazauric · Fionn Mc Inerney · Nicolas Nisse · Stéphane Pérennes:  
*Sequential Metric Dimension*

Jaroslaw Byrka · Mateusz Lewandowski · Joachim Spoerhase:  
*Approximating Node-Weighted  $k$ -MST on Planar Graphs*

session chair: Gerhard Woeginger

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### 14:00 · ALGOSENSORS

hall C

Huda Chuangpishit · Konstantinos Georgiou · Preeti Sharma:  
*Average Case - Worst Case Tradeoffs for Evacuating 2 Robots from the Disk in the Face-to-Face Model*

Ranendu Adhikary · Kaustav Bose · Manash Kumar Kundu · Buddhadeb Sau:  
*Mutual Visibility by Asynchronous Robots on Infinite Grid*

Kaustav Bose · Manash Kumar Kundu · Ranendu Adhikary · Buddhadeb Sau:  
*Optimal Gathering by Asynchronous Oblivious Robots in Hypercubes*

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### 14:00 · ATMOS invited talk

hall D

Dennis Huisman:  
*Railway Disruption Management: State-of-the-art in practice and new research directions*

session chair: Ralf Borndörfer

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## 15:15 · Coffee break

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**15:35 · IPEC****hall A**

Tomáš Gavenčíak · Dušan Knop · Martin Koutecký:  
*Integer Programming in Parameterized Complexity: Three Miniatures*

Ivan Bliznets · Danil Sagunov:  
*Solving Target Set Selection with Bounded Thresholds Faster than  $2^n$*

Katrin Casel:  
*Resolving Conflicts for Lower-Bounded Clustering*

session chair: Stefan Kratsch

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**15:35 · WAOA****hall B**

Minjun Chang · Dorit Hochbaum · Quico Spaen · Mark Velednitsky:  
*DISPATCH: An Optimally-Competitive Algorithm for Maximum Online Perfect Bipartite Matching with i.i.d. Arrivals*

Marcin Bienkowski · Artur Kraska · Hsiang-Hsuan Liu · Paweł Schmidt:  
*A Primal-Dual Online Deterministic Algorithm for Matching with Delays*

Yossi Azar · Amit Jacob-Fanani:  
*Deterministic Min-Cost Matching with Delays*

session chair: Asaf Levin

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**15:35 · ALGOSENSORS invited talk****hall C**

Stefan Schmid:  
*Schedule, Support, Adjust, and Fix: Topology Control Revolutions for Data-Aware Networks*

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**15:35 · ATMOS****hall D**

Roel van den Broek · Han Hoogeveen · Marjan van den Akker:  
*How to measure the robustness of shunting plans*

Markus Friedrich · Matthias Müller-Hannemann · Ralf Rückert · Alexander Schiewe · Anita Schöbel:  
*Robustness as a Third Dimension for Evaluating Public Transport Plans*

Christoph Hansknecht · Alexander Richter · Sebastian Stiller:  
*Fast robust shortest path computations*

session chair: Stefan Funke

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**16:50 · Break**

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**17:00 · IPEC business meeting****hall A**

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**17:00 · WAOA****hall B**

George Christodoulou · Themistoklis Melissourgos · Paul Spirakis:  
*Strategic Contention Resolution in Multiple Channels*

György Dósa · Hans Kellerer · Zsolt Tuza:  
*Bin Packing Games with Weight Decision: how to get a small value for the Price of Anarchy*

Guillaume Sagnol · Daniel Schmidt Genannt Waldschmidt · Alexander Tesch:  
*The Price of Fixed Assignments in Stochastic Extensible Bin Packing*

session chair: Matthias Englert

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**17:00 · ALGOSENSORS****hall C**

Adil Erzin · Natalya Lagutkina:  
*Barrier Coverage Problem in 2D*

Lars Hanschke · Christian Renner:  
*Time- and Energy-aware Task Scheduling in Environmentally-powered Sensor Networks*

Adelina Madhja · Sotiris Nikolettseas · Alexandros Voudouris:  
*Mobility-Aware, Adaptive Algorithms for Wireless Power Transfer in Ad Hoc Networks*

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**17:00 · ATMOS****hall D**

Irving van Heuven van Staereling:  
*Tree Decomposition Methods for the Periodic Event Scheduling Problem*

Agustín Arizti · Antonio Mauttone · Maria Urquhart:  
*A bilevel approach to frequency optimization in public transportation systems*

Julius Pätzold · Alexander Schiewe · Anita Schöbel:  
*Cost-Minimal Public Transport Planning*

*session chair: Nils Lindner*

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**18:15 · Break****18:30 · ATMOS business meeting****hall D**

**9:00 · IPEC tutorial****hall A**

Radu Curticapean:  
*Counting Problems in Parameterized Complexity*

*session chair: Michał Pilipczuk***9:00 · WAOA****hall B**

Hans-Joachim Böckenhauer · Dennis Komm · Raphael Wegner:  
*Call Admission Problems on Grids with Advice*

Allan Borodin · Joan Boyar · Kim S. Larsen · Denis Pankratov:  
*Advice Complexity of Priority Algorithms*

Hans-Joachim Böckenhauer · Janosch Fuchs · Walter Unger:  
*Exploring Sparse Graphs with Advice*

*session chair: György Dósa***9:00 · ALGOSENSORS****hall C**

Nicolas Gastineau · Wahabou Abdou · Nader Mbarek · Olivier Togni:  
*Distributed leader election and computation of local identifiers for programmable matter*

Jaroslav Mirek · Dariusz Kowalski:  
*Reaching Consensus in Ad-Hoc Diffusion Networks*

Attila Hideg · Tamas Lukovszki · Bertalan Forstner:  
*Filling Arbitrary Connected Areas by Silent Robots with Minimal Visibility Range*

**9:00 · ATMOS****hall D**

Thomas Petig · Elad M. Schiller · Jukka Suomela:  
*Changing Lanes on a Highway*

René van Bevern · Till Fluschnik · Oxana Yu. Tsidulko:  
*Parameterized algorithms and data reduction for safe convoy routing*

Youcef Amarouche · Rym Nesrine Guibadj · Aziz Moukrim:  
*A Neighborhood Search and Set Cover Hybrid Heuristic for the Two-Echelon Vehicle Routing Problem*

*session chair: Alexander Kröller***10:15 · Coffee break****10:35 · IPEC****hall A**

Marc Roth · Johannes Schmitt:  
*Counting Induced Subgraphs: A Topological Approach to  $\#W[1]$ -hardness*

Mateus De Oliveira Oliveira · Daniel Lokshtanov · Saket Saurabh:  
*A Strongly-Uniform Slicewise Polynomial-Time Algorithm for the Embedded Planar Diameter Improvement Problem*

*session chair: Radu Curticapean*



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**10:35 · WAOA****hall B**

Arnaud Mary · Nicolas Bousquet:  
*Reconfiguration of graphs with connectivity constraints*

Motoki Ikeda · Shin-Ichi Tanigawa:  
*Cut Sparsifiers for Balanced Digraphs*

session chair: Kim S. Larsen

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**10:35 · ALGOSENSORS****hall C**

Jinhua Lv · Qinpei Zhao · Weixiong Rao · Yige Zhang · Mingxuan Yuan · Jia Zeng:  
*Localization of MR Records with Missing RSSI Information*

David Segarra · Jessica Caballeros · Wilbert G. Aguilar:  
*Orientation Estimation using Filter-Based Inertial Data Fusion for Posture Recognition*

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**10:35 · ATMOS****hall D**

Leon Sering · Martin Skutella:  
*Multi-Source Multi-Sink Nash Flows Over Time*

Veerle Timmermans · Laura Vargas Koch · Björn Tauer · Britta Peis:  
*Oligopolistic Competitive Packet Routing*

session chair: Guillaume Sagnol

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**11:25 · Break**

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**11:30 · ALGO keynote talk****hall A**

Gerhard Woeginger:  
*Some Easy and Some Not So Easy Geometric Optimization Problems*

session chair: Thomas Erlebach

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**12:30 · Lunch**

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**14:00 · WAOA****hall B**

Anne Driemel · Amer Krivosija:  
*Probabilistic embeddings of the Frechet distance*

Yaron Fairstein · Seffi Naor · Dan Raz:  
*Algorithms for Dynamic NFV Workload*

Gruia Calinescu · Guy Kortsarz · Zeev Nutov:  
*Improved approximation algorithms for minimum power covering problems*

session chair: Thomas Erlebach

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**14:00 · ATMOS****hall D**

Carlo Mannino · Giorgio Sartor:  
*The Path&Cycle formulation for the Hotspot Problem in Air Traffic Management*

Rolf van Lieshout · Paul Bouman:  
*Vehicle Scheduling Based on a Line Plan*

Ralf Borndörfer · Marika Karbstein · Christian Liebchen · Niels Lindner:  
*A Simple Way to Compute the Number of Vehicles That Are Required to Operate a Periodic Timetable*

session chair: Güvenç Şahin

