

# Programme

## Monday, 3rd June

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08:30 - 08:50

**Welcome and Coffee/Tea**

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08:50 - 09:00

**Welcome session**

### **Session chair: Merav Parter**

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09:00 - 10:00

**Bernhard Haeupler** — Length-Constrained Expanders: Marrying Low-Diameter and Expander Decompositions

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10:00 - 10:30

**Jason Li** — Deterministic Near-Linear Time Minimum Cut in Weighted Graphs

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10:30 - 11:00

**Coffee/Tea Break**

### **Session chair: Paweł Gawrychowski**

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11:00 - 11:30

**Sanjeev Khanna** — A Faster Combinatorial Algorithm for Maximum Bipartite Matching

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11:30 - 12:00

**David Wajc** — Dynamic Matching with Better-than-2 Approximation in Polylogarithmic Update Time

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12:00 - 12:30

**Soheil Behnezhad** — Dynamic Algorithms for  
Maximum Matching Size (remote)

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12:30 - 14:00

**Lunch (provided)**

**Session chair: David Wajc**

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14:00 - 15:30

**Contributed Talks**

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15:30 - 16:30

**Coffee Break and Poster Session**

**Session chair: William Kuszmaul**

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16:30 - 17:30

**Sam Hopkins** — Bridging Privacy and  
Robustness in High-Dimensional Statistics

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17:30 - 18:00

**Kasper Green Larsen** – Bagging is an Optimal  
PAC Learner

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18:00 - 18:30

**Shang-En Huang** – Byzantine Agreement with  
Optimal Resilience via Statistical Fraud  
Detection

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**Tuesday, 4th June**

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08:30 - 09:00

**Welcome and Coffee/Tea**

**Session chair: Yasamin Nazari**

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09:00 - 10:00

**Shiri Chechik** — Shortest Paths Queries and Related Problems

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10:00 - 10:30

**Gary Hopenworth** — Folklore Sampling is Optimal for Exact Hopsets: Confirming the  $\sqrt{n}$  Barrier

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10:30 - 11:00

**Coffee/Tea Break**

**Session chair: Stefano Leonardi**

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11:00 - 11:30

**William Kuszmaul** – Tiny Pointers

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11:30 - 12:00

**Christian Coester** – The Randomized k-Server Conjecture is False!

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12:00 - 12:30

**Annamária Kovács** – A Proof of the Nisan-Ronen Conjecture

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12:30 - 14:00

**Lunch (provided)**

**Session chair: Robert Krauthgamer**

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14:00 - 15:30

**Contributed Talks**

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15:30 - 16:30

**Coffee Break and Poster Session**

**Session chair: Yossi Azar**

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16:30 - 17:30

**Kurt Mehlhorn** – Fair Allocation of Indivisible Goods

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17:30 - 18:00

**Andrés Cristi** – A Constant Factor Prophet Inequality for Online Combinatorial Auctions

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18:00 - 18:30

**Naama Ben-David** – The FIDS Theorems: Tensions between Multinode and Multicore Performance in Transactional Systems

**Chair: Yossi Azar**

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18:30 - 19:30

**Business Meeting**

**Wednesday, 5th June**

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08:30 - 09:00

**Welcome and Coffee/Tea**

**Session chair: Merav Parter**

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09:00 - 10:00

**Ronitt Rubinfeld** – Testing Distributional Assumptions

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10:00 - 10:30

**Cameron Seth** – Testing Graph Properties with the Container Method

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10:30 - 11:00

**Coffee/Tea Break**

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**Session chair: Parinya Chalermsook**

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11:00 - 11:30

**Chris Schwiegelshohn** – Deterministic Clustering in High Dimensional Spaces: Sketches and Approximation

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11:30 - 12:00

**Tuukka Korhonen** – Dynamic treewidth

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12:00 - 12:30

**Tomasz Kociumaka** – Weighted Edit Distance Computation: Strings, Trees and Dyck

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12:30 - 14:00

**Lunch (provided)**

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**Session chair: Tomasz Kociumaka**

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14:00 - 15:30

**Contributed Talks**

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15:30 - 16:00

**Coffee Break**

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**Session chair: Stefano Leonardi**

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16:00 - 17:00

**Paul Dutting** – Algorithmic Contract Theory

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17:00 - 18:00

**Poster Session**

## Contributed Talks

### Monday, 3rd June

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**Michał Włodarczyk**, Meirav Zehavi — Planar Disjoint Paths, Treewidth, and Kernels

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**Simon Döring**, Dániel Marx, Philip Wellnitz— Counting Small Induced Subgraphs with Edge-monotone Properties

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Anish Hebbar, **Arindam Khan**, KVN Sreenivas – Bin Packing under Random-Order: Breaking the Barrier of  $3/2$

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Jana Cslovjecsek, Michał Pilipczuk, **Karol Wegrzycki** – A polynomial-time  $\text{OPT}^{\epsilon}$ -approximation algorithm for maximum independent set of connected subgraphs in a planar graph

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Sayan Bhattacharya, **Martín Costa**, Nadav Panski, Shay Solomon – Nibbling at Long Cycles: Dynamic (and Static) Edge Coloring in Optimal Time

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Mathieu Mari, Michał Pawłowski, **Runtian Ren**, Piotr Sankowski – Online Multi-level Aggregation with Delays and Poisson Arrivals

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**Andreas Emil Feldmann**, Michail Lampis – Parameterized Algorithms for Steiner Forest in Bounded Width Graphs

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Yossi Azar, **Shahar Lewkowicz**, Varun Suriyanarayana – List Update with Predictions

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Monika Henzinger, **AR Sricharan**, Leqi Zhu – Tighter Bounds for Local Differentially Private Core Decomposition and Densest Subgraph

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Mathieu Mari, **Michał Pawłowski**, Runtian Ren, Piotr Sankowski – Online Matching with Delays and Stochastic Arrival Times

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Karl Bringmann, Nick Fischer, Ivor van der Hoog, **Evangelos Kipouridis**, Tomasz Kociumaka, Eva Rotenberg – Dynamic Dynamic Time Warping

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Martin Hoefer, **Conrad Schecker**, Kevin Schewior – Contract Design for Pandora's Box

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**Yotam Kenneth**, Robert Krauthgamer – Cut Sparsification and Succinct Representation of Submodular Hypergraphs

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Karl Bringmann, **Egor Gorbachev** – A Fine-grained Classification of Subquadratic Patterns for Subgraph Listing and Friends

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**Or Vardi**, Yossi Azar – Learning augmented bounded delay scheduling

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**Mingmou Liu**, Yi Li – Sparsity-Dimension Trade-Offs for Oblivious Subspace Embeddings

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Nick Fischer, Piotr Kaliciak, **Adam Polak** – Deterministic 3SUM-Hardness

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**Harmender Gahlawat**, Meirav Zehavi – Learning Small Decision Trees With Few Outliers: A Parameterized Perspective

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Bernhard Haeupler, Shyamal Patel, **Antti Roeykoe**, Clifford Stein, Goran Zuzic – Polylog-Competitive Deterministic Local Routing and Scheduling

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Adam Karczmarz, Wojciech Nadara, **Marek Sokołowski** – Exact Shortest Paths with Rational Weights on the Word RAM

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Sandip Banerjee, Rajesh Chitnis, **Abhiruk Lahiri** – How Does Fairness Affect the Complexity of Gerrymandering?

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## **Tuesday, 4th June**

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**Yonggang Jiang**, Chaitanya Nalam, Thatchaphol Saranurak, Sorrachai Yingchareonthawornchai – Deterministic k-Vertex Connectivity in k Max-flows

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Cezar-Mihail Alexandru, **Pavel Dvorak**, Christian Konrad, Kheeran K. Naidu – Improved Weighted Matching in the Sliding Window Model

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Hsien-Chih Chang, Jonathan Conroy, Hung Le, **Lazar Milenkovic**, Shay Solomon, Cuong Than – Optimal Euclidean Tree Covers

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Amir Abboud, **Nathan Wallheimer** – Worst-Case to Expander-Case Reductions: Derandomized and Generalized

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**Mathieu Mari**, Anish Mukherjee, Michał Pilipczuk, Piotr Sankowski – Shortest Disjoint Paths on a Grid

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Karl Bringmann, **Anita Durr**, Adam Polak – Even Faster Knapsack via Rectangular Monotone Min-Plus Convolution and Balancing

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**Gustav Schmid**, Xavier Coteux-Roy, Francesco d'Amore, Rishikesh Gajjala, Fabian Kuhn, François Le Gall, Henrik Lievonen, Augusto Modanese, Marc-Olivier Renou, Jukka Suomela – No distributed quantum advantage for approximate graph coloring

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Martino Bernasconi, Matteo Castiglioni, Andrea Celli, **Federico Fusco** – No-Regret Learning in Bilateral Trade via Global Budget Balance

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Jakob Burkhardt, Ioannis Caragiannis, Karl Fehrs, **Matteo Russo**, Sudarshan Shyam, Chris Schwiegelshohn – Low-Distortion Clustering with Ordinal and Limited Cardinal Information

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**Wojciech Przybyszewski**, Pierre Ohlmann, Michał Pilipczuk, Wojciech Przybyszewski, Szymon Toruńczyk – Graph isomorphism is FPT parameterized by shrubdepth

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Nicolò Cesa-Bianchi, Tommaso Cesari, Roberto Colomboni, **Federico Fusco**, Stefano Leonardi – The Role of Transparency in Repeated First-Price Auctions with Unknown Valuations

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Emilio Cruciani, Sebastian Forster, Gramoz Goranci, Yasamin Nazari, **Antonis Skarlatos** – Dynamic algorithms for k-center on graphs

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Jan van den Brand, **Adam Karczmarz** – Deterministic Fully Dynamic SSSP and More

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**Antoine El-Hayek**, Monika Henzinger, Stefan Schmid – Broadcast and Consensus in Stochastic Dynamic Networks with Byzantine Nodes and Adversarial Edges

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**Ernest Van Wijland**, Hang Zhou – Faster Approximation Scheme for Euclidean k-TSP

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Christian Lebeda, **Jakub Tetek** – Better Differentially Private Approximate Histograms and Heavy Hitters using the Misra-Gries Sketch

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Lena Carta, Lukas Drexler, **Annika Hennes**, Clemens Rösner, Melanie Schmidt – FPT-Approximations for Fair k-Min-Sum-Radii

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## **Wednesday, 5th June**

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Jesper Nederlof, **Krisztina Szilagyi** – Detecting and Counting Small Patterns in Unit Disk Graphs

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Panagiotis Charalampopoulos, Tomasz Kociumaka, Solon Pissis, **Jakub Radoszewski**, Wojciech Rytter, Tomasz Waleń, Wiktor Zuba – Approximate Circular Pattern Matching

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Felix Hommelsheim, Nicole Megow, **Komal Muluk**, Britta Peis – Recoverable Robust Optimization with Commitment

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Bernhard Haeupler, **Richard Hladík**, Václav Rozhoň, Robert Tarjan, Jakub Tětek – Universal Optimality of Dijkstra via Beyond-Worst-Case Heaps

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Emily Clark, Chloe Georgiou, Katelyn Poon, **Marek Chrobak** – On HTLC-Based Protocols for Multi-Party Cross-Chain Swaps

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**Andrew Draganov**, David Saulpic, Chris Schwiegelshohn – Settling Time vs. Accuracy Tradeoffs for Clustering Big Data

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Christian Konrad, **Kheeran K. Naidu** – An Unconditional Lower Bound for Two-Pass Streaming Algorithms for Maximum Matching Approximation

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Peter Gartland, Daniel Lokshtanov, **Tomas Masarik**, Marcin Pilipczuk, Michal Pilipczuk, Pawel Rzazewski – Maximum Weight Independent Set in Graphs with no Long Claws in Quasi-Polynomial Time

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Hannaneh Akrami, Kurt Mehlhorn, Masoud Seddighin, **Golnoosh Shahkarami** – Randomized and Deterministic Maximin-share Approximations for Fractionally Subadditive Valuations

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Tomasz Kociumaka, **Jakob Nogler**, Philip Wellnitz – On the Communication Complexity of Approximate Pattern Matching

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Joakim Blikstad, **Peter Kiss** – Incremental  $(1-\epsilon)$ -approximate dynamic matching in  $O(\text{poly}(1/\epsilon))$  update time

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**Zohar Barak**, Anupam Gupta, Inbal Talgam-Cohen – MAC Advice for Facility Location Mechanism Design

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**Fateme Abbasi**, Sandip Banerjee, Jarosław Byrka, Parinya Chalermsook, Ameet Gadekar, Kamyar Khodamoradi, Dániel Marx, Roohani Sharma, Joachim Spoerhase – Parameterized Approximation for Robust Clustering in Discrete Geometric Spaces

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Fabian Egidy, Christian Glasser, **Martin Herold** – Upward Translation of Optimal and P-Optimal Proof Systems in the Boolean Hierarchy over NP

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Sándor Kisfaludi-Bak, **Jana Masarikova**, Erik Jan van Leeuwen, Bartosz Walczak, Karol Węgrzycki – Separator Theorem and Algorithms for Planar Hyperbolic Graphs