

Workshop on
“Parametrized complexity and discrete optimization”

December 6 - 10, 2021

organized by

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Time measurement: CET

• **Monday, December 6**

10:20 - 10:50	On-Site Registration <i>Proof of "GG" required (vaccinated, recovered)</i>
10:50 - 11:00	Remarks on COVID-19 situation at HIM by Christoph Thiele (HIM director)
11:00 - 11:30	Introduction of participants
11:30 - 12:30	Daniel Dadush <i>Integer Programming and The Kannan-Lovasz Conjecture</i>
12:30 - 15:00	<i>Lunch break</i>
15:00 - 15:30	Stefan Weltge (online) <i>Lattice-free simplices with lattice width $2d - o(d)$</i>
15:30 - 16:00	Daniel Kral (online) <i>Parameterized approach to block structured integer programs</i>
16:00 - 16:30	<i>Break</i>
16:30 - 17:00	Michał Pilipczuk <i>Tight Complexity Lower Bounds for Integer Linear Programming with Few Constraints</i>
17:00 - 17:30	Samuel Fiorini <i>Integer programs with bounded subdeterminants and two nonzeros per row</i>

• **Tuesday, December 7**

09:15 - 09:30	On-Site Registration <i>Proof of "GG" required (vaccinated, recovered)</i>
09:30 - 10:30	Saket Saurabh (online) <i>Parameterized Algorithms and (Possible) Future Directions</i>

10:30 - 11:00	<i>Break</i>
11:00 - 11:30	Petr Golovach <i>Longest cycle above Paul Erdős—Gallai bound</i>
11:30 - 12:00	Hans Bodlaender <i>Parameterized Problems Complete for Nondeterministic FPT time and Logarithmic Space</i>
12:00 - 15:00	<i>Lunch break</i>
15:00 - 15:30	Erik Jan van Leeuwen (online) <i>Steiner Trees for Hereditary Graph Classes: A Treewidth Perspective</i>
15:30 - 16:00	Carla Groenland <i>Tight bounds for counting colourings parameterised by cutwidth via matrix ranks</i>
16:00 - 16:30	<i>Break</i>
16:30 - 18:00	Open problem session <i>Chaired by Michał Pilipczuk</i>

• **Wednesday, December 8**

09:15 - 09:30	On-Site Registration <i>Proof of "GG" required (vaccinated, recovered)</i>
09:30 - 10:30	Karl Bringmann (online) <i>Pseudopolynomial-time Algorithms for Optimization Problems - a Fine-grained Perspective</i>
10:30 - 11:00	<i>Break</i>
11:00 - 11:30	Kim Manuel Klein (online) <i>On the Fine-Grained Complexity of the Unbounded SubsetSum and the Frobenius Problem</i>
11:30 - 12:00	Adam Polak <i>Knapsack and Subset Sum with Small Items</i>
12:00 - 15:00	<i>Lunch break</i>
15:00 - 15:30	Sorrachai Yingchareonthawornchai <i>Vertex Connectivity in Poly-logarithmic Max-flows</i>
15:30 - 16:00	Sally Dong <i>A Nearly-Linear Time Algorithm for Linear Programs with Small Treewidth: A Multiscale Representation of Robust Central Path</i>
16:00 -	Afternoon off

• **Thursday, December 9**

09:15 - 09:30	On-Site Registration <i>Proof of "GG" required (vaccinated, recovered)</i>
09:30 - 10:30	Robert Weismantel (online) <i>Mixed Integer Optimization in high dimensions</i>
10:30 - 11:00	<i>Break</i>
11:00 - 11:30	Klaus Jansen (online) <i>New Algorithmic Results for Bin Packing and Scheduling</i>
11:30 - 12:00	Lars Rohwedder <i>Flow Time Scheduling and Prefix Beck-Fiala</i>
12:00 - 12:30	Céline Swennenhuis <i>A Faster Exponential Time Algorithm for Bin Packing With a Constant Number of Bins via Additive Combinatorics</i>
12:30 - 16:30	<i>Lunch break</i>
16:30 - 17:00	Marcin Pilipczuk <i>Directed flow-augmentation</i>
17:00 - 17:30	Andreas Feldmann (online) <i>The Parameterized Complexity of the Survivable Network Design Problem</i>

• **Friday, December 10**

09:15-09:30	On-Site Registration <i>Proof of "GG" required (vaccinated, recovered)</i>
09:30 - 10:30	Karthik C.S. (online) <i>Recent Hardness of Approximation results in Parameterized Complexity</i>
10:30 - 11:00	<i>Break</i>
11:00 - 11:30	Tuukka Korhonen (online) <i>Fast FPT-Approximation of Branchwidth</i>
11:30 - 12:00	Jana Cslovjecsek <i>Efficient sequential and parallel algorithms for multistage stochastic integer programming using proximity</i>