

Workshop on
“Continuous approaches to discrete optimization ”

October 11 - 15, 2021

organized by

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Time measurement: CEST

• Monday, October 11

09:00 - 10:00	On-Site Registration <i>Proof of "GGG" required (vaccinated, recovered, tested)</i>
10:00 - 11:00	Jan van den Brand <i>From Interior Point Methods to Data Structures and back</i>
11:00 - 11:30	<i>Coffee break</i>
11:30 - 12:00	Rasmus Kyng <i>A numerical analysis approach to convex optimization</i>
12:00 - 12:30	Yang Liu <i>Fully Dynamic Maximum Flows: Sparse Maxflow Faster than Goldberg-Rao</i>
12:30 - 15:00	<i>Lunch break</i>
15:00 - 16:00	Debmalya Panigrahi <i>The Isolating Cuts Lemma: A new tool for solving minimum cut problems</i>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:00	Sorrachai Yingchareonthawornchai <i>Approximating k-Edge-Connected Spanning Subgraphs via a Fast Linear Program Solver</i>
17:00 - 17:30	Kent Quanrud <i>On Iterative Peeling and Supermodularity for Densest Subgraph</i>
17:30 - 17:45	break
17:45 - 18:30	Panel Data-Structures and Opt: Jan van den Brand, Rasmus Kyng, Debmalya Panigrahi

• **Tuesday, October 12**

09:00 - 10:00	On-Site Registration <i>Proof of "GGG" required (vaccinated, recovered, tested)</i>
10:00 - 11:00	Sally Dong <i>Nested Dissection Meets IPMs: Planar Min-Cost Flow in Nearly-Linear Time</i>
11:00 - 11:30	<i>Coffee break</i>
11:30 - 12:00	Bento Natura <i>Fast Exact Solvers for Linear Programs via Interior Point Methods</i>
12:00 - 12:30	Jacek Gondzio <i>Applying interior point algorithms in column generation and cutting plane methods</i>
12:30 - 15:00	<i>Lunch break</i>
15:00 - 15:30	Andrea Lodi <i>Cutting Plane Generation Through Sparse Principal Component Analysis</i>
15:30 - 16:00	Jens Vygen <i>Continuous approaches to VLSI routing</i>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:00	Robert Luce <i>Solving nonconvex quadratic optimization problems with Gurobi</i>
17:00 - 17:30	Aaron Sidford <i>Unit Capacity Maximum Flow in Almost $m^{4/3}$ Time</i>
17:30 - 17:45	break
17:45 - 18:30	Panel Challenges in Practical Opt: Andrea Lodi, Robert Luce, Erling Andersen

• **Wednesday, October 13**

09:00 - 10:00	On-Site Registration <i>Proof of "GGG" required (vaccinated, recovered, tested)</i>
10:00 - 11:00	Vera Traub, Rico Zenklusen <i>Bridging the Gap Between Tree and Connectivity Augmentation: Unified and Stronger Approaches</i>
11:00 - 11:30	<i>Coffee break</i>
11:30 - 12:00	Matthias Mnich <i>Approximation Algorithms for Hard Cut Problems via Continuous Relaxations</i>

12:00 - 12:30	Sebastian Pokutta <i>Fast Algorithms for Packing Proportional Fairness and its Dual</i>
12:30 - 15:00	<i>Lunch break</i>
15:00 - 15:30	Stefan Weltge <i>Simple Iterative Methods for Linear Optimization over Convex Sets</i>
15:30 - 16:00	Zhao Song <i>Fast Iterative Algorithm via Nearest/Furthest Neighbor Search</i>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:00	Alina Ene <i>Adaptive gradient descent methods for constrained optimization</i>
17:00 - 17:30	Jelena Diakonikolas <i>Local Acceleration of Frank-Wolfe Methods</i>

• **Thursday, October 14**

09:00 - 10:00	On-Site Registration <i>Proof of "GGG" required (vaccinated, recovered, tested)</i>
10:00 - 11:00	Roie Levin <i>Random Order Set Cover is as Easy as Offline</i>
11:00 - 11:30	<i>Coffee break</i>
11:30 - 12:00	Gerard Cornuejols <i>Dyadic linear programming</i>
12:00 - 15:00	<i>Lunch break</i>
15:00 - 15:30	Ola Svensson <i>Learning-Augmented Online Algorithms and the Primal-Dual Method</i>
15:30 - 16:00	Anupam Gupta <i>Covering LP Relaxations for k-Server</i>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:30	Sebastian Bubeck <i>Chasing small sets</i>
17:30 - 17:45	break
17:45 - 18:30	Panel New Perspectives in Online Opt: Ola Svensson, Anupam Gupta, Sebastian Bubeck

• **Friday, October 15**

09:00 - 10:00	On-Site Registration <i>Proof of "GGG" required (vaccinated, recovered, tested)</i>
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10:00 - 11:00	Haotian Jiang <i>Minimizing Convex Functions with Integral Minimizers</i>
11:00 - 11:30	<i>Coffee break</i>
11:30 - 12:00	Deeparnab Chakrabarty <i>A polynomial lower bound on the number of rounds for efficient submodular function minimization</i>