Computational Complexity of Discrete Problems

Monday, March 10th, 2025			
07:30-08:45	Breakfast		
08:50–09:00	Welcome		
09:00–09:40	Yuval Filmus BLR for arbitrary Boolean predicates	Morning session	
09:40–10:20	Introduction round		
10:20–10:50	Coffee break		
10:50–11:30	Prahladh Harsha An Improved Line-Point Low-Degree Test		
11:30–12:10	Amey Bhangale A New Approximation Algorithm for Satisfiable Constraint Satisfaction Problems		
12:15	Lunch		
15:30–16:00	Coffee and cake		
16:00–16:40	Valentine Kabanets Witness Encryption vs NP-hardness of Learning	Afternoon session	
17:00–17:40	Oliver Korten Stronger Cell Probe Lower Bounds via Local PRGs		
17:40–17:55	Yuval Filmus (Talk to Talk About)		
17:55	Dinner		

Computational Complexity of Discrete Problems

Tuesday,	March	11th,	2025	

07:30–08:45	Breakfast	
09:00–09:50	lan Mertz Simulating Time With Square Root Space	Morning session
09:50–10:30	Michal Koucký Collapsing Catalytic Classes	
10:30–11:00	Coffee break	
11:00–11:40	Roei Tell When Connectivity is Hard, Random Walks are Easy With Non-Determ	inism
11:40–11:55	Sourav Chakraborty (Talk to Talk About)	
12:05–12:15	Group Photo	
12:15	Lunch	
15:30–16:00	Coffee and cake	
16:00–16:40	Kaave Hosseini Algebraic, analytic, and combinatorial measures of boolean matrices	Afternoon session
16:40–17:20	Eshan Chattopadhyay Extractors for hidden sources	
17:20–18:00	Pavel Pudlák Nonmalleable affine extractors and read-once linear branching programs	
18:00	Dinner	

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# Wednesday, March 12th, 2025

07:30-08:45	Breakfast
09:00–09:40	Zhenjian Lu Morning session On the Complexity of Avoiding Heavy Elements
09:40–10:30	Jakob Nordström Truly Supercritical Trade-offs for Resolution, Cutting Planes, Monotone Circuits, and Weisfeiler–Leman
10:30-11:00	Coffee break
11:00–11:30	Susanna F de Rezende Lifting with Colourful Sunflowers
11:30–12:00	Avishay Tal Lifting Barriers: towards query-to-communication lifting with smaller gadgets
12:00–12:10	Gillat Kol (Talk to Talk About)
12:15	Lunch
13:45	Hike
18:00	Dinner
19:30–20:30	Open Problems

Thursday, March 13th, 2025

Computational Complexity of Discrete Problems

07:30–08:45	Breakfast	
09:00–09:40	Shuichi Hirahara Error-Correction of Matrix Multiplication Algorithms	Morning session
09:40–10:20	Alexander Golovnev Polynomial Formulations as a Barrier for Reduction-Based Hardness Pro	oofs
10:20–10:50	Coffee break	
10:50–11:20	Rachel Zhang Explicit Vertex Expanders Beyond the Spectral Barrier	
11:20–12:00	Siqi Liu High Dimensional Expanders for Error-correcting Codes	
12:00–12:10	(Talk to Talk About)	
12:15	Lunch	
15:30–16:00	Coffee and Cake	
16:00–16:40	Amit Chakrabarti Finding missing items requires strong forms of randomness	Afternoon session
16:40–17:20	Sumegha Garg A New Information Complexity Measure for Multi-pass Streaming with Applications	
17:20–17:50	Olaf Beyersdorff Computationally Hard Problems Are Hard for QBF Proof Systems Too	
17:50–18:00	(Talk to Talk About)	
18:00	Dinner	

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### Friday, March 14th, 2025

07:30-08:45 Breakfast Makrand Sinha Morning session 09:00-09:40 Constructing Pseudorandom Matrices 09:40-10:10 Radu Curticapean Can You Link Up With Treewidth? 10:10-10:40 Coffee break 10:40-11:20 Gil Cohen Analytic Insights into the Zig-Zag Product and Its Friends Thomas Thierauf 11:20-12:00 Graph Rigidity Lunch and Departure 12:15