Dagstuhl Seminar 25111

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	·

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-Determinism
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 Afternoon session Algebraic, analytic, and combinatorial measures of boolean matrices
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

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	Hanlin Ren, Ian Mertz, Sumegha Garg, Jakob Nordström, Robert Robere, Mika Göös Open Problems

Thursday, March 13th, 2025

07:30-08:45	Breakfast	
09:00-09:40	Shuichi Hirahara Morning session Error-Correction of Matrix Multiplication Algorithms	
09:40–10:20	Alexander Golovnev Polynomial Formulations as a Barrier for Reduction-Based Hardness Proofs	
10:20-10:50	Coffee break	ı
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	Yogesh Dahiya (Talk to Talk About)	
12:15	Lunch	
15:30–16:00	Coffee and Cake	
16:00–16:40	Amit Chakrabarti Afternoon session Finding missing items requires strong forms of randomness	
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	Johan Håstad (Talk to Talk About)	
18:00	Dinner	
20:00	Music Night	

Friday, March 14th, 2025

07:30-08:45	Breakfast	
09:00-09:40	Makrand Sinha Constructing Pseudorandom Matrices	Morning session
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	
11:20–12:00	Thomas Thierauf Graph Rigidity	
12:15	Lunch and Departure	