

Program of Dagstuhl Seminar 22301 (tentative)
Algorithmic Aspects of Information Theory

Monday, 25 of July

9:00–10:00	Introduction	
10:00–10:30	Coffee	
10:30–12:00	Laszlo Csirmaz	Information Inequalities
12:15–14:00	Lunch	
14:00–15:30	Marcelo Arenas	Fundamentals of Databases, Normal Forms, Information Theory
15:30–16:15	Coffee	
16:15–16:45	Amos Beimel	On Lower Bounds for Secret Sharing Schemes and Information Inequalities
16:45–17:15	Oriol Farras Ventura	Linear Programming Technique in the Search for Lower Bounds in Secret Sharing
17:15–17:45	Søren Riis	Term Coding
18:00	Dinner	

Tuesday, 26 of July

09:00–10:30	Hung Ngo	Applications of Information Theory to Data Management
10:30–11:00	Coffee	
11:00–11:30	Dan Suciú	Max-Information Inequalities and the Domination Problem
11:30–12:00	Peter Harremoës	Entropy Inequalities, Lattices and Groups
12:15–14:00	Lunch	
14:00–15:30	Milan Studeny	Tutorial on Conditional Independence Implication
15:30–16:00	Coffee	
16:00–16:30	Tobias Boege	Universality of Gaussian Conditional Independence Models
16:30–18:00	Alexander Shen and others	OPEN PROBLEM SESSION
18:00	Dinner	

Wednesday, 27 of July

09:00–09:30	Raymond W. Yeung	Machine-Proving of Entropy Inequalities (online talk)
09:30–10:00	Nikolay Vereshchagin	One Conditional Information Inequality and its Combinatorial Applications (online talk)
10:00–11:00	Coffee	
11:00–11:30	Batya Kenig	Approximate Implication for PGMs and Relational Databases
11:30–12:00	Lele Wang	Universal Graph Compression: Stochastic Block Models
12:15–14:00	Lunch	
14:00–17:00	Excursion	
18:00	Dinner	

Thursday, 28 of July

09:00–09:30	Cheuk Ting Li	On the Undecidability of Conditional Independence Implication (online talk)
09:30–10:00	John MacLaren Walsh	When are Exhaustive Minimal Lists of Information Inequalities Scalable?
10:00–10:30	Coffee	
10:30–11:00	Milan Studeny	Conditional Ingleton Inequalities
11:00–11:30	Geva Yashfe	On Entropic and Multilinear Matroids
11:30–12:00	TBA	
12:15–14:00	Lunch	
14:00–14:30	Yuval Filmus	Information Complexity
14:30–15:00	Andrei Romashchenko	From the Expander Mixing Lemma to Information Inequalities
15:00–15:30	TBA	
15:30–16:30	Coffee	
16:30–17:00	Mahmoud Abo Khamis	Open Problems on Information-Theoretic Bounds for Database Query Answers (online talk)
17:00–18:00	OPEN PROBLEM SESSION	
18:00	Dinner	

Friday, 29 of July

09:00–09:30	Miika Hannula	Dependencies in team semantics
09:30–10:00	(tentative) Batya Kenig	Quantifying the Loss of Acyclic Join Dependencies
10:00–10:30	TBA	
10:30–11:00	Coffee	
11:00–12:00	General Discussion, Future Plans	
14:00	Departure	