

Workshop
“Information theory, Boolean functions, and lattice problems”

November 18 - 22, 2024

organized by

Sergey Bobkov, Polona Durcik, Alexandros Eskenazis, Steven Heilman,
Irina Holmes Fay, Paata Ivanisvili, Dor Minzer, and Alexander Volberg

Time measurement: CET

• **Monday, November 18**

08:30 - 08:55	<i>Arrival and Self-Registration</i>
08:55 - 09:00	<i>Welcome by HIM Director Karl-Theodor Sturm</i>
09:00 - 09:05	<i>Opening Remarks</i>
09:05 - 10:05	Chandra Nair <i>Some conjectures relating the optimality of dictator functions and connections to discrete isoperimetric inequalities</i>
10:05 - 11:00	<i>Coffee break</i>
11:00 - 12:00	Lisa Sauermann <i>The quadratic Littlewood-Offord Problem</i>
12:00 - 15:00	<i>Lunch break</i>
15:00 - 16:00	Noah Stephens-Davidowitz <i>A reverse Minkowski theorem</i>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:30	Piotr Nayar <i>Minimum entropy of a log-concave random variable with fixed variance</i>
17:30 - 18:30	<i>Get-Together</i>

• **Tuesday, November 19**

09:00 - 10:00	Igal Sason (online talk) <i>Combinatorial Applications of the Shearer and Han Inequalities in Graph Theory and Boolean Functions.</i>
10:00 - 10:30	<i>Group Photo and Coffee break</i>
10:30 - 11:30	Sergey Tikhonov <i>Polynomial inequalities and discretization</i>
11:30 - 12:30	Joseph Slote <i>Fourier multipliers for functions on the discrete n-torus: to Figiel and beyond</i>
12:30 - 14:30	<i>Lunch break</i>
14:30 - 16:00	Open problems 1
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:30	Open problems 2

• **Wednesday, November 20**

09:00 - 10:00	Thomas Courtade <i>Information inequalities on Euclidean space</i>
10:00 - 10:30	<i>Coffee break</i>
10:30 - 11:30	James Melbourne <i>On the Entropy Power of Sums of Dependent Random Variables and Related Inequalities</i>
11:30 - 12:30	Tomasz Tkocz <i>A Rényi entropy interpretation of anti-concentration</i>
12:30 - 14:30	<i>Lunch break</i>
14:30 - 16:00	Collaboration time
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:00	Collaboration time

• **Thursday, November 21**

09:00 - 10:00	Gautam Aishwarya <i>A Shannon-Kneser-Poulsen theorem</i>
10:00 - 10:30	<i>Coffee break</i>
10:30 - 11:30	Emma Pollard <i>Symmetrization Resistance</i>
11:30 - 12:30	Bruno Volzone <i>On Gilles Pisier's approach to Gaussian concentration, isoperimetry, and Poincare-type inequalities</i>
12:30 - 14:30	<i>Lunch break</i>
14:30 - 16:00	Collaboration time
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:00	Collaboration time

• **Friday, November 22**

09:30 - 10:30	Dario Cordero-Erausquin <i>Convexity, duality and heat diffusion</i>
10:30 - 11:00	<i>Coffee break</i>
11:00 - 12:00	Felipe Ferreira Goncalves <i>Linear Programming, Sign Uncertainty, and Sphere packings</i>
12:00 - 14:00	<i>Lunch break</i>
14:00 - 17:30	Outing or collaboration time