Workshop
"Analysis and Geometry on Discrete Spaces "

October 7 - 11, 2024

organized by
**Sergey Bobkov, Polona Durcik, Alexandros Eskenazis, Irina Holmes Fay,
Paata Ivanisvili, Dor Minzer, and Alexander Volberg**

Time measurement: CEST

- **Monday, October 7**

08:30 - 09:00	*Arrival and Self-Registration*
09:00 - 09:05	*Welcome by HIM Director Karl-Theodor Sturm*
09:05 - 10:05	**Rocco Servedio** *Sparsifying suprema of Gaussian processes*
10:05 - 11:00	*Coffee break*
11:00 - 12:00	**Joris Roos** *Isoperimetric and Poincaré inequalities on the Hamming cube*
12:00 - 14:00	*Lunch break*
14:00 - 15:00	**Tuomas Hytönen** *A geometric dichotomy for the discrete Hilbert transform*
15:00 - 16:00	**Polona Durcik** *Quantitative norm convergence of triple ergodic averages for commuting transformations*
16:00 - 16:30	*Coffee break*
16:30 - 17:30	**Li Gao** *Log-Sobolev inequalities for matrix-valued functions*
from 17:30 on	*Get-Together*

- **Tuesday, October 8**

09:15 - 10:15	**Vjekoslav Kovač** *Sharp estimates for Gowers norms on discrete cubes*
10:15 - 11:00	*Group Photo and Coffee break*
11:00 - 12:00	**Justin Salez** *Entropy and curvature of Markov chains on metric spaces*
12:00 - 14:00	*Lunch break*
14:00 - 15:00	**Manor Mendel** *The pursuit of Hadamard expanders via rudimentary Walsh analysis*
15:00 - 16:00	**David Beltran** *From Kakeya–Brascamp–Lieb inequalities to localised variants of multi-linear Fourier restriction*
16:00 - 16:30	*Coffee break*
16:30 - 17:30	**José Ramón Madrid Padilla** *On convolution inequalities and applications*

- **Wednesday, October 9**

09:15 - 10:15	**Quanhua Xu** *Vector-valued Littlewood–Paley–Stein theory for semigroups*
10:15 - 11:00	*Coffee break*
11:00 - 12:00	**Florent Baudier** *Bi-Lipschitz and coarse embeddings of diamond graphs*
12:00 - 14:00	*Lunch break*
14:00 - 15:00	**Stefanie Petermichl** *Banach space geometry and the dyadic shift*
15:00 - 16:00	**Yuval Filmus** *Approximate polymorphisms*
16:00 - 16:30	*Coffee break*
16:30 - 17:30	**Guy Kindler** *A polynomial Bogolyubov-type result for the special linear group*

- **Thursday, October 10**

09:15 - 10:15	**Haonan Zhang** *On the Eldan–Gross Inequality*
10:15 - 11:00	*Coffee break*
11:00 - 12:00	**Assaf Naor** *TBA*
12:00 - 14:00	*Lunch break*
14:00 - 15:00	**Michael Dymond** *Lipschitz mappings of discrete metric spaces*
15:00 - 16:00	**Lenka Slaviková** *Dimension-free Sobolev-type embeddings in the Gauss space*
16:00 - 16:30	*Coffee break*
16:30 - 17:30	**Błażej Wróbel** *Dimension-free estimates for low degree functions on the Hamming cube*

- **Friday, October 11**

09:15 - 10:15	**Pandelis Dodos** *Random graphs and nonlinear spectral gaps*
10:15 - 11:00	*Coffee break*
11:00 - 12:00	**Noam Lifshitz** *Hypercontractivity and growth over finite groups*
12:00 - 14:00	*Lunch break*