

Workshop  
“Analysis in TCS: testing, learning, and complexity”

November 4 - 8, 2024

organized by

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*Time measurement: CET*

• **Monday, November 4**

08:30 - 09:00	<i>Arrival and Self-Registration</i>
09:00 - 09:05	<i>Welcome by Stefan Hartmann</i>
09:05 - 09:15	<i>Opening Remarks</i>
09:15 - 10:25	<b>Shivam Nadimpalli</b> <i>High-dimensional convexity: testing, learning, and complexity</i>
10:25 - 11:00	<i>Coffee break</i>
11:00 - 12:10	<b>Hamed Hatami</b> <i>Sparse graph counting and Kelley–Meka bounds for binary systems</i>
12:10 - 13:40	<i>Lunch break</i>
13:40 - 14:50	<b>Avichai Marmor</b> (remote) <i>Permutation mixing via hypercontractivity of symmetric characters</i>
14:50 - 16:00	<b>Ohad Sheinfeld</b> <i>Improved Covering Results and Intersection Theorems in Symmetric Groups, via Hypercontractivity</i>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:40	<b>Ohad Klein</b> <i>TBD</i>
from 17:40 on	<i>Get-Together</i>

• **Tuesday, November 5**

09:00 - 09:45	<b>Srinivasan Arunachalam</b> <i>Testing and learning phase states and their variants (Part 1)</i>
9:45 - 10:00	<i>Brief break</i>
10:00 - 10:45	<b>Srinivasan Arunachalam</b> <i>Testing and learning phase states and their variants (Part 2)</i>
10:45 - 11:15	<i>Coffee break</i>
11:15 - 12:25	<b>Tom Gur</b> (remote talk) <i>Higher-order Fourier analysis in quantum complexity theory</i>
12:25 - 14:30	<i>Lunch break</i>
14:30 - 16:00	<b>Open problems 1</b>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:30	<b>Open problems 2</b>

• **Wednesday, November 6**

09:00 - 09:45	<b>Francisco Escudero Gutiérrez</b> <i>An approach towards the Aaronson–Ambainis conjecture via Fourier completely bounded polynomials (Part 1)</i>
9:45 - 10:00	<i>Brief break</i>
10:00 - 10:45	<b>Francisco Escudero Gutiérrez</b> <i>An approach towards the Aaronson–Ambainis conjecture via Fourier completely bounded polynomials (Part 2)</i>
10:45 - 11:15	<i>Coffee break</i>
11:15 - 12:25	<b>Kewen Wu</b> <i>Quantum State Preparation with Optimal T-Count</i>
12:25 - 14:30	<i>Lunch break</i>
14:30 - 16:00	<b>Collaboration time</b>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 18:00	<b>Collaboration time</b>

• **Thursday, November 7**

09:00 - 10:10	<b>Dmitry Krachun</b> <i>An optimal space lower bound for approximating MAX-CUT</i>
10:10 - 11:50	<i>Coffee break</i>
11:50 - 12:00	<b>Pooya Hatami</b> <i>Constant-Cost Communication</i>
12:00 - 14:00	<i>Lunch break</i>
14:00 - 16:00	<b>Collaboration time</b>
16:00 - 16:30	<i>Coffee break</i>
16:30 - 18:00	<b>Collaboration time</b>

• **Friday, November 8**

09:00 - 10:10	<b>Dan Mikulencer</b> (remote) <i>Spectral gaps for measures on the cube via a generalized stochastic localization process</i>
10:10 - 11:50	<i>Coffee break</i>
11:50 - 12:00	<b>Joris Roos</b> <i>Sharp isoperimetric inequalities on the Hamming cube</i>
12:00 - 14:00	<i>Lunch break</i>
14:00 - 17:30	<i>Outing or collaboration time</i>