

# QMATH 15

## September 2022

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
12	13	14	15	16
<p><b>Registration</b> (8:30-9:15)</p> <hr/> <p><b>Opening</b> (9:15-9:30 am)</p> <hr/> <p><b>Gregory Berkolaiko</b> (9:30-10:30 am) <i>Nodal deficiency, spectral minimal partitions and the Dirichlet-to-Neumann map</i></p> <hr/> <p><b>Coffee Break</b> (10:30-11:00 am)</p> <hr/> <p><b>Benjamin Schlein</b> (11:00-12:00 pm) <i>Correlation energy of weakly interacting Fermi gases</i></p> <hr/> <p><b>Lunch Break</b> (12:00-2:00 pm)</p> <hr/> <p><b>Sessions</b> (2:00-3:30 pm) <b>Many Body</b>, Giedt 1003 <b>Amanda Young</b> <i>A bulk gap in the presence of edge states for a truncated Haldane pseudopotential</i> <b>Anton Kapustin</b> <i>Non-abelian Hall conductance as a homotopy invariant of gapped lattice systems</i> <b>Dynamical Systems</b>, Giedt 1007 <b>Yaiza Canzani</b> <i>Counting closed geodesics and improving Weyl's law for predominant sets of metrics</i> <b>Contributed talks</b></p> <hr/> <p><b>Coffee Break</b> (3:30-4:00 pm)</p> <hr/> <p><b>Sessions</b> (4:00-5:30 pm) <b>Many Body</b>, Giedt 1003 <b>Contributed talks</b> <b>Dynamical Systems</b>, Giedt 1007 <b>Alexis Drouot</b> <i>Topological insulators in semiclassical regime</i> <b>Contributed talks</b> <b>New Topics</b>, Math 1147 <b>Jon Dimock</b> <i>Ultraviolet Stability for Quantum Electrodynamics in <math>d = 3</math></i> <b>Contributed talks</b></p> <hr/> <p><b>Banquet</b> (5:30pm - ) <i>Math Courtyard</i></p>	<p><b>Nilanjana Datta</b> (9:30-10:30 am) <i>Uniform entropic continuity bounds via majorization flow</i></p> <hr/> <p><b>Coffee Break</b> (10:30-11:00 am)</p> <hr/> <p><b>Jens Marklof</b> (11:00-12:00 pm) <i>The low-density limit of the Lorenz gas: random vs periodic, classical vs quantum</i></p> <hr/> <p><b>Lunch Break</b> (12:00-2:00 pm)</p> <hr/> <p><b>Sessions</b> (2:00-3:30 pm) <b>Quantum Information</b>, Giedt 1003 <b>Contributed talks</b> <b>Dynamical Systems</b>, Giedt 1007 <b>Thibault Lefeuvre</b> <i>On the ergodicity of the frame flow</i> <b>Contributed talks</b> <b>New Topics</b>, Math 1147 <b>Marcello Porta</b> <i>Quantization of Edge Transport in Interacting Hall Systems</i> <b>John Klauder</b> <i>Advanced QMath Ready for Difficult Problems</i></p> <hr/> <p><b>Coffee Break</b> (3:30-4:00 pm)</p> <hr/> <p><b>Sessions</b> (4:00-5:30 pm) <b>Quantum Information</b>, Giedt 1003 <b>Contributed talks</b> <b>Dynamical Systems</b>, Giedt 1007 <b>Alexis Drouot</b> <i>Topological insulators in semiclassical regime</i> <b>Contributed talks</b> <b>New Topics</b>, Math 1147 <b>Jon Dimock</b> <i>Ultraviolet Stability for Quantum Electrodynamics in <math>d = 3</math></i> <b>Contributed talks</b></p>	<p><b>Andreas Winter</b> (9:30-10:30 am)</p> <hr/> <p><b>Coffee Break</b> (10:30-11:00 am)</p> <hr/> <p><b>Tatyana Shcherbina</b> (11:00-12:00 pm) <i>Supersymmetric approach to the deformed Ginibre ensemble</i></p> <hr/> <p><b>Lunch Break</b> (12:00-2:00 pm)</p> <hr/> <p><b>Sessions</b> (2:00-3:30 pm) <b>Quantum Information</b>, Giedt 1006 <b>Anurag Anshu</b> <i>NLTS Hamiltonians from good quantum codes</i> <b>Contributed talks</b> <b>Many-body</b>, Giedt 1003 <b>Nicolas Rougerie</b> <i>Two modes approximation for bosons in a double well potential</i> <b>Contributed talks</b> <b>Spectral Theory</b>, Math 2112 <b>Contributed talks</b></p> <hr/> <p><b>Coffee Break</b> (3:30-4:00 pm)</p> <hr/> <p><b>Sessions</b> (4:00-5:30 pm) <b>Quantum Information</b>, Giedt 1006 <b>Xun Gao</b> <i>Limitations of Linear Cross-Entropy as a Measure for Quantum Advantage</i> <b>Contributed talks</b> <b>Many-body</b>, Giedt 1003 <b>Contributed talks</b> <b>Spectral Theory</b>, Math 2112 <b>Contributed talks</b></p>	<p><b>Matthew Hastings</b> (9:30-10:30 am) <i>The sum-of-squares for fermionic systems</i></p> <hr/> <p><b>Coffee Break</b> (10:30-11:00 am)</p> <hr/> <p><b>Tomaz Prosen</b> (11:00-12:00 pm) <i>Random Matrix Spectral Fluctuations in Quantum Lattice Systems</i></p> <hr/> <p><b>Lunch Break</b> (12:00-2:00 pm)</p> <hr/> <p><b>Sessions</b> (2:00-3:30 pm) <b>Quantum Information</b>, Giedt 1003 <b>Pavel Panteleev</b> <i>Sheaf Codes</i> <b>Contributed talks</b> <b>Disordered Systems</b>, Giedt 1006 <b>Alexandre Krajenbrink</b> <i>The crossover from the Macroscopic Fluctuation Theory to the Kardar-Parisi-Zhang equation controls the large deviations of diffusive systems</i> <b>Contributed talks</b> <b>New Topics</b>, Math 1147 <b>Isaac Kim</b> <i>Chiral Central Charge and Modular Commutator</i> <b>Simone Warzel</b> <i>Quantum Spin Glasses</i> <b>Spectral Theory</b>, Math 2112 <b>Contributed talks</b></p> <hr/> <p><b>Coffee Break</b> (3:30-4:00 pm)</p> <hr/> <p><b>Sessions</b> (4:00-5:30 pm) <b>Quantum Information</b>, Giedt 1003 <b>Contributed talks</b> <b>Disordered Systems</b>, Giedt 1006 <b>Emma Bailey</b> <i>Large deviation estimates for CLTs in certain log-correlated fields</i> <b>Contributed talks</b> <b>New Topics</b>, Math 1147 <b>Michael Levin</b> TBA <b>Contributed talks</b> <b>Spectral Theory</b>, Math 2112 <b>Contributed talks</b></p>	<p><b>Sessions</b> (9:00 -10:20 am) <b>Disordered Systems</b>, Giedt 1006 <b>Ben McKenna</b> <i>Random determinants, the elastic manifold, and landscape complexity beyond invariance</i> <b>Contributed talks</b> <b>Spectral Theory</b>, Math 2112 <b>Nikolay Filonov</b> <i>Polya Conjecture for the Dirichlet problem in a multi-dimensional ball</i> <b>Julien Sabin</b> TBA</p> <hr/> <p><b>Coffee Break</b> (10:20-10:50 am)</p> <hr/> <p><b>Sessions</b> (10:50-12:00 pm) <b>Disordered Systems</b>, Giedt 1006 <b>Jiaoyang Huang</b> <i>Extreme eigenvalues of random graphs with growing degrees</i> <b>Contributed talks</b> <b>Spectral Theory</b>, Math 2112 <b>David Damanić</b> <i>Johnson-Schwartzman gap labelling and applications</i> <b>Lingrui Ge</b> TBA</p>