ESI — Erwin Schrödinger International Institute for Mathematical Physics

universität wien

Programme on

"Quantum Many-body Systems, Random Matrices and Disorder"

June 1 - July 31, 2015

organized by

László Erdös (IST Austria), Robert Seiringer (IST Austria), Simone Warzel (TU Munich)

Workshop I, June 8 - 12, 2015

- **Monday, June 8, 2015**

  09:00 – 09:30 **Opening & Registration**

  09:30 – 10:30 **Jan Philip Solovej**
  The Bogolubov Variational Model for Bose gases

  10:30 – 11:00 *coffee / tea break*

  11:00 – 12:00 **Jeff Schenker**
  Dissipative transport in the localized regime

  12:00 – 14:00 *lunch break*

  14:00 – 15:00 **Hermann Schulz-Baldes**
  An index walk in the periodic table

  15:00 – 15:30 *break*

  15:30 – 16:30 **Wojciech De Roeck**
  (Energy) localization in driven systems

- **Tuesday, June 9, 2015**

  09:30 – 10:30 **Nicolas Rougerie**
  Incompressibility estimates for the Laughlin phase

  10:30 – 11:00 *coffee / tea break*

  11:00 – 12:00 **Wolfgang Spitzer**
  Area law for the entanglement entropy of the free Fermi gas at nonzero temperature

  12:00 – 14:00 *lunch break*

  14:00 – 15:00 **Jörg Schmiedmayer**
  'Solving' a Quantum Many Body Problem by Experiment

  15:00 – 15:30 *break*

  15:30 – 16:30 **Jakob Yngvason**
  Superfluidity and BEC in a model of interacting Bosons in a Random Potential

- **Wednesday, June 10, 2015**

  NOTE: All talks on Wednesday are held at IST Austria

  10:00 – 11:00 **Elliott Lieb**
  Indirect Coulomb Energy with Gradient Correction

  11:00 – 11:15 *coffee / tea break*

  11:15 – 12:15 **Simone Warzel**
  From adiabatic computing to the phase transition in the QREM

  12:15 – 14:00 *lunch break*

  14:00 – 15:00 **Giulio Biroli**
  Ergodicity, Level Statistics and Localization Transitions on the Bethe lattice and for Levy random matrices

  15:00 – 16:00 **Benjamin Schlein**
  Time-evolution of quantum systems in the BCS approximation

- **Thursday, June 11, 2015**

  09:30 – 10:30 **Sven Bachmann**
  Scattering theory for gapped quantum spin systems

  10:30 – 11:00 *coffee / tea break*

  11:00 – 12:00 **Benjamin Landon**
  Convergence of local statistics of Dyson Brownian motion

  12:00 – 14:00 *lunch break*

  14:00 – 15:00 **Yuriy Nemish**
  About some local properties of the products of independent square non-hermitian random matrices with independent entries

  15:00 – 15:30 *break*

  15:30 – 16:30 **Martin Gebert**
  On the asymptotics of eigenfunction-correlation determinants

- **Friday, June 12, 2015**

  09:30 – 10:30 **Margherita Disertori**
  Transfer matrix approach in the supersymmetric context

  10:30 – 11:00 *coffee / tea break*

  11:00 – 12:00 **Marco Tarzia**
  Level statistics, ergodicity, and localization transition of Lévy Matrices

  12:00 – 14:00 *lunch break*

  14:00 – 15:00 **Eman Hamza**
  Product Vacua and Boundary State Models in d-Dimensions

  15:00 – 15:30 *break*

  15:30 – 16:30 **Roland Bauerschmidt**
  Eigenvalues of random regular graphs

Except for Wednesday, all talks take place at the ESI, Boltzmann Lecture Hall!