

Programme on
“Quantum Many-body Systems, Random Matrices and Disorder”
June 1 - July 31, 2015

organized by

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

Workshop II, July 13 - 17, 2015

• **Monday, July 13, 2015**

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

09:30 – 10:30 **Abel Klein**

An eigensystem approach to Anderson localization

10:30 – 11:00 *coffee / tea break*

11:00 – 12:00 **Frederic Klopp**

Interacting one dimensional particles in a random background.

12:00 – 14:00 *lunch break*

14:00 – 15:00 **Janek Wehr**

Low lying eigenvalues of the one-dimensional Schrödinger operator with a Bernoulli random potential

15:00 – 15:30 *break*

15:30 – 16:30 **Sasha Sodin**

Invertibility in deformed Gaussian ensembles and some applications

17:00: **Reception** at the Palais Strudlhof

• **Tuesday, July 14, 2015**

09:30 – 10:30 **Jens Eisert**

Unifying various facets of many-body localization

10:30 – 11:00 *coffee / tea break*

11:00 – 12:00 **Michael Knap**

Dynamics of disordered many-body systems: from thermal transport to many-body localization

12:00 – 14:00 *lunch break*

14:00 – 15:00 **John Imbrie**

Iterated Schur complementation and the level-spacing problem

15:00 – 15:30 *break*

15:30 – 16:30 **Denis Basko**

Chaos vs Anderson localization in classical disordered nonlinear chains

- **Wednesday, July 15, 2015**

NOTE: All talks on Wednesday are held at IST Austria

10:00 – 11:00 **Michael Aizenman**

Resonant Delocalization in Quantum Dynamics under Disorder

11:00 – 11:15 *coffee / tea break*

11:15 – 12:15 **Yan Fyodorov**

Random matrix theory for resonances in chaotic wave scattering: A short overview

12:15 – 14:00 *lunch break*

14:00 – 15:00 **Markus Müller**

Many-body localization: A route to retaining quantum memory in interacting systems

15:00 – 16:00 **Wilhelm Zwerger**

Attractive Fermi gases at infinite coupling: a new paradigm in many-body physics

- **Thursday, July 16, 2015**

09:30 – 10:30 **Leonid Pastur**

Large Block Behavior of the Entanglement Entropy of Disordered Fermions

10:30 – 11:00 *coffee / tea break*

11:00 – 12:00 **Vojkan Jaksic**

Conductance and AC spectrum of 1D samples

12:00 – 14:00 *lunch break*

14:00 – 15:00 **Vieri Mastropietro**

Localization in an interacting quasi-periodic fermionic chain

15:00 – 15:30 *break*

15:30 – 16:30 **Tatyana Shcherbina**

Universality of the local regime for some types of random band matrices

- **Friday, July 17, 2015**

09:30 – 10:30 **Heinz Siedentop**

Accumulation Rate of Bound States of Dipoles in Graphene

10:30 – 11:00 *coffee / tea break*

11:00 – 12:00 **David Hasler**

Asymptotic expansions in quantum field theory

12:00 – 14:00 *lunch break*

14:00 – 15:00 **Robert König**

Disorder-assisted error correction in Majorana chains

15:00 – 15:30 *break*

15:30 – 16:30 **Valentin Zagrebnov**

Dynamical Semigroups for Unbounded Repeated Perturbation

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