

Conference Program

**“Mathematical Physics of Disordered Systems –
A Conference in Honor of Leonid Pastur”**

May 13 — May 17

at the FernUniversität in Hagen, Germany

Organizers: Werner Kirsch, FernUniversität in Hagen
 Boris Khoruzhenko, University of London
 Peter Müller, Ludwig-Maximilians-Universität München

*All talks (except Wednesday afternoon) will take place at the
FernUniversität Hagen, KSW-Seminargebäude Room 4/5, second floor*

Monday, May 13

09:20 Registration

09:40 Opening

Chairperson: Peter Müller

09:50 **Ilya Goldsheid**, London

Aspects of the asymptotic behaviour of Random Walks in Random Environments

10:35 **Frédéric Klopp**, Paris

Interacting quantum Fermions in a disordered background

11:20 Coffee break

11:45 **Yan Fyodorov**, London

Topology trivialization and large deviations for the minimum in the simplest random optimization

12:30 Lunch break

13:30 Library Tour

Chairperson: David Khmelnitski

14:00 **Victor Tchoulaevski**, Reims

Stochastic regularization of singular operator ensembles

14:45 **Oleksiy Khorunzhiy**, Versailles

On high moments of dilute Wigner matrices, Catalan trees and ternary trees

15:30 Coffee break

15:55 **Daniel Lenz**, Jena

Spectral properties of trees of finite cone type

16:40 **Hatem Najjar**, Monastir

Some results on the spectral theory of quantum waveguide

18:00 Public Lecture by **Simone Warzel** (TU München):

Helfen Quanten bei der Lösung komplexer Probleme?
(in German)

Tuesday, May 14

Chairperson: Peter Stollmann

- 09:20** **Peter Hislop**, Lexington
Wegner estimates and the IDS for random N-body Schrödinger operators
- 10:05** **Alex Figotin**, UC Irvine
Some Mathematical Problems in a Neoclassical Theory of Electric Charges
- 10:50** Coffee break
- 11:20** **Gian-Michele Graf**, ETH Zürich
Bulk-edge duality for topological insulators
- 12:05** **Hermann Schulz-Baldes**, Erlangen
The density of surface states as the total time delay
- 12:50** Lunch break

Chairperson: Wolfgang Spitzer

- 14:00** **Giuseppe de Nittis**, Erlangen
Topological piezo-currents in graphene
- 14:45** **Roland Speicher**, Saarbrücken
Calculation of asymptotic eigenvalue distribution for polynomials in several random matrices
- 15:30** Coffee break
- 16:00** **James A. Mingo**, Kingston
Asymptotic Freeness of Orthogonally and Unitarily Invariant Ensembles
- 16:45**

Wednesday, May 15

Special day in honor of Leonid Pastur

- 09:20** Welcome address by the Rector of the FernUniversität
Prof. Dr. Helmut Hoyer
- 09:30** **Michael Aizenman**, Princeton
Resonant delocalization over some infinite and finite graphs
- 10:15** **Francesco Guerra**, Rom
The pioneering work of Leonid Pastur and Masha Scherbina on spin glasses: an historical perspective
- 11:00** Coffee break
- 11:30** **Shinichi Kotani**, Osaka
Limit set of KdV flow
- 12:15** Lunch break

The afternoon session and the conference dinner will take place at the castle "Schloss Hohenlimburg"

- 14:00** Departure of bus to the castle
Chairperson: Boris Khoruzhenko
- 15:00** **Abel Klein**, UC Irvine
The ac-conductivity in the Anderson model
- 15:45** Coffee break
- 16:15** **Mikhail Sodin**, Tel Aviv
Random nodal portraits
- 17:00** Guided Tour through the castle
- 19:00** Reception
- 19:30** Dinner
- 23:00** Return by bus

Thursday, May 16

Chairperson: Alan Huckleberry

- 09:20** **Masha Shcherbina**, Kharkov
Entropy and the Shannon-McMillan-Breiman theorem for classical random matrix ensembles
- 10:05** **Stanislav Molchanov**, Charlotte
Localization for the non-percolating potentials on the graphs
- 10:50** Coffee break
- 11:20** **Bob Sims**, Arizona
Dynamical Localization in disordered quantum spin systems
- 12:05** **Nariyuki Minami**, Keio University
Definition and self-adjointness of the stochastic Airy operator
- 12:50** Lunch break

Chairperson: Dirk Hundertmark

- 14:00** **Martin Venker/Friedrich Götze**, Bielefeld
Local Universality of Repulsive Particle Systems and Random Matrices
- 14:45** **Wolfgang König**, Berlin
Eigenvalue order statistics and mass concentration in the parabolic Anderson model
- 15:30** Coffee break
- 16:00** **Stephane Ouvry**, Paris
Arithmetic area covered by m Brownian planar walkers
- 16:45**

Friday, May 17

Chairperson: Hajo Leschke

- 09:20** **Krishna Maddaly**, Chennai
Local statistics for the Anderson model with decaying randomness
- 10:05** **Ivan Veselic**, Chemnitz
*Alloy potentials on the lattice:
(absence of) monotonicity, regularity, and spectral averages*
- 10:50** Coffee break
- 11:20** **Günter Stolz**, Birmingham Alabama
Entanglement bounds in disordered quantum oscillator systems
- 12:05** **Jeff Schenker**, Michigan State
Diffusion of waves in fluctuating random media
- 12:50** Lunch break