

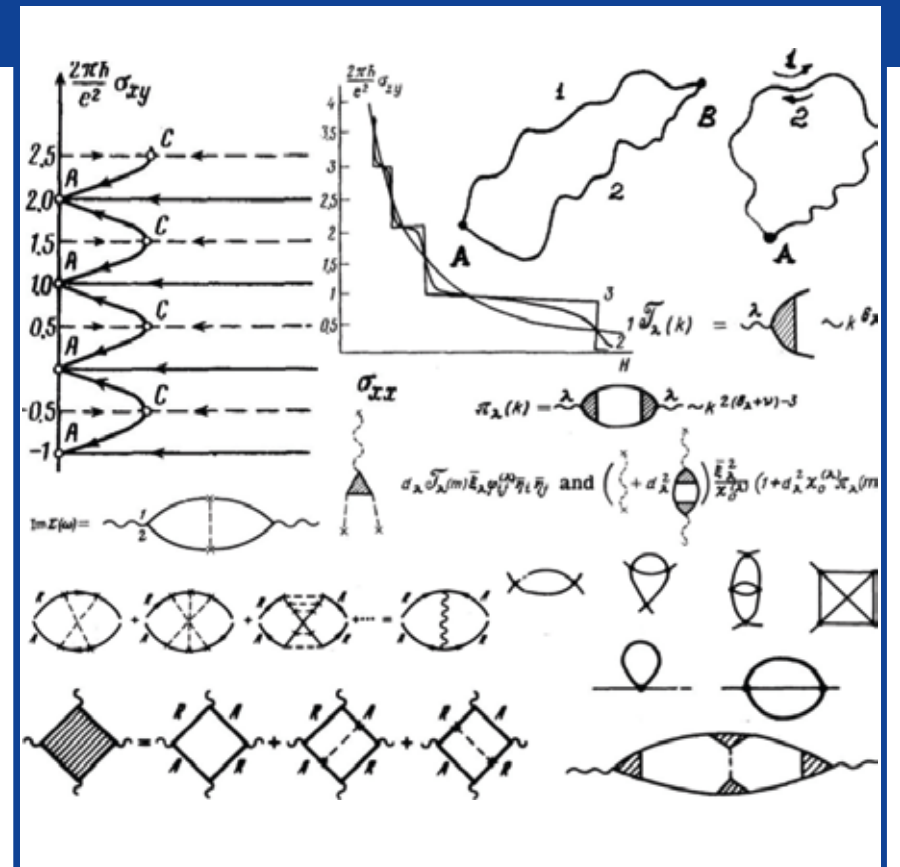


Disorder, Interactions and Coherence: Warps and Delights

MAX-PLANCK-GESELLSCHAFT

International Focus Workshop 13 - 15 July 2016

The focus workshop aims to discuss a broad range of phenomena arising due to the interplay of disorder, interactions and quantum coherence. The underlying physics and concepts have much in common, such as different problems concerning many-body localization, entanglement in cold atom systems, disorder and fluctuations in quantum transport, as well as quantum Hall effect. Also it is the opportunity to honor 50 years in science of David Khmel'nitskii (Cambridge University).



Topics include

- Many-body localization
- Statistics of wave functions
- Disorder versus coherence in fermionic systems
- Disorder versus the long range order in bosonic systems
- Disorder and decoherence in metal-insulator transition
- Disorder, dynamical decoherence, and noises
- Disorder and topology: IQHE and NIQHE
- Topological excitations, non-integer quantum numbers and anomalous statistics
- Extremal and non-Gaussian statistics in mesoscopic and nano-systems
- New topological quantum states
- Topological quantization
- Non-equilibrium dynamical phases
- Applications to quantum computing
- Applications to biological systems

Invited speakers:

Dmitry Abanin (CA)
 Alexandre Abanov (US)
 Denis Basko (FR)
 Igor Burmistrov (RU)
 Claudio Castellano (UK)
 John Chalker (UK)
 Michel Dyakonov (FR)
 Konstantin Efetov (DE)
 Alexander Finkelstein (US & IL)
 Peter Fulde (DE)
 Yuri Galperin (NO)
 Yuval Gefen (IL)
 Leonid Glazman (US)
 Lev Ioffe (FR & US)
 Alex Kamenev (US)
 Mikhail Katsnelson (NL)
 Vladimir Lebedev (RU)
 Peter Littlewood (US)
 Konstantin Matveev (US)

Karen Michaeli (IL)
 Gilles Montambaux (FR)
 Rahul Nandkishore (US)
 Vadim Oganesyan (US)
 William D. Oliver (US)
 Yury Ovchinnikov (RU)
 Valery Pokrovskii (US)
 Frank Pollmann (DE)
 Adrianus Pruisken (NL)
 Boris Shklovskii (US)
 Andrey Shytov (UK)
 Ben Simons (UK)
 Boris Spivak (US)

Scientific coordinators:

Serguei Brazovskii
 Orsay, France
 Natasha Kirova
 Orsay, France
 Leonid Levitov
 Cambridge, USA

Organisation:

Maria Pätzold
 MPIPKS Dresden

Please apply by 31 March 2016 for full consideration.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international focus workshop is 120 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses. Please note that childcare is available upon request.

For further information please contact:

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