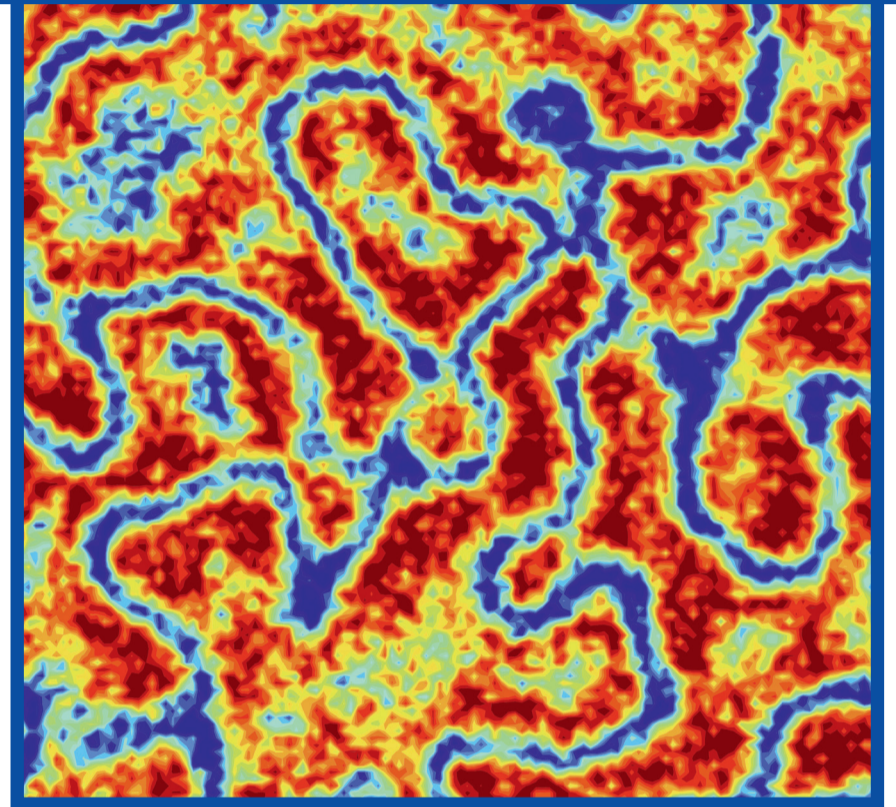


Nonlinear Physics at the Nanoscale: A Cross-Fertilization on Stochastic Methods

Tandem Workshop 12 – 16 May 2014

Coherent quantum dynamics is heavily influenced by interactions and fluctuations, e.g. in quantum optics, ultracold atomic gases, and polariton condensates. We will cross-fertilize the use of stochastic methods when describing open quantum systems, many-body quantum dynamics and driven quantum systems in the presence of temporal and spatial fluctuations in and out of equilibrium.



Topics include

- Stochastic field approaches to quantum many body physics
- Entanglement based methods for open quantum many body systems
- Stochastic open quantum systems
- Dynamics of noisy non-equilibrium quantum many body systems
- Ultra-long time propagation of quantum many body waves
- Nonlinear dynamics of dissipative quantum condensates

This meeting launches the program of Exploratory Tandem Workshops MPIPKS (Dresden) – NZIAS (Auckland). The second tandem partner meeting will take place in Auckland in 2015. For details see: <http://www.pks.mpg.de/~nzias>.

Keynote speakers

B. Altshuler (US)
H. Carmichael (NZ)
P. Drummond (AU)
M. Fleischhauer (DE)
P. Gaspard (BE)
V. Oganesyan (US)

Invited speakers

(* to be confirmed)

D. Alonso (ES)
N. Berloff (UK/RU)
B. Blakie (NZ)
M. Campisi (DE)
B. Clark* (US)
A. Daley (UK)
P. Deuar (PL)
M. Esposito (LU)
V. Falko (UK)
A. Feiguin (US)
Y. Galperin (NO)
M. Gershenson* (US)
M. Hartmann (UK)

L. Ioffe* (US/FR)
A. Kavokin (UK)
K. Kheruntsyan (AU)
C. Kollath (DE)
A. Läuchli (AT)
D. Pekker (US)
F. Petruccione (ZA)
M. Plenio (DE)
F. Pollmann (DE)
Y. Rubo (MX)
I. Siddiqi (US)
A. Sinatra (FR)
Y. Utsumi (JP)
H. Wiseman (AU)
E. Yuzbashyan (US)

Scientific coordinators:

Joachim Brand (NZ)
Sergej Flach (NZ)
Peter Schwerdtfeger (NZ)

Organisation:

Mandy Lochar, MPIPKS

Applications received before February 15, 2014 are considered preferentially.

Applications are welcome and should be made by using the application form on the conference web page (please see URL below). The number of attendees is limited. The registration fee for the international 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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