



FOR760: Scattering Systems with Complex Dynamics



**Center for
Quantum
Dynamics**

International Symposium on

**Dynamical control of quantum correlations:
From Experiment to Theory and back**

26 – 29 January 2011

We invite – particularly the members of the **Centre for Quantum Dynamics** and of the **Heidelberg Graduate School of Fundamental Physics** – to join our discussions and seminar talks on experimental and theoretical aspects of quantum control and transport, with emphasis on ultracold quantum gases.

Program

26 January

afternoon: private meetings, group discussions, and group visits

CQD Kolloquium at the Kirchhoff Institute for Physics, INF 227, seminar room 1.403:

17:00 **pretalk** (University of Heidelberg)
'tba'

17:30 **Andreas Buchleitner** (University of Freiburg)
'Transport, disorder, and entanglement'

19:30 Dinner in town

27 January

meeting room: Fakultätssaal, Albert-Ueberle-Strasse 3-5, 3rd floor

Chair: Remy Dubertrand

9:30 **Riccardo Mannella** (Università degli Studi di Pisa)
'tba'

10:30 **Italo Guarneri** (Università degli Studi dell'Insubria, Como)
'Exponential diffusion'

11:30 - 12:00 **Georgios Kordas** (ITP, Heidelberg)
'Many-body transport beyond mean-field'

12:30 - 14 Lunch break

Chair: Andreas Buchleitner

14:00 **Ennio Arimondo** (Università degli Studi di Pisa)
'Resonantly enhanced tunneling revisited'

15:00 **Hannah Venzl** (University of Freiburg)
'Spectral statistics and their impact on the dynamics of ultracold bosons in tilted optical lattices'

16:00 - 16:30 **Remy Dubertrand** (ITP, Heidelberg)
'Fidelity as a detector of complex dynamics'

16:30 - 18 Coffee break, group discussions and group visits

19:00 **Symposium dinner** (place: Backmulde, Schiffgasse 11, 69117 Heidelberg)

28 January

meeting room: Fakultätssaal, Albert-Ueberle-Strasse 3-5, 3rd floor

Chair: Riccardo Mannella

10:00 **Oliver Morsch** (Università degli Studi di Pisa, CNR-INFM)
'Coherent control of Rydberg excitations in optical lattices'

11:00 **Torsten Scholak** (University of Freiburg)
'Optimal molecular networks for excitonic energy transport'

12 - 14 Lunch break

Chair: Oliver Morsch

14:00 **Pierre Lugan** (University of Freiburg)
'Multiphoton processes and decay in helium driven by electromagnetic fields'

15:00 - 15:30 **Carlos Parra Murillo** (ITP, Heidelberg)
'Avoided crossings in a two band many-body Wannier-Stark system'

15:30 - 17 Coffee break and group discussions

Suggestion (Physikalisches Institut, Großer Hörsaal, Philosophenweg 12): [Physics Colloquium Heidelberg](#)

17:15 **Peter Zoller** (ITP, Innsbruck)
'Quantenoptik mit kalten Atomen und Molekülen'

19:30 Dinner in town

29 January

10 Meeting at Hotel for excursion

participants: Arimondo, Buchleitner, Dubertrand (?), Guarneri (?), Mannella

10 - 15 Excursion including lunch

further discussions and departure

Our guests will be available for discussions at the seminars and at the Institute for Theoretical Physics, Philosophenweg 19, during the period of the Symposium.

Hope to see you at our event!

Sandro Wimberger
Complex Dynamics in Quantum Systems
Institut für Theoretische Physik
Universität Heidelberg
Philosophenweg 19, D-69120 Heidelberg
Email: s.wimberger@thphys.uni-heidelberg.de
Phone: (+49-(0)6221) 54 - 9449 or 9431 (secretary)

