









Program

Sunday, 27. November 2011

19:00 - *Get together and welcome at IWH*

(Hauptstraße 242, 69117 Heidelberg, Telefon +49 6221- 54 36 90, Mobil: (+49) 172 2682610



-  **IWH - COHERENCE Meeting location**
IWH - COHERENCE, Meeting location (with guest rooms), Hauptstraße 242, Heidelberg
-  **Hotel Perkeo**
Hotel Perkeo, Hauptstraße 75, Heidelberg
-  **Hotel Schönberger Hof**
Hotel Schönberger Hof, Untere Neckarstraße 54, Heidelberg
-  **Haus Buhl**
guest rooms, Hauptstrasse 234, Heidelberg
-  **Funicular**
Funicular (to Molkenkur-Dinner)
-  **Molkenkur (Dinner)**
-  **Frankfurt am Main**
Frankfurt am Main, Airport
-  **Heidelberg - Railway station**
Heidelberg - Railway station

Monday, 28. November 2011

- 09:00 - 09:30 **Matthias Weidemüller**, Heidelberg
Introduction to COHERENCE
Shannon Whitlock, Heidelberg
Optical imaging of Rydberg atoms in dense atomic gases
- 09:30 - 10:00 **Tim Softley**, Oxford
Interaction of Rydberg atoms and molecules with surfaces
- 10:00 - 10:45 **Stefan Kuhr**, Strathclyde
- 10:45 - 11:15 - *Coffee break*
- 11:15 - 11:45 **Rosario González-Férez**, Granada
Universality in the short time dynamics of Rydberg aggregates
- 11:45 - 12:15 **Patrick Cheinet**, Paris
Observation of a resonant four-body interaction in cold cesium Rydberg atoms
- 12:15 - 12:30 *COHERENCE session: Organisation*
- 12:30 - 14:00 - *Lunch*
- 14:00 - 14:30 **Hossein Sadeghpour**, Harvard
Rydberg mediated interactions with polar molecules
- 14:30 - 15:00 **Oliver Morsch**, Pisa
Rydberg excitations in periodic matter wave arrays
- 15:00 - 15:30 **Georg Raithel**, Michigan
Direct spatial imaging of the Rydberg excitation blockade
- 15:30 - 16:00 - *Coffee break*
- 16:00 - 16:30 **Matt Jones**, Durham
Spatially resolved Rydberg spectroscopy using autoionization
David Szwer, Durham
Rydberg Blockade for Non-Classical Photon States
- 16:30 - 17:00 **Wilhelm Kaenders**, TOPTICA Graefelfing
Diode and Fiber Laser Development at TOPTICA Scientific Lasers on their route to Industrial Applications
- 17:00 - 17:30 *COHERENCE session: Events*
- 17:30 - 19:30 *Poster session*

Tuesday, 29. November 2011

- 09:00 - 09:30 **Stephen Hogan**, Zürich
Manipulating Rydberg atoms close to surfaces
- 09:30 - 10:00 **Thomas Pohl**, Dresden
Nonlinear Phenomena in Cold Rydberg Gases
- 10:00 - 10:45 **Ed Grant**, Vancouver BC
The evolution of electron energy and spatial distribution in a dissociating molecular ultracold plasma
- 10:45 - 11:15 - *Coffee break*
- 11:15 - 11:45 **Klaus Mølmer**, Aarhus
Coherent interaction between light and atomic ensembles
- 11:45 - 12:15 **Silvia Bergamini**, London
(contribution to be confirmed)
- 12:15 - 12:30 *COHERENCE session: Budget*
- 12:30 - 14:00 - *Lunch*
- 14:00 - 14:30 **Jonathan Balewski**, Stuttgart
Interferometric studies of Förster resonances
- 14:30 - 15:00 **Guido Pupillo**, Innsbruck
Non-equilibrium dynamics and cooling in mixtures of molecules and Rydberg atoms
- 15:00 - 15:30 **Gerhard Birkl**, Darmstadt
Versatile Architecture for the Coherent Manipulation of Atomic Quantum Systems
- 15:30 - 16:00 - *Coffee break*
- 16:00 - 16:30 **Robert Spreeuw**, Amsterdam
Rydberg atoms and atom chips
- 16:30 - 17:00 **Edgar Vredenbregt**, Eindhoven
Atom trap as charged-particle source
- 17:00 - 17:30 *COHERENCE session: Recruitment*
- 19:00 - Conference dinner (Molkenkur)
(meet at IWH at 18:30)

Wednesday, 30. November 2011

- 09:00 - 09:30 **Mark Saffman**, Wisconsin
Qubits in Rydberg blockaded ensembles
- 09:30 - 10:00 **Igor Lesanovsky**, Nottingham
Strongly correlated spin physics with Rydberg atoms
- 10:00 - 10:45 **Michael Fleischhauer**, Kaiserslautern
Slow-light in Rydberg gases
- 10:45 - 11:15 - *Coffee break*
- 11:15 - 11:45 **Peter Schmelcher** and **Markus Kurz**, Hamburg
Ultracold Rydberg atoms and molecules in laser and combined static fields
- 11:45 - 12:00 **Maria Allegrini**
Presentation of the next COHERENCE – Event to be held in Pisa
- 12:15 - 12:30 *COHERENCE session: General Issue*
- 12:30 - 14:00 - *Lunch*
- 14:30 - 16:00 *Laboratory Tour of the Physikalisches Institut Heidelberg*

End of Kick-Off Meeting

Extra-meeting talk:

"Cooperativity in atom light interactions"

Charles Adams (Department of Physics, Durham University)

Wednesday, 30. November 2011 at 17:00 / 17:30 Uhr

Pretalk: Xiao-Fan Xu (PI) "Active one-way quantum computation with a hybrid cluster state"
in Heidelberg, Kirchhoff-Institut (Room SR 1.403), Im Neuenheimer Feld 227, 69120 Heidelberg