

Quantum Coherence Effects

February 11 and 12, 2010

Ulm University, Albert-Einstein-Allee 11, 89081 Ulm, building/room O25/346

Thursday, February 11, 2010

- 11:30 **Registration in O25/507**
- 12:00 **Lunch in Mensa**
- 13:20 **W.P. Schleich**, Ulm University
Welcome
- 13:30 **M. Lukin**, Harvard University
From quantum eraser to solid-state quantum networks: exploring new frontiers of quantum optical science
- 14:00 **Ch. Keitel**, Max-Planck-Institute for Nuclear Physics, Heidelberg
Quantum optics at high fields
- 14:30 **W. Becker**, Max-Born-Institute, Berlin
Interference in laser-induced ionization processes
- 15:00 **M. Kleber**, Technical University, Munich
From Kepler orbits to Coulomb waves: New results for semiclassical propagation in a Coulomb field
- 15:30 **Coffee Break**
- 16:00 **M. Plenio**, Ulm University
Coherence and decoherence: Quantum effects in biology
- 16:30 **T. Pfau**, University of Stuttgart
Long-range interacting quantum gases
- 17:00 **E. Rasel**, University of Hannover
Matter waves in free fall
- 17:30 **T. Walther**, University of Darmstadt
Trapping neutral mercury: Status and prospects
- 18:00 **F. Narducci**, Naval Air Systems Command
Considerations in the development of a gradient magnetometer atom interferometer

Friday, February 12, 2010

- 8:30 **G. Leuchs**, MPI for the Science of Light and University of Erlangen-Nürnberg
The physical significance of the dielectric constant of vacuum
- 9:00 **S. Zubairy**, Texas A&M University
Correlated emission laser: From noise quenching to macroscopic entanglement
- 9:30 **T. Siebert**, Freie Universität Berlin
Faster and faster: How CARS was inspired to new performance
- 10:00 **S. Zhu**, Hong Kong Baptist University
Dynamic evolution and modification of Lamb shift
- 10:30 **Coffee Break**
- 11:00 **S. Stenholm**, Royal Institute of Technology, Stockholm
Quantum amplifiers don't look back
- 11:30 **E. Fry**, Texas A&M University
Do experimental violations of Bell inequalities require a non-local interpretation of quantum mechanics?
- 12:00 **H. Briegel**, University of Innsbruck
Quantum control and entanglement in the avian chemical compass
- 12:30 **N. Kroo**, Hungarian Academy of Sciences, Budapest
The new world of plasmonics
- 13:00 **Lunch in Mensa**

14:30 **Award Ceremony: Honorary Degree for Prof. Dr. Marlan O. Scully Building/room: N24/H13**

K.-J. Ebeling, President of Ulm University
Welcome

H.J. Newton, Dean of Science, Texas A&M
Greetings

W.P. Schleich, Ulm University
Laudation

A. Groß, Dean of Natural Sciences, Ulm University
Award Ceremony

H. Rauch, Technical University Vienna
Test of quantum curiosities by neutron experiments

M.O. Scully, Texas A&M University
Personal remarks

Reception in front of the lecture hall