

IMPRS-QD Excursion to the Odenwald

Program of Students' Talks

Friday, 14:00 - 17:30 (including a 30-min. coffee break at about 15:30)

Opening remarks by Christoph H. Keitel, Speaker of the IMPRS-QD

First session (Chair: Pálffy-Buß)

- 1) David von Lindenfels: First highly charged ions in the ARTEMIS trap
- 2) Thomas Ding: Towards 2d XUV spectroscopy
- 3) Vladislav Gavryusev: Imaging of few Rydberg atoms
- 4) Raphael Beinke: Many-body tunneling dynamics of Bose-Einstein condensates and vortex states in two spatial dimensions
- 5) Mathias Neidig: Ultracold fermions in a two-dimensional lattice
- 6) Jonas Gunst: Logic gates with x-rays processed by dynamically-controlled nuclear excitation
- 7) Alessandro Angioi: Nonlinear single Compton scattering of ultrashort laser pulses by a superposition of Volkov states
- 8) Pavlo Bilous: Towards a nuclear clock based on the Th-229 isomeric transition
- 9) Salvatore Castrignano: Collective phenomena in quantum optics

Second session (Chair: Tashenov)

- 1) Giovanni Cerchiari: La⁻ spectroscopy for laser cooling of a negative ion
- 2) Yonghao Mi: Ionization of atoms and molecules in a strong two-color field
- 3) Sergey Bragin: Strong-field QED effects in laser-proton collision
- 4) Chunhai Lyu: Inner shell x-ray lasing with highly charged ions
- 5) Xiangjin Kong: Stopping x-ray pulses in a thin-film cavity
- 6) Hendrik Bekker: Experimental investigation of Ir¹⁷⁺ as a sensitive detector for variation of constants
- 7) Andreas Weigel: ALPHATRAP g-factor experiment
- 8) Ioanna Arapoglou: ALPHATRAP: Traptower
- 9) Adrian Komanda: Nonadiabatic effects in polyenes

Saturday, 9:00 - 12:00 (including a 30-min. coffee break at about 10:15)

First session (Chair: Quint)

- 1) Johannes Windshuh: Separating proton hopping from dipolar interaction in nuclear spin exchange
- 2) Shikha Bhadoria: Collisionless shocks in laboratory plasmas
- 3) Elisabeth Brühl: Shaping of ultrashort laser pulses
- 4) Stephan Helmrich: Two-photon spectroscopy of potassium in an optical dipole trap
- 5) Nikolay Golubev: Controlling charge migration in molecules
- 6) Ghazal Jabbari: ICD in atoms and molecules
- 7) Jiamin Hou: A high-precision measurement of the isotope effect in g-factors of $^{40}\text{Ca}^{17+}$ and $^{48}\text{Ca}^{17+}$

Second session (Chair: Jochim)

- 1) Jiri Danek: Classical analytical approach for Coulomb focusing of tunnelled electrons in intense laser fields
- 2) Fabián Olivares: Phononic Lamb shift of a bound Polaron.
- 3) Stephan Häfner: Efimov physics in an ultracold Bose-Fermi mixture of Cs and Li
- 4) Nicolas Teeny: Tunnel ionization-time
- 5) Puneet Murthy: Superfluidity in a two-dimensional Fermi gas
- 6) Valentin Kasper: Quantum simulation of quantum electrodynamics in one dimension
- 7) Fabian Heiße: The proton mass experiment

Saturday, 13:30 - 14:30

Session (Chair: Harman)

- 1) Andrea Bergschneider: Assembling an anti-ferromagnet: The concept
- 2) Vincent Klinkhamer: Assembling an anti-ferromagnet: The experiment
- 3) Christian Meyer: Rotational state thermometry of OH⁻ at the Heidelberg Cryogenic Storage Ring (CSR)
- 4) Sebastian Wetzal: The Hubbard model on the square lattice at zero temperature
- 5) Vasili Stumpf: Interatomic electronic decay of microsolvated metal ions