

WORKSHOP 'PASSION FOR ELECTRONS': PROGRAM

TUESDAY SEPTEMBER 28: MORNING SESSIONS

09:00-09:15 OPENING

09:15-10:00 KEYNOTE PASSION FOR ELECTRONS

Prof. W-D Schneider (École Polytechnique Fédérale de Lausanne)

"Quantum oscillations, superconductivity, zero-bias anomalies, and Coulomb blockade in nanoscaled supported lead islands"

10:05-10:35 Prof. J. Kirschner (Max-Planck-Institut für Mikrostrukturphysik, Halle, Germany)

"Experiments on the exchange-correlation hole in solids"

10:35-11:05 Prof. F. Martin (Universidad Autónoma de Madrid, Spain)

"Electron Localization following Attosecond Molecular Photoionization of H₂"

11:05-11:25 Prof. D. Menzel (Fritz-Haber-Institut der MPG, Berlin, Germany)

"NO photochemistry on silver nanoparticles by nanosecond vs. femtosecond excitation"

COFFEE BREAK

11:50-12:20 Prof. S. Blügel (Forschungszentrum, Jülich, Germany)

"Electrons at surfaces: From Rashba effect to topologically protected spin textures"

12:20-12:50 Prof. J.P. Gauyacq (Université Paris-Sud, Orsay, France)

"Magnetic transitions induced by tunnelling electrons in individual adsorbates"

12:50-13:10 Dr. J. Fransson (Uppsala University, Sweden)

"Dynamical exchange interaction between localized spins in non-equilibrium"

13:10-13:30 Prof. H.Ch. Schneider (TU, Kaiserslautern, Germany)

"Ultrafast demagnetization dynamics in ferromagnets and Heusler alloys"

LUNCH BREAK

TUESDAY SEPTEMBER 28: AFTERNOON SESSIONS

15:00-15:30 Prof. R. Kienberger (Max-Planck-Institut für Quantenoptik, Garching Germany)

"Attosecond spectroscopy on solid surfaces"

15:30-15:50 Prof. A.K. Kazansky (Fock Institute of Physics, Sankt Petersburg, Russia)

"Some aspects of the theory of streaking experiments with sub-femtosecond pulses on solids"

15:50-16:10 Dr. Ch. Lemell (Vienna UT, Austria)

"Modelling XUV-NIR streaking experiments at metal surfaces"

17:00-21:00 THE LECTURES

WEDNESDAY SEPTEMBER 29: MORNING SESSIONS

09:00-09:45 KEYNOTE PASSION FOR PHOTONS

Prof. N. Halas (Rice University, Houston, USA)

"Plasmonics: nanoscale manipulation of light"

09:50-10:20 Prof. M. Rocca (Università di Genova, Italy)

"Acoustic Surface Plasmons, a novel collective excitation at metal surfaces, with promising applications"

10:20-10:50 Prof. T. Nagao (National Institute for Material Science, Tsukuba, Japan)

"Plasmon propagation and confinement in atom-scale chains and sheets"

COFFEE BREAK

11:30-12:15 KEYNOTE PASSION FOR SOFT MATTER

Prof. D. Richter (Forschungszentrum Jülich, Germany)

"Soft Matter and Live Science: Research with Neutrons"

12:20-12:50 Prof. U. Höfer (University of Marburg, Germany)

"Coherent dynamics of image-potential electrons"

12:50-13:20 Prof. A. Rubio (University of the Basque Country, San Sebastián, Spain)

"First principle modeling of the excited state properties of complex nanostructures and biomolecules: a TDDFT and Many-Body perturbation theory approach"

13:20-13:40 Dr. J. Stähler (Fritz-Haber-Institut der MPG, Germany)

"Ultrafast dynamics of coherent phonons during the insulator-metal transition of VO₂"

LUNCH BREAK

WEDNESDAY SEPTEMBER 29: AFTERNOON SESSIONS

15:00-16:30 POSTER SESSION

17:00-21:00 THE LECTURES

THURSDAY SEPTEMBER 30: MORNING SESSIONS

09:00-09:45 KEYNOTE PASSION FOR INTERFACES

Prof. F. Flores (UAM, Madrid, Spain)

"Organic and inorganic semiconductor interfaces across physics, chemistry and time"

09:50-10:20 Prof. H. Petek (University of Pittsburg, USA)

"Imaging the femtosecond time scale correlated electron-nuclear dynamics in surface photodesorption"

10:20-10:50 Prof. E.V. Chulkov (University of the Basque Country, San Sebastián, Spain)

"Decay mechanisms of single particle excitations in nanostructures surfaces"

10:50-11:10 Prof. A. Heidenreich (University of the Basque Country, San Sebastián, Spain)

"Laser pulse length dependence of electron and nuclear dynamics in Coulomb explosions of xenon clusters"

COFFEE BREAK

11:40-12:10 Prof. M. Aeschlimann (University of Kaiserslautern, Germany)

"Lifetime of optically excited electrons"

12:10-12:40 Prof. B. Gumhalter (Institute of Physics, Zagreb, Croatia)

"Ultrafast electron dynamics in pump-probe spectroscopies of surfaces: from transient excitonic to quasi-stationary polaronic states"

12:40-13:10 Prof. J.M. Pitarke (Nanogune, San Sebastián, Spain)

"The asymptotic behavior of the Kohn-Sham potential of Density-Functional Theory at metal surfaces"

13:10-13:30 Prof. V.U. Nazarov (RCAS, Academia Sinica, Taipei, Taiwan)

"Performance of the exchange-correlation kernel of time-dependent density-functional theory derived from LDA to to current-density functional theory"

LUNCH BREAK

THURSDAY SEPTEMBER 30: AFTERNOON SESSIONS

15:00-15:30 Prof. Ph. Hofmann (University of Aarhus, Denmark)

"The electronic structure of graphene: confinement-induced band gap opening and core electron delocalization"

15:30-15:50 Prof. A.A. Lucas (FUNDP, Nandrin, Belgium)

"Plasmon tsunami on C60 caused by electron transfer to a highly charged ion"

15:50-16:10 Dr. L. Chico (Instituto de Ciencia de Materiales CSIC, Madrid, Spain)

"Interface states in carbon nanotube junctions: Rolling up graphene"

16:10-16:30 Dr. J. Zhao (University of Pittsburgh, USA)

"The electronic structure graphane and graphane nanostructures from ab initio theory"

17:00-21:00 THE LECTURES