

International Workshop on Photoionization & Resonant Inelastic X-ray Scattering IWP-RIXS 2017

Aussois, France

26th - 31st of March 2017

Programme

Sunday, March 26th

17:00 - 19:30 Registration

19:30 - 21:30 Welcome reception

Monday, March 27th

08:30 - 08:45 Welcome

Session 1

FEL Non equilibrium matter

Chairperson: **Linda Young**

08:45 - 09:15 **Invited Talk**
Stimulated X-ray Raman scattering in molecular targets – A critical study of the building block of coherent nonlinear X-ray spectroscopy
Nina Rohringer - MPSD, Hamburg, Germany

09:15 - 09:45 **Invited Talk**
Non-equilibrium Processes within X-Ray FEL Generated Plasmas
Beata Ziaja-Motyka - CFEL DESY, Hamburg, Germany

09:45 - 10:15 **Invited Talk**
Femtosecond response of polyatomic molecules to intense soft and hard X-rays
Rebecca Boll - DESY, Hamburg, Germany

10:15 - 10:45 *Coffee break*

Session 2

Atto and Ultra-fast processes

Chairperson: **Nina Rohringer**

10:45 - 11:15 **Invited Talk**
Attosecond dynamics through Fano resonances
Fernando Martin - Universidad Autónoma de Madrid, Spain

11:15 - 11:45 **Invited Talk**
Observing atoms and molecules change their shape in short and strong laser fields
Thomas Pfeiffer - MPIK, Heidelberg, Germany

11:45 - 12:15 **Invited Talk**
Tracking in real-time attosecond inelastic scattering in dielectrics
Francesca Calegari - CNR-IFN, Milano, Italy

12:15 - 12:45 **Invited Talk**
Attosecond electron dynamics in molecules and liquids
Hans-Jacob Wörner - ETH, Zürich, Switzerland

13:00 - 14:30 *Lunch*

Session 3

RIXS 1

Chairperson: **Yoshihisa Harada**

14:30 - 15:00 **Invited Talk**
Mapping potential energy surfaces and dynamics around selected atoms with RIXS
Alexander Föhlisch - BESSY, Berlin, Germany

15:00 - 15:30 **Invited Talk**
Symmetry breaking in soft X-ray resonant inelastic scattering on molecules
Jan-Erik Rubensson - Uppsala University, Sweden

15:30 - 16:00 **Invited Talk**
Electron and nuclear dynamics in deeply core-excited molecules
Tatiana Marchenko - UPMC, Paris, France

16:00 - 16:20 Theory of RIXS of water
Faris Gel'mukhanov - KTH Stockholm, Sweden

16:20 - 16:40 Excited state proton transfer in aqueous 2-mercaptopyridine studied with RIXS
Jesper Norell - Stockholm University, Sweden

16:40 - 17:00 *Coffee break*

17:00 - 19:00 *Poster Session*

20:00 - *Dinner*

Tuesday, March 28th

Session 4

Chirality and Exotic polarization

Chairperson: **Kiyoshi Ueda**

08:30 - 09:00 **Invited Talk**
Photoelectron circular dichroism measured by multiphoton ionization
Thomas Baumert - Kassel University, Germany

09:00 - 09:30 **Invited Talk**
Toward femtochemistry with circularly polarized pulses
Valérie Blanchet - CELIA, Bordeaux, France

09:30 - 09:50 Bi-elliptical high-harmonic spectroscopy as a probe of matter: From atomic orbitals to chiral molecules
Denitsa Baykusheva - ETH Zurich, Switzerland

09:50 - 10:10 Complete polarization state of high order harmonics generated from bicircular counter-rotating ω and 2ω fields and probed by molecular frame photoemission
Danielle Dowek - ISMO, Orsay, France

10:10 - 10:30 *Coffee break*

10:30 - 16:30 *Ski or Snowshoes*

16:30 - 17:00 *Coffee break*

Session 5

Multielectron processes

Chairperson: **Steve Manson**

17:00 - 17:30

Invited Talk

Photoionization as probe of dynamical processes

Piero Decleva - *Università di Trieste, Italy*

17:30 - 18:00

Invited Talk

K^2V : A new spectroscopic tool

Stéphane Carniato - *LCPMR, CNRS & UPMC, Paris, France*

18:00 - 18:30

Invited Talk

Multiple inner shell vacancies and collective Auger decay processes

Raimund Feifel, *Gothenburg University, Sweden*

18:30 - 18:50

Hybrid basis close-coupling interface to quantum chemistry packages for the treatment of ionization problems

Markus Klinker - *Universidad Autónoma de Madrid, Spain*

18:50 - 19:10

Multi electron spectroscopy: Auger decays of the rubidium 3d hole

Jérôme Palaudoux – *LCPMR, CNRS & UPMC, Paris, France*

20:00

Savoyard Dinner

Wednesday, March 29th

Session 6

ICD et clusters

Chairperson: **Arnaldo Naves de Brito**

08:30 - 09:00

Invited Talk

Multicoincidence studies of molecular photoionization – Entanglement and wavefunction imaging

Reinhard Dörner - *Frankfurt University, Germany*

09:00 - 09:30

Invited Talk

ICD and ICD cascades in multiply excited clusters

Alexander I. Kuleff - *Heidelberg University, Germany*

09:30 - 09:50

On the computations of decay widths of Fano resonances

Tsveta Miteva – *LCPMR, CNRS & UPMC, Paris, France*

09:50 - 10:10

Size-resolved photoemission anisotropies of neutral water clusters and predictions for liquid water

Sebastian Hartweg - *ETH Zurich, Switzerland*

10:10 - 10:40

Coffee break

Session 7

Liquid jets

Chairperson: **Paul Morin**

- 10:40 - 11:10 **Invited Talk**
Local and non-local electronic and nuclear relaxation processes in aqueous solutions
Bernd Winter - *Fritz-Haber-Institut, Berlin, Germany*
- 11:10 - 11:40 **Invited Talk**
A superficial look at water
Olle Björneholm - *Uppsala University, Sweden*
- 11:40 - 12:10 **Invited Talk**
From distillation to biomolecules in aqueous surface: Revelations from electron spectroscopy
Arnaldo Naves de Brito - *UNICAMP, Campinas, Brazil*
- 12:10 - 12:30 High energy photoemission as a probe of ultrafast charge transfer in KCl aqueous solution
Denis Céolin – *Synchrotron SOLEIL, Gif-sur-Yvette, France*
- 12:30 - 12:50 Optical luminescence from liquid water after excitation with Synchrotron Radiation
Christian Ozga - *Kassel University, Germany*
- 13:00 - 14:30 *Lunch*

Session 8

Chemistry and Nanosystems

Chairperson: **Fernando Martin**

- 14:30 - 15:00 **Invited Talk**
Capturing the fastest charge and spin dynamics in nanosystems using high harmonic beams
Margaret Murnane - *JILA, Boulder, USA*
- 15:00 - 15:30 **Invited Talk**
Ultrafast non equilibrium dynamics induced by attopulses
Françoise Remacle - *Liège University, Belgium*
- 15:30 - 16:00 **Invited Talk**
Double imaging coincidences techniques for product determination in gas phase complex mixtures
Gustavo Garcia - *Synchrotron SOLEIL, Gif-sur-Yvette, France*
- 16:0 - 16:20 Isolated nanoparticles' surfaces and interfaces probed by soft X-ray photoelectron spectroscopy
Mina Patanen - *University of Oulu, Finland*
- 16:20 - 16:40 Selective dissociation upon core-electronic excitation in unsaturated hydrocarbons
Shabnam Oghbaie - *Lund University, Sweden*
- 16:40 - 17:00 *Coffee break*
- 17:00 - 19:00 *Poster Session*
- 20:00 - *Dinner*

Thursday, March 30th

Session 9

Atto and Ultra-fast processes 2

Chairperson: **Matjaž Žitnik**

- 08:30 - 09:00 **Invited Talk**
Photoionization dynamics: Transition and scattering delays
Richard Taïeb - UPMC, Paris, France
- 09:00 - 09:20 **Invited Talk**
What can we learn from electronic-state lifetime interference in atoms and molecules?
Ralph Püttner - Berlin University, Germany
- 09:20 - 09:40 Photodamage and photostability of halogenated uracils under XUV HH radiation
Raluca Cireasa – ISMO, Orsay, France
- 09:40 - 10:00 Attosecond interferometry with self-amplified spontaneous emission of a free-electron laser
Tim Laarmann – DESY, Hamburg, Germany
- 10:00 - 10:20 Role of electron-nuclear coupled dynamics on charge migration induced by attosecond pulses in glycine
Manuel Lara-Astiaso - Universidad Autónoma de Madrid, Spain
- 10:20 - 10:40 *Coffee break*
- 10:40 - 16:30 Ski or visit of “Haute-Maurienne” village
- 16:30 - 17:00 *Coffee break*

Session 10

RIXS 2

Chairperson: **Alexander Föhlisch**

- 17:00 - 17:30 **Invited Talk**
X-ray Raman spectroscopy
Simo Huotari - Helsinki University, Finland
- 17:30 - 18:00 **Invited Talk**
Interference effects in high-resolution X-ray spectra
Matjaž Žitnik - Jožef Stefan Institute, Ljubljana, Slovenia
- 18:00 - 18:30 **Invited Talk**
Soft X-ray experiments of samples under atmospheric pressure: X-ray emission studies of liquids, solutions, gases and interfaces at SPring-8 BL17SU
Takashi Tokushima - RIKEN, Saitama, Japan
- 18:30 - 18:50 Probing the trans-and Cis-isomerization of azobenzene with RIXS
Zhong Yin - Max Planck Institute, Göttingen, Germany
- 18:50 - 19:10 *Hydrogen-bonding network of water confined in a polyelectrolyte brush*
Kosuke Yamazoe - University of Tokyo, Japan
- 20:00 - *Conference Dinner & Best poster award (sponsored by Elsevier)*

Friday, March 31st

Session 11

Ions

Chairperson: **Maria Novella Piancastelli**

- 08:30 - 09:00 **Invited Talk**
Multi-electron electron effects in inner-shell ionization of ions
Stefan Schippers - *Giessen University, Germany*
- 09:00 - 09:30 **Invited Talk**
One- and two-color photoionization of atomic ions formed within an intense free-electron laser pulse
Michael Meyer - *XFEL, Hamburg, Germany*
- 09:30 - 10:00 **Invited Talk**
Photoionization of ions stored in traps : From small carbonated systems to large biopolymers
Alexandre Giuliani - *INRA, Nantes / Synchrotron SOLEIL, Gif-sur-Yvette, France*
- 10:00 - 10:20 Dissociation dynamics of energy-selected methyl halide ions (CH_3X^+ , X=F, Cl, Br) investigated by Synchrotron photoelectron photoion coincidences
Xiaofeng Tang - *Chinese Academy of Sciences, Hefei, China*
- 10:20 - 10:50 *Coffee break*

Session 12

FEL multiphoton

Chairperson: **John Bozek**

- 10:50 - 11:20 **Invited Talk**
Coherent control experiments with the fully coherent free electron laser FERMI
Kevin Prince - *Elettra, Trieste, Italy*
- 11:20 - 11:50 **Invited Talk**
Hard X-ray photonics with intense X-ray laser pulses
Hitoki Yoneda - *University of Electro-Communications, Tokyo, Japan*
- 11:50 - 12:20 **Invited Talk**
X-ray pump -- X-ray probe spectroscopy
Antonio Picón - *ANL, Argonne, USA*
- 12:20 - 12:40 Molecular femtodynamics at FERMI
Maria Novella Piancastelli - *LCPMR, CNRS & UPMC, Paris, France / Uppsala University, Sweden*
- 12:40 - 13:00 Control of H_2 dissociative ionization in the non-linear regime using EUV femtosecond pulses @ FERMI
Fabian Holzmeier – *ISMO, Orsay / Synchrotron SOLEIL, Gif-sur-Yvette, France*
- 13:00 - *Lunch and Departure*