



École Polytechnique, Palaiseau – France
&
Synchrotron SOLEIL, Saint-Aubin - France

Programme

Thursday, January 19

ÉCOLE POLYTECHNIQUE – ARAGO Auditorium

- 09:00 - 10:00 Registration & coffee
- 10:00 - 10:10 Welcome / Introduction
Antonio Tejeda - *ORGUES Chairperson*
- 10:10 - 10:20 The word of SOLEIL General Director
Jean Daillant
- 10:20 – 11:05 Towards Diffraction Limited Photon Sources on Storage Rings
Amor Nadji - *Synchrotron SOLEIL, Gif-sur-Yvette, France*
- 11:05 - 11:50 MAX IV: Status and how we got there
Jesper Andersen - *MAX-IV, Lund, Sweden*
- 11:50 – 12:00 **Marc Simon** - *AFURS*
- 12:00 - 12:20 Peer Review Committee 1 Chairman – **Roland Thissen** (5mn)
Peer Review Committee 2 Chairwoman – **Francine Solal** (5mn)
Questions 10mn
- 12:20 - 14:00 *Lunch*
- 14:00 – 14:45 Bragg ptychography: When crystallography meets microscopy
Virginie Chamard - *Institut Fresnel, Marseille, France*

Transfer to SOLEIL (15h00)

Technical Workshops : ongoing and future developments on beamlines dedicated to:

- 15:30 - 17:00
- Biology *BLOCH Auditorium*
 - Material Science *SOLEIL Auditorium*
 - Reactivity measurements *Welcome Building Auditorium*
- 17:00 – 17:30 *Coffee break*



17:30 - 19:30 Posters session / Commercial exhibition / ORGUES and AFURS Booth

18:30 - 19:30 Visit of 3 Beamlines (GALAXIES / TEMPO / SIRIUS)

19:30 - 21:00 *Buffet* / Award of Roger Fourme prize (best student poster)

Friday, January 20

ECOLE POLYTECHNIQUE

9:00 – 10:30 Parallel sessions (see the detailed programme here after)

10:30 - 11:00 *Coffee break*

11:00 - 13:15 Parallel sessions (see the detailed programme here after)

13:15 - 14:30 *Lunch*

Transfer to SOLEIL (14h45)

15:00 – 18:00 **2 tutorials (reserved to registered participants)**

- ***MX Software tutorial*** *Amphitheater, Main Building, SOLEIL*
- ***Chemometric analysis of Quick-XAS data Practical*** *T5 Building, SOLEIL*



Parallel Sessions Schedule

Biology – Health

Chairpersons: Yann GOHON and Isabelle BROUTIN

ECOLE POLYTECHNIQUE –Pierre FAURRE Auditorium

- 09:00 - 09:30
(25'+5') Architecture and assembly of an anti-bacterial weapon: The type VI secretion system
Eric Durand - invited speaker- LISM – IMM, Marseille , France
- 09:30 - 09:50
(15'+5') Microspectrometric insights on the uptake of antibiotics at the single bacterial cell level
Estelle Dumont - UMR MD1, Marseille, France
- 09:50 - 10:10
(15'+5') Tunneling analysis of the efflux pump component OprN using xenon
Gilles Phan - LCRB, UMR 8015 Paris, France
- 10:10 - 10:30
(15'+5') Structural and functional insight in the helicobacter pylori blood group antigen binding adhesin BabA
Kristof Moonens - VIB Structural Biology Research Center, Brussels, Belgium
- 10:30 – 11:00
Coffee break
- 11:00 - 11:30
(25'+5') Synchrotron light contribution to renal pathology
Emmanuel Estève - UMR U1155, Hôpital Tenon, Paris, France
- 11:30 - 11:50
(15'+5') Selection and characterization of artificial proteins targeting tubulin
Valerie Campanacci - I2BC, Gif-sur-Yvette, France
- 11:50 - 12:10
(15'+5') Human tRNA-Dihydrouridine synthase 2: Molecular basis for tRNA recognition by an unusual double stranded RNA-binding domain
Charles Bou Nader LCPB , Collège de France Paris, France
- 12:10 - 12:30
(15'+5') HSP90 regulation by RPAP3-PIH1D1 cochaperones during macromolecular complex assembly
Julien Henri - LBMCE, UMR 8226 IBPC Paris, France
- 12:30 - 12:50
(15'+5') Allosteric regulation of small GTPases by membranes as a pharmacological target
Agata Nawrotek- LBPA, ENS Paris-Saclay, France
- 12:50 - 13:10
(15'+5') Short ragweed pollen allergy in the light of SOLEIL beamlines
Rachel Groeme - Stallergenes Greer, Antony, France



Parallel Sessions Schedule

Chemistry & Physico-Chemistry, In Situ Reactivity, Soft Matter

Chairpersons:

ECOLE POLYTECHNIQUE –MONGE Auditorium

- 09:00 - 09:30
(25'+5')
- A Synchrotron look into the lifecycle of Pt-In catalysts
Hilde Poelman - *Laboratory for Chemical Technology, Ghent, Belgium*
- 09:30 - 09:50
(15'+5')
- A combined in situ XAS/MS/Raman study of Ni-Cu catalysts derived from hydrotalcite-like precursors
Aline. R. Passos - *Synchrotron SOLEIL, Gif-sur-Yvette, France*
- 09:50 - 10:10
(15'+5')
- In situ 1s2p resonant inelastic X-ray scattering (RIXS) applied to cobalt based catalysts
Charlotte Desjacques - *Unité de Catalyse et de Chimie du Solide, Lille, France*
- 10:10 - 10:30
(15'+5')
- Negative thermal expansion in noble metal-based nanoparticles under different gaseous atmosphere
Claudia Zlotea - *Institut de Chimie et des Matériaux de Paris-Est, Thiais, France*
- 10:30 – 11:00
- Coffee break*
- 11:00 - 11:30
(25'+5')
- Competing coexisting phases in 2D water
Jean-Marc Zanolli - *CEA Saclay, Gif-sur-Yvette, France*
- 11:30 - 11:50
(15'+5')
- Infrared spectroscopy study of water confinement in imogolites with internal Si-OH and Si-CH₃ groups
Yuan-Yuan Liao - *CEA Saclay, Gif-sur-Yvette, France*
- 11:50 - 12:10
(15'+5')
- Oxide nanoparticles in water: amorphous to crystal conversion of luminescent yttrium vanadate
Alexis Freitas - *Université Paris-Saclay, Gif-sur-Yvette, France*
- 12:10 - 12:30
(15'+5')
- Organometallic aryl-first row transition metal complexes as key intermediates in C-H functionalization
Vlad Martin-Diaconescu - *Universitat de Girona, Catalonia, Spain*
- 12:30 - 12:50
(15'+5')
- Speciation of ruthenium in TBP/TPH organic phases (structure and reactivity)
Claire Lefebvre - *CEA Marcoule, Bagnols-sur-Cèze, France*



Parallel Sessions Schedule

Cultural heritage, archaeology, environment, geosciences

Chairpersons: Emmanuel Guillon and Noemí Carmona

ECOLE POLYTECHNIQUE – CURIE Auditorium

- 10:30 – 11:00 *Coffee break*
- 11:00 - 11:30
(25'+5') Formation and reactivity of ZnS nanoparticles precipitating in organic wastes
Clément Lévard - CEREGE-UMR7330 - Aix-en-Provence, France
- 11:30 - 11:50
(15'+5') Highlighting the large variability of as speciation in Wetlands: A new insight in as dynamic control
Delphine Vantelon - Synchrotron SOLEIL, Gif-sur-Yvette, France
- 11:50 - 12:10
(15'+5') Investigating Ca speciation and distribution inside cyanobacterial cells forming intracellular carbonates
Karim Benzerara - IMPMC, CNRS, Paris, France
- 12:10 - 12:30
(15'+5') VUV photodynamics of free “tholins” nanoparticles investigated by imaging Angle-Resolved Photoemission
Sarah Tigrine - LATMOS, Université Versailles, Guyancourt, France
- 12:30 - 12:50
(15'+5') 5 years of X-ray imaging of flat fossils at the Diffabs beamline: New sources of data for paleontologists
Pierre Gueriau - Synchrotron SOLEIL et IPANEMA, CNRS, Gif-sur-Yvette, France
- 12:50 - 13:10
(15'+5') Metallurgy of the earliest lost-wax cast
Mathieu Thoury - IPANEMA. CNRS/MCC - Gif sur Yvette (France)



Parallel Sessions Schedule

Diluted Matter

Chairpersons: Vincent BOUDON ad Francis PENENT

ECOLE POLYTECHNIQUE – CARNOT Auditorium

- 09:00 - 09:30
(25'+5')
- Quantum tunnelling of particles within molecules: Synchrotron far-IR spectroscopy of malonaldehyde
Dennis Tokaryk - *University of New Brunswick, Fredericton, New Brunswick, Canada*
- 09:30 - 09:50
(15'+5')
- The far-IR spectrum of formic acid cyclic dimer : A model system for vibrational dynamics
Sabath Bteich - *PhLAM, Lille, France*
- 09:50 - 10:10
(15'+5')
- Photo-ionization and photo-dissociation of PAH cations
Junfeng Zhen - *IRAP, Toulouse, France*
- 10:10 - 10:30
(15'+5')
- A new method for the determination of metal-ligand bonding energy using VUV Synchrotron Radiation
Niloufar Shafizadeh - *ISMO, Orsay, France*
- 10:30 – 11:00
- Coffee break*
- 11:00 - 11:30
(25'+5')
- Many-electron emission in understanding atoms and molecules: Theory and experiment
Kari Jänkälä - *Oulu University, Finland*
- 11:30 - 11:50
(15'+5')
- Photoionization of the fullerene cation
Suzie Douix - *Synchrotron SOLEIL, Saint-Aubin, France*
- 11:50 - 12:10
(15'+5')
- VUV spectroscopy of free radicals on the DESIRS beamline: Absorption of OH and photoionization of CH and C₂H
Bérenger Gans - *ISMO, Orsay, France*
- 12:10 - 12:30
(15'+5')
- Core-Valence double photoionization $4d^{-1}5p^{-1}$ in xenon studied with multielectron spectroscopy
Mehdi. A. Khalal - *LCPMR, Paris, France*
- 12:30 - 12:50
(15'+5')
- State-selected ion-molecule reactions with CERISES: A very efficient TPEPICO ion source adapted to metastable species produced in a beam
Christian Alcaraz - *LCP et Synchrotron SOLEIL, Orsay, France*
- 12:50 - 13:10
(15'+5')
- Infrared spectroscopy of methoxyphenols involved as atmospheric secondary organic aerosol precursors
Arnaud Cuisset - *LPCA, Dunkerque, France*



Parallel Sessions Schedule

Electronic & Magnetic Property of Matter, Surfaces and Interfaces

Chairpersons: Marie d'ANGELO and Antonio TEJEDA

ECOLE POLYTECHNIQUE – BECQUEREL Auditorium

- 09:00 - 09:30
(25'+5') Spin to charge conversion at room temperature using the α -Sn topological insulator
Nicolas Reyren - UMR CNRS/Thales, Palaiseau, France
- 09:30 - 09:50
(15'+5') Pump-probe diffraction experiment for studying displacive transitions
Isabel González Vallejo - LPS and LOA, Orsay and Palaiseau, France
- 09:50 - 10:10
(15'+5') Ultrafast electronic, spin and lattice separation in LaCoO_3
Manuel Izquierdo - European XFEL, Hamburg, Germany
- 10:10 - 10:30
(15'+5') Mott insulator-metal transition in Sr_2IrO_4
Alex Louat - LPS, Orsay, France
- 10:30 – 11:00 *Coffee break*
- 11:00 - 11:30
(25'+5') Interlayer coupling through a dimensionality-induced magnetic state
Michel Viret - CEA, France
- 11:30 - 11:50
(15'+5') Strong resonances of quasi 1D structures at the Bi/InAs(100) interface
Christine Richter - LPMS, Cergy Pontoise, France
- 11:50 - 12:10
(15'+5') Calculation of XMCD at K-edge under pressure from first principles, application to iron hydride
Nadejda Bouldi - IMPMC et SOLEIL, Paris et Gif sur Yvette, France
- 12:10 - 12:30
(15'+5') Superconductivity, pseudogap, and stripe correlations in high- T_c cuprates
Zailan Zhang - IMPMC, Paris, France
- 12:30 - 12:50
(15'+5') C_{60} thin films on Co(0001) : A structural study to understand magnetic properties
Cynthia Fourmental - SOLEIL et MPQ, Gif sur Yvette et Paris, France
- 12:50 - 13:10
(15'+5') Investigation of organic/metal interface by XPS and STM
YongFeng Tong - SOLEIL and ISMO, Gif sur Yvette and Orsay, France



Parallel Sessions Schedule

Matter and material properties: Structure, Organisation, Characterisation, Elaboration

Chairpersons: F. Datchi and K. Provost

ECOLE POLYTECHNIQUE –ARAGO Auditorium

- 09:00 - 09:30
(25'+5')
- Contribution of Synchrotron Radiation studies to the understanding of the magneto-electric coupling in BaTiO₃ layered artificial multiferroic systems
Antoine Barbier - IRAMIS, CEA, Saclay, France
- 09:30 - 09:50
(15'+5')
- IR imaging of the Paris meteorite with an FPA detector for micro-tomography
Zelia Dionnet - Institut d'Astrophysique Spatiale, Saclay, France
- 09:50 - 10:10
(15'+5')
- Tomographie-X ultra-rapide à haute pression et température
Eglantine Boulard - Synchrotron SOLEIL, Saint-Aubin, France
- 10:10 - 10:30
(15'+5')
- The anomalous behavior of silicate glasses and liquids on densification: A combined microtomography and X-ray diffraction study at high pressure
Alisha Clark - IMPMC, Paris, France
- 10:30 – 11:00
- Coffee break
- 11:00 - 11:20
(15'+5')
- Influence of structural changes on the magnetic properties of Y_{1-x}RxFe₂(H,D)_{4,2} compounds
V. Paul-Boncourt - ICMPE, Thiais, France
- 11:20 - 11:40
(15'+5')
- Coupling powder diffraction, electron microscopy, solid-state NMR and GIPAW calculations: structure and dynamics of inorganic fluorides
Charlotte Martineau-Corcós - ILV, Versailles, France
- 11:40 - 12:00
(15'+5')
- Relaxation mechanisms in a nanocrystalline gold thin film on a compliant substrate
Pierre Godard - P' Institut, Poitiers, France
- 12:00 - 12:20
(15'+5')
- Time-resolved X-ray diffraction in density-wave systems
Sylvain Ravy - LPS, Orsay, France
- 12:20 - 12:40
(15'+5')
- Structure and growth mechanism of single layer and multi-layer silicene
Alberto Curcella - Institut des Nanosciences de Paris, France
- 12:40 - 13:00
(15'+5')
- Influence of the tetragonal structure on the electronic bands of CH₃NH₃PbI₃ hybrid organic-inorganic perovskites
Min I. Lee - LPS, Orsay, France