PROGRAM

Monday, August 8, 2022

Arrival

17:00 – 18:00 Registration

Tuesday, August 9, 2022

8.30 – 9.00	**Registration**
9.00 – 9.15	**Opening**
9.15 – 12.10	**Section I** Chair: S. Brazovskii
9.15 – 9.35	*P. Monceau, Institut Néel, CNRS, France*
9.35 – 10.45	*P. Littlewood, University of Chicago, USA* Electronic and structural order in oxides
10.45 – 11.15	**Coffee**
11.15 – 11.45	*H. Itoh, Tohoku University, Sendai, Japan* Short- and long-range charge correlations and their ultrafast photoinduced dynamics in organic electronic ferroelectrics
11.45 – 12.10	*A. Edelman, University of Chicago, USA* Superconductivity in strontium titanate
12.30 – 14.30	**Lunch**
14.30 – 16.10	**Section II** Chair: T. Mertelj
14.30 – 15.10	*S. Iwai, Tohoku University, Sendai, Japan* Ultrafast breaking of spatial/time reversal symmetry in strongly correlated systems
15.10 – 15.40	*U. Bovensiepen, University of Duisburg-Essen, Germany* Dynamics of propagating and localized electronic excitations analyzed by femtosecond photoelectron spectroscopy
15.40 – 16.10	*L. Degiorgi, ETH Zurich, Switzerland* Optical signature of anomalous Hall effect in a correlated magnetic Weyl semimetal
16.10 – 16.40	**Coffee**
16.40 – 18.40	Posters I
19:00	**Welcome reception**

Wednesday, August 10, 2022

9.00 – 11.55	**Section III** Chair: S. Iwai
9.00 – 10.10	*D. Mihailovic, Jozef Stefan Institute, Ljubljana, Slovenia* Electronic topological defect dynamics in metastable states - from forced to quantum
10.10 – 10.40	**Coffee**
10.40 – 11.05	*I. Vaskivskiy, Jozef Stefan Institute, Ljubljana, Slovenia* Real-time tracking of the Wigner crystal through a photoinduced phase transition
11.05 – 11.30	*Y. Gerasimenko, Jozef Stefan Institute, Ljubljana, Slovenia* Ultrafast jamming transition in a charge-ordered system
11.30 – 11.55	*P. Karpov, Max Planck Institute of Physics of Complex Systems, Dresden, Germany* Modeling of patterns in electronic crystals
12.30 – 14.30	**Lunch**
14.30 – 17.35	**Section IV** Chair: L. Degiorgi
14.30 – 15.10	*Y. Iwasa, The University of Tokyo, Japan* Density driven BCS-BEC crossover in 2D superconductors
15.10 – 15.40	*A. Gabovich, Institute of Physics, National Academy of Sciences of Ukraine, Ukraine* Image forces and interaction between electric charges or dipoles in three-layer structures
15.40 – 16.10	*P. Hofmann, Aarhus University, Denmark* *In-operando* electronic structure of quantum material devices
16.10 – 16.40	**Coffee**
16.40 – 17.10	*C. Sanders, UK Central Laser Facility, UK* Time- and angle-resolved photoemission techniques for understanding correlated electron states
17.10 - 17.35	*T. Ivek, Institute of Physics, Zagreb, Croatia* Control of polar order via magnetic field in vector-chiral β-$TeVO_4$

Thursday, August 11, 2022

9.00 – 12.10	**Section V** Chair: P. Littlewood
9.00 – 9:40	*T. Mehlstaubler, Leibniz Universität Hannover* Non-equilirium dynamics and nanofriction in ion Coulomb crystals.
9:40 – 10:10	*J. Hallen, University Cambridge, UK* Anomalous diffusion of magnetic monopoles in spin ice
10.10 – 10.40	**Coffee**
10.40 – 11.20	*S. Tanda, Hokkaido University, Sapporo, Japan.* Quantum density waves
11.20 – 11.45	*K. Nakatsugawa, Hokkaido University, Sapporo, Japan.* Time crystals and time operators from charge density waves
11.45 – 12.10	*N. Kirova, LPS, University Paris-Saclay, France* Half-integer complexes of vortices and dislocations in spin density waves
12.30 – 14.30	**Lunch**
14.30 – 17.40	**Section VI** Chair: U. Bovensiepen
14.30 – 15:00	*A. Rosso, LPTMS, CNRS & University Paris-Saclay, France* Bath-induced localization in 1D XXZ chain
15:00 – 15.25	*H. Nobukane, Hokkaido University, Sapporo, Japan* High-T_c superconductivity in 2D ruthenates: relation to charge and spin density wave
15.25 – 15.55	*S. Mukhin, NUST MISIS, Moscow, Russia* Euclidean Q-balls of fluctuating SDW/CDW density waves as the pairing 'glue' in the pseudogap and superconducting phases of high-*Tc* cuprates
15.55 – 16.20	**Coffee**
16.20 – 16.45	*M. Kartsovnik, Walther-Meissner-Institute, Garching, Germany* Metallic ground state near the Mott transition in organic conductors probed by magnetic quantum oscillations
16.45 – 17.10	*Y. Soh, Paul Scherrer Institute, Villigen, Switzerland* Coupling between the magnetic and charge degrees of freedom in a Weyl ferromagnet
17.10 – 17.40	*M. Rozenberg, LPS, CNRS & University Paris-Saclay, France* Solid state neuroscience
18.30	**Public lecture (in French)** *G. Aeppli, ETH Zurich, Switzerland* Mapping artificial and natural intelligence

Friday, August 12, 2022

9.00 – 12.05	**Section VII** Chair: Sh. Sanders
9.00 – 10.10	*J. Tranquada, Brookhaven National Laboratory, Upton, USA* Making sense of stripes, pseudogaps, and superconductivity in cuprates
10.10 – 10.40	**Coffee**
10.40 – 11.10	*M. Senn, University of Warwick, United Kingdom* Striping of orbital-order with charge-disorder in optimally doped manganites
11.10 – 11.40	*G.-Y. Cho, Institute for Basic Science (IBS), Republic of Korea* Superconductivity and non-Fermi liquids in domain wall networks of 2D charge density wave systems
11.40 – 12.05	*M. Leroux, LNCMI, Toulouse, France* CDW and superconductivity: T_c "domes" by proton irradiation induced disorder
12.30 – 14.30	**Lunch**
14.30 – 16.00	**Section VIII** Chair: T. Mehlstaubler
14.30 – 15.00	*T. Mertelj, Jozef Stefan Institute, Ljubljana, Slovenia* Phase transition bottleneck during ultrafast insulator-metal transition in 3D orbitally-driven Peierls insulator $CuIr_2S_4$
15.00 – 15.30	*A. Luican-Mayer*, University of Ottawa, Canada Quantum 2D materials and devices at the atomic scale
15.30 – 16.00	*V. Dobrosaljevic*, Florida State University, Tallahassee, USA Moiré-Wigner-Mott freezing in TMD heterobilayers
16.00 – 16.30	**Coffee**
16.30	**Departure to the Cargese port for the boat trip**
17.30	**Boat trip**

Saturday, August 13, 2022

9.00 – 12.15	**Section IX** Chair: D. Popovic
9.00 – 10.10	*D. Le Bolloc'h, LPS, CNRS & University Paris-Saclay, France* Sliding charge density waves from coherent and time resolved diffraction
10.10 – 10.40	**Coffee**
10.40 – 11.10	*A. Sinchenko,* Kotel'nikov Institute, Moscow, Russia CDW collective motion in 2D systems
11.10 – 11.35	*V. Jacques, LPS, CNRS & University Paris-Saclay, France* Spin and charge density wave coupling in chromium studied through the spin-flip transition: statics and ultrafast dynamics
11.35 – 12.00	*P. Monceau, Institut Néel, CNRS, France* The search for density wave sliding in chromium
12.00 – 12.15	**Closing 1st week**
12.30 – 14.30	**Lunch**

Sunday, August 14, 2022

Free time

Social activity

Monday, August 15, 2022

8.30 – 9.00	**Registration**
9.00 – 12.10	**Section X** Chair : V. Dobrosaljevic
9.00 – 10.10	*T. Giamarchi, University of Geneva, Switzerland* Wigner crystals
10.10 – 10.40	**Coffee**
10.40 – 11.10	*J. Van Wezel, University of Amsterdam, The Netherlands* Multipole charge density waves causing orbital order
11.10 – 11.40	*P. Werner, University of Fribourg, Switzerland* Nonthermal electronic orders in photo-doped Mott systems
11.40 – 12.10	*S. Brazovskii, LPS, University Paris-Saclay, France* Revision of the TDGL approach to evolution of inhomogeneous states of charge density waves
12.30 – 14.30	**Lunch**
14.30 – 15.55	**Section XI** Chair: E. Blackburn
14.30 – 15.00	*C. Monney, University of Fribourg, Switzerland* Transient enhancement of the ferroelectricity in the Rashba semiconductor α-GeTe
15.00 – 15.25	*R. Ramazashvili, LPT, CNRS & University of Toulouse, France* Skyrmion-electron bound states in a Néel antiferromagnet
15.25 – 15.55	*M. Rontani, CNR-Nano, Italy* Pressurized MoS_2 and monolayer WTe_2 as ideal excitonic insulators
15.55 – 16.20	**Coffee**
16.20 – 18.20	**Posters II**

Tuesday, August 16, 2022

9.00 – 12.10	**Section XII** Chair: A. Luican-Mayer
9.00 – 10.10	*C. Proust, LNCMI, Toulouse, France* The remarkable underlying ground states of cuprates
10.10 – 10.40	**Coffee**
10.40 – 11.10	*E. Blackburn, Lund University, Sweden* The normal state response of YBCO
11.10 – 11.40	*D. Popovic, Florida State University, Tallahassee, USA* Signatures of a pair density wave at high magnetic fields in stripe-ordered cuprates
11.40 – 12.10	*V. Balédent, LPS, CNRS & University Paris-Saclay, France* Pressure phase diagram of unidimensional iron based superconductors $BaFe_2Se_3$
12.30 – 14.30	**Lunch**
14.30 –15.55	**Section XIII** Chair: Ph. Hofmann
14.30 – 15.00	*V. Pokrovskii,* Kotel'nikov Institute, Moscow, Russia Features of CDWs in NbS_3-II revealed by Shapiro steps
15.00 – 15.25	*I. Gorlova,* Kotel'nikov Institute, Moscow, Russia Photoconductivity as a probe of semiconducting and collective states in the layered quasi one-dimensional compound TiS_3
15.25 – 15.55	*S. Zaitsev-Zotov,* Kotel'nikov Institute, Moscow, Russia Low-temperature magnetoresistance in o-TaS_3 and $(TaSe_4)_2I$ in nonlinear conduction regime
15.55 – 16.25	**Coffee**
16:25 – 18:00	Discussions

Wednesday, August 17, 2022

9.00 – 12.10	**Section XIV** Chair: L. Perfetti
9.00 – 10.10	*K. Kanoda, University of Tokyo, Japan* Topological excitations in neutral–ionic transition systems
10.10 – 10.40	**Coffee**
10.40 – 11.10	*A. Buzdin, LOMA, CNRS & University of Bordeaux, France* Towards the light-operated superconducting devices: circularly polarized radiation manipulates the current-carrying states in superconducting rings
11.10 – 11.40	*E. Demler, ETH Zurich, Switzerland* Optical responses of photoexcited materials: from parametric amplification to photoinduced superconductivity
11.40 – 12.05	*L. Radzihovsky, University of Colorado, Boulder, USA* Quantum smectic fracton order
12.30 – 14.30	**Lunch**
14.30 – 15.30	**Section XV** Chair: S. Fratini
14.30 – 15.00	*S. Lin, Los Alamos National Laboratory, USA* Correlated Chern insulator in two-dimensional materials
15.00 – 15.30	*V. Yakovenko, University of Maryland, USA* Optical control of topological memory based on orbital magnetization
15.30 – 16.00	**Coffee**
16.30	**Bus excursion to Piana clifs**

Thursday, August 18, 2022

9.00 – 12.10	**Section XVI** Chair E. Blachburn
9.00 – 10.10	*K. Rossnagel, Kiel University, Germany* Ultrafast unordering of electronic order
10.10 – 10.40	**Coffee**
10.40 – 11.10	*L. Perfetti, LSI, Ecole Polytechnique, France* Ultrafast dimerization melting in the Peierls-Mott insulator 1T-TaS_2
11.10 – 11.40	*K. Yonemitsu, Chuo University, Tokyo, Japan* Oscillating charge order and spin polarization in photoexcited Mott insulators
11.40 – 12.10	*R. Bertoni, University of Rennes, France* Exploring the phase diagram of molecular conductors during photo-induced non-equilibrium dynamics
12.30 – 14.30	**Lunch**
14.30 – 15.55	**Section XVII** Chair : R. Bertoni
14.30 – 15.00	*S.-K. Mo, Lawrence Berkeley National Laboratory, USA* Charge density waves in atomically thin transition metal dichalcogenides
15:00 – 15.30	*C. Renner, University of Geneva, Switerland* Insight into the CDW electronic structure from high-resolution topographic scanning tunneling microscopy
15.30 – 15.55	*A. Bosak, European Synchrotron Radiation Facility, France* Electron-phonon interaction as seen in diffuse and inelastic scattering
15.55 – 16.20	**Coffee**
19.30	**Conference Dinner**

Friday, August 19, 2022

9.00 – 12.15	**Section XVIII** Chair: V. Yakovenko
9.00 – 10.10	*K. Behnia, LPEM, CNRS & Sorbonne University, France* Thermal transport and quasi-particle hydrodynamics
10.10 – 10.40	**Coffee**
10.40 – 11.10	*S. Fratini, Institut Néel, CNRS, France* Bad metal behavior from slow collective excitations
11.10 – 11.35	*A. Pustogow, TU Wien, Austria* Thirty-year anniversary of κ-(BEDT-TTF)$_2$Cu$_2$(CN)$_3$: reconciling the spin gap in a spin-liquid candidate
11.35 – 12. 00	*Y. Zhao, Deutsches Elektronen-Synchrotron, Hamburg, Germany* Mechanism of divergence resistance in $Rb_2Mo_6Se_6$ with pressure
12.00 – 12:15	Closing
12.30 – 14.00	**Lunch**

Saturday, August 20, 2022

Departure

POSTER SESSIONS

Poster session I
Tuesday, August 9

Poster number	Name	Title
PI-1	Y. Chernolevska	Superconductivity in epitaxial mbe-grown 1T-TaS_2 thin films
PI-2	V. Zimmermann	Inelastic photon scattering from spin-orbit excitons in a strongly correlated *4d*-metal
PI-3	D. Dominko	Thin films of blue bronze with micron size grains
PI-4	D. Ghoneim	*Sliding charge density wave systems under applied current probed by X-ray free electron laser*
PI-5	G. Jecl	Transient and persistent responses of stripe order in $IrTe_2$ to ultrafast optical pulses
PI-6	V. Kisicek	Linear magnetoelectric effect in multidomain antiferromagnet Cu_3TeO_6
P-7	T.Lacmann	Pressure-temperature phase diagram of $BaNi_2As_2$
PI-8	R. Mathew Roy	Charge dynamics of heavy fermions near its quantum critical point
PI-9	A. Minelli	Charge density wave in KCP: a new look to an old compound
PI-10	K. Nakatsugawa	Origin of stripe CDW structures in monolayer MX_2: multivalley free energy landscape and conformality

PI-11	P. Rodière	Charge density wave and superconductivity: the case of $Lu_5Ir_4Si_{10}$
PI-12	M. Senn	Intrinsic phase-coexistence and its effect on octahedral tilt magnitude in hole-doped lanthanum cuprates
PI-13	F. Spathelf	From magnetic order to valence-change crossover in $EuPd_2(Si_{1-X}Ge_X)_2$ using helium gas pressure
PI-14	R. Venturini	Ultra-efficient resistance switching between charge ordered phases in 1T-TaS_2 with a single picosecond electrical pulse
PII-15	A. Sinchenko	Collective motion of a charge density wave driven by Hall electric field
PII-16	A. Sinchenko	Current-time evolution of pinning of a charge density wave in a quasi-two-dimensional $TbTe_3$ compound

Poster session II
Monday, August 15

Poster number	Name	Title
PII-1	E. Blackburn	Forbidden Bragg reflections in multi-k magnetic structures
PII-2	J. Henke	Dimensionally dependent ‘beyond nesting’ charge order in VSe_2
PII-3	K. Kazarian	Probing charge and spin density wave dynamics in chromium due to a magnetic field pulse
PII-4	G. Mirarchi	Dissipation-driven strange metal behavior
PII-5	V. Pokrovskii	CDWs under static and dynamic deformation of the crystals
PII-6	I. Pushkarna	Large area exfoliation of monolayer transition metal dichalcogenides for scanning probe microscopy
PII-7	Y. Vaskivskyi	Charge dynamics in the amorphous state of 1T-TaS_2
PII-8	G. Venditti	The CDW – SC competition as a source of filamentary superconductivity: a monte carlo study
PII-9	I. Zimmermann	Imaging of phase coexistence in Weyl semimetal $Co_3Sn_2S_2$
PII-10	S. Zaitsev-Zotov	Pinning of the charge density waves by correlated impurities in *o*-TaS_3

PII-11	S. Zaitsev-Zotov	Transition to one-dimensional pinning of charge density waves at low temperatures in bulk crystals of o-TaS_3
PII-12	S. Zaitsev-Zotov	Strain-induced metal-dielectric transition in quasi-one-dimensional metal $TaSe_3$
PII-13	N. Davier	Skyrmion-electron bound states in a Neel antiferromagnet
PII-14	A. Sinchenko	Magnetic quantum oscillations in Hall effect
PII-15	A. Sinchenko	Time relaxation of a non-equilibrium charge density wave in quasi-two-dimensional compounds