

Session Program

4-8 Sept 2023



**Joint Annual Meeting of the Swiss and
Austrian Physical Society 2023**

Condensed Matter Physics (KOND)

Tuesday 5 September

14:00

Condensed Matter Physics (KOND): I: (Thermal) Transport in 2D systems

Session | Location: Aula 033

14:00–14:30

【101】 Modern theory of thermal transport in solids

Speaker

Michele Simoncelli

14:30–14:45

【102】 Thermodynamic transport fingerprints in Twisted monolayer-bilayer graphene

Speaker

Mr Jin Jiang

14:45–15:00

【103】 Electronic Poiseuille Flow in Hexagonal Boron Nitride Encapsulated Graphene FETs

Speaker

Tathagata Paul

15:00–15:15

【104】 Dipole charge density ordering in bilayer semiconductors

Speaker

Joel Hutchinson

15:15–15:30

【105】 Probing the electronic structure of chemically-induced van der Waals heterostructures in V_xTaS_2

Speaker

Wojciech Pudelko

15:30–15:45

【106】 Understanding pairing mechanism in magic angle twisted trilayer graphene

Speaker

Mr Zekang Zhou

15:45–16:00

【107】 Origin and nature of defect states coupled to a van der Waals superconductor

Speaker

Paritosh Karnatak

16:00–16:15

【108】 Fabry-Perot interferometry in bi-layer graphene

Speaker

Mario Di Luca

16:30

16:15–16:30

【109】 In-situ buried interface passivation enables efficient and stable inverted perovskite solar modules**Speaker**

Virginia Carnevali

17:00

Condensed Matter Physics (KOND): II: Cuprates**Session** | **Location:** Aula 033

17:00–17:15

【111】 Uniaxial Control of Quantum Matter. Application to Cuprates**Speaker**

Gediminas Simutis

17:15–17:30

【112】 A strong-coupling mechanism for the pseudogap from spin fluctuations**Speaker**

Friedrich Krien

17:30–17:45

【113】 Investigating the periodic electronic modulations in $\text{Bi}_2\text{Sr}_2\text{Ca}_1\text{Cu}_2\text{O}_{8+\delta}$ by Scanning Tunneling Microscopy**Speaker**

Mr Tejas Parasram Singar

17:45–18:00

【114】 High-Tc cuprates - story of two electronic subsystems**Speaker**

Neven Barisic

18:00–18:15

【115】 Murunskite: A Bridge Between Cuprates and Pnictides**Speaker**

Trpimir Ivsic

18:15–18:30

【117】 Cuprates in Magnetic Field**Speaker**

Benjamin Klebel-Knobloch

18:30–18:45

【118】 Ionic effects in cuprates: from Fermi arcs to superconductivity**Speaker**

Denis Sunko

19:00

Wednesday 6 September

14:30

Condensed Matter Physics (KOND): III: Devices and Applications

Session | Location: Aula 033

14:30–15:00

【121】 High performance bifacial Cu(In,Ga)Se₂ solar cells with silver promoted low-temperature process

Speaker

Dr Shih-Chi Yang

15:00–15:15

【123】 Thermal circuit elements with Telescopic nanowires

Speaker

Yashpreet Kaur

15:15–15:30

【124】 Chemical and structural characterization of tannin-furanic foams using X-Ray micro-CT, FTIR imaging and UV Resonant Raman scattering

Speaker

Dr Maurizio Musso

15:30–15:45

【125】 Understand the photoinduced phase transition of the monoclinic VO₂ with the nonequilibrium DMFT

Speaker

Jiyu Chen

15:45–16:00

【126】 3D Magnonic Conduits by Direct Write Nanofabrication

Speaker

Sebastian Lamb-Camarena

16:30

17:00

Condensed Matter Physics (KOND): IV: Varia

Session | Location: Aula 033

17:00–17:15

【131】 Non-thermal superconductivity in photo-doped multi-orbital Hubbard systems

Speaker

Sujay Ray

17:15–17:30

【132】 Pressure dependence of unconventional superconductivity in rare-earth nickel oxides

Speaker

Simone Di Cataldo

17:30–17:45

【133】 First-principles modelling of the metal-insulator transition in vanadium dioxide using a bond-centered orbital basis

Speaker
Peter Mlkvik

17:45–18:00 **[134] Mapping out phase diagrams with generative classifiers**

Speaker
Julian Arnold

18:00–18:15

[135] Probing ferroelectricity in Zr/Nb-substituted barium titanate relaxors by PFM

Speaker
Mr Philipp Münzer

18:15–18:30

[136] Spin-polarized electron-hole pair excitations in $\text{Co}_3\text{Sn}_2\text{S}_2$ studied by magnetic circular dichroism resonant inelastic X-ray scattering

Speaker
Tianlun Yu

18:30–18:45

[137] Tensor network investigation of the finite temperature behaviour of the J_1 - J_2 - J_3 Kagome Ising Antiferromagnet

Speaker
Afonso Dos Santos Rufino

18:45–19:00

[138] Spin-orbital excitations encoding the magnetic phase transition in the van der Waals antiferromagnet FePS_3

Speaker
Yuan Wei

19:00–19:15

[139] Quantum transport theory in disordered interacting systems: A dynamical mean-field approach

Speaker
Jiawei Yan

19:30

Thursday 7 September

14:00

Condensed Matter Physics (KOND): V: Superconductivity

Session | Location: Aula 033

14:00–14:15

[141] Driven-dissipative engineering: A generalized fitness criterion for the superconducting transition temperature

Speaker

Aline Ramires

14:15–14:30

[142] Vortex Counting and Velocimetry for Slitted Superconducting Thin Strips

Speaker

Barbora Budinská

14:30–14:45

[143] Particle-hole symmetry in the $5/2$ Quantized Hall State at small magnetic field

Speaker

Loic Herviou

14:45–15:00

[144] Coupled chain construction for a fractional spin quantum Hall effect

Speaker

Pierre Fromholz

15:00–15:15

[145] Characterizing fractional quantum Hall states using isometric tensor networks

Speaker

Dr Bartholomew Andrews

15:15–15:30

[147] Topological interlayer superconductivity mediated by magnons

Speaker

Dr Even Thingstad

15:30–15:45

[148] Tunable unconventional kagome superconductivity in charge ordered RbV_3Sb_5 and KV_3Sb_5

Speaker

Zurab Guguchia

15:45–16:00

[146] Magnetic Impurity Effect in the Kagome Superconductor LaRu_3Si_2

Speaker

Zurab Guguchia

16:00–16:15

[149] Two-dimensional Shiba lattices as a platform for crystalline topological superconductivity**Speaker**

Titus Mangham-Neupert

16:15–16:30

[150] Mechanisms for π phase shifts in Little-Parks experiments on single crystals**Speaker**

Mark Fischer

16:30

17:00

Condensed Matter Physics (KOND): VI: Methods**Session** | **Location:** Aula 033

17:00–17:15

[151] Entanglement and thermo-kinetic uncertainty relations in coherent mesoscopic transport**Speaker**

Kacper Prech

17:15–17:30

[152] Weak-signal extraction enabled by deep-neural-network denoising of diffraction data**Speaker**

Jens Oppliger

17:30–17:45

[153] A Versatile Ultrasonic Setup for Quantum Matter Research**Speaker**

Mr Xuan Dang Dang

17:45–18:00

[154] Infrared ellipsometry study of the charge dynamics in K3p-terphenyl**Speaker**

Qi He

18:00–18:15

[155] Electronic properties of single layer molybdenum disulphide-on-gold heterostructure as a function of twist angle**Speaker**

Ishita Pushkarna

18:15–18:30

[156] Field-induced bound-state condensation and spin-nematic phase in $\text{SrCu}_2(\text{BO}_3)_2$ revealed by neutron scattering up to 25.9 T**Speaker**

Mithilesh Nayak

18:30–18:45

[157] 3D ptychography reconstruction**Speaker**

Ding Peng

19:00

Friday 8 September

12:00

Condensed Matter Physics (KOND): VII: Diffraction and Spectroscopy

Session | Location: Aula 033

12:00–12:15

【161】 Raman spectroscopy as an ideal tool for probing phonon-carrier interactions in low dimensional materials

Speaker

Mirjana Dimitrievska

12:15–12:30

【162】 Three-dimensional microstructural investigation of Silicon Carbide composite materials using synchrotron radiation

Speaker

Dr Fareeha Hameed

12:30–12:45

【163】 Shape Transformation of Nanocrystals investigated by Model Free X-Ray Scattering Analyses

Speaker

Dr Rainer Lechner

12:45–13:00

【164】 Phonon engineering in GaAs-GaP Superlattice Nanowires

Speaker

Aswathi Kanjampurath Sivan

13:00–13:15

【166】 Squaraine molecular crystals: Femtosecond dynamics and Davydov splitting

Speaker

Robert Schwarzl

13:15–13:30

【167】 Non-adiabatic Lifshitz transition in High Tc superconductor Bi2212

Speaker

Dr Siham Benhabib

13:30–13:45

【168】 Phase transition driven by ultrashort laser pulses in the charge-density-wave material K_{0.3}MoO₃

Speaker

Rafael Winkler

13:45–14:00

【169】 Band structure measurements on the topological magnet PrGeAl

Speaker

Ola Kenji Forslund

14:00-14:15

【170】 Interplay between phonon and charge density wave in Superconducting $\mathrm{La}_{1.675}\mathrm{Eu}_{0.2}\mathrm{Sr}_{0.125}\mathrm{CuO}_4$

Speaker

Xunyang Hong

14:30