

## **Session Program**

**4-8 Sept 2023**



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

### ***Poster Session***

## Tuesday 5 September

19:00

### Poster Session: Applied Physics and Plasma Physics

Poster Session | Location: Hall 1st floor

#### 【974】 A Connection between Probability, Physics and Neural Networks

**Speaker**

Sascha Ranftl

#### 【973】 Towards exascale in Plasma Physics: A massively parallel performance portable C++ Particle-in-Cell framework

**Speaker**

Sonali Mayani

20:30

19:00

### Poster Session: Atomic Physics and Quantum Optics

Poster Session | Location: Hall 1st floor

#### 【438】 Levitated optomechanics in ultra-high vacuum

**Speaker**

Florian Goschin

#### 【439】 The Scalar Magnetometer on board ESA's JUICE Mission and its Potential as a Vector Magnetometer

**Speaker**

Christoph Amtmann

#### 【437】 Charge and pair density waves induced by light in a strongly interacting Fermi gas

**Speaker**

Tabea Nelly Clara Buehler

#### 【436】 Investigation of the dipole moment of 6,11-dihydroxy-5,12-naphthacenedione using molecular diffraction

**Speaker**

Richard Ferstl

#### 【435】 Towards OH-ion reaction studies at astrochemically relevant conditions

**Speaker**

Pietro Vahramian

#### 【434】 Towards quantum control of polyatomic molecular ions

**Speaker**

Mikhail Popov

#### 【433】 Precision spectroscopy and coherent manipulation of single trapped nitrogen molecules

**Speaker**

Mikolaj Franciszek Roguski

#### 【432】 Coupling a mechanical Oscillator to single trapped Ions

20:30

19:00

**Speaker**

Mr Moritz Weegen

**[431] Laser cooling and shuttling of trapped ions in strongly inhomogeneous magnetic fields****Speaker**

Christian Mangeng

**Poster Session: KOND****Poster Session** | **Location:** Hall 1st floor**[187] Critical line of the triangular Ising antiferromagnet in a field from a C3-symmetric corner transfer matrix algorithm****Speaker**

Samuel Louis Nyckees

**[186] Emergent U(1) symmetry in non-particle-conserving 1D models****Speaker**

Zakaria Jouini

**[185]  $H_{c2}$  as a function of the order parameter in unconventional superconductors****Speaker**

Bernhard Lüscher

**[184] Neutron scattering on a new organo-metallic quantum magnet****Speaker**

Oksana Shliakhtun

**[183] Thermoelectric properties of individual silicon nanotubes****Speaker**

Jose Manuel Sojo Gordillo

**[188] Convergent beam electron diffraction of adsorbates on graphene****Speaker**

Sara Mustafi

**[182] Magnetostriction and heat capacity measurements of quantum spin ice materials at ultra-low temperatures****Speaker**

Ilaria Villa

**[189] Finite temperature investigation of the ferroJ1-J2 model****Speaker**

Olivier Gauthé

**[181] RIXS study of Cu-O-Mn superexchange coupling at YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub>/manganite interfaces****Speaker**

Subhrangsu Sarkar

20:30

19:00

**Poster Session: Neutron Science****Poster Session** | **Location:** Hall 1st floor**【736】 Microstructural Characterization Through Grain Orientation Mapping with Laue Three-Dimensional Neutron Diffraction Tomography****Speaker**

Stavros Samothrakitis

**【735】 Targeted use of residual stress in electrical steel to increase energy efficiency****Speaker**

Tobias Neuwirth

**【734】 Competition of Superconductivity and Spin-Density Wave Fluctuations around the Quantum Critical Point of  $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$** **Speaker**

Brigitte Decrausaz

**【733】 COMSOL Simulations of the Active Magnetic Shielding of the n2EDM Experiment****Speaker**

Sergey Ermakov

**【732】 CREScent: High-precision Electron Spectroscopy using Cyclotron Radiation Emissions****Speaker**

Alberto José Saavedra García

**【731】 BYO Beamline Experiment with FRAPPY****Speaker**

Marek Bartkowiak

20:30

19:00

**Poster Session: New prospects in ARPES for quantum materials****Poster Session** | **Location:** Hall 1st floor**【533】 Doping and temperature dependence evolution of the electronic properties of electron-doped  $\text{Sr}_2\text{IrO}_4$  seen by ARPES****Speaker**

Yann Alexanian

**【531】 Momentum-space imaging and chemical gating of the novel polarization induced two-dimensional electron and hole gases on AlN single crystals****Speaker**

Enrico Della Valle

20:30

19:00

**Poster Session: Quantum Computing****Poster Session** | **Location:** Hall 1st floor**【850】 Ultra-low noise RF comb using a 1 GHz passively modelocked laser****Speaker**

Florian Emaury

**【843】 Enhancing Coherence in Ge/Si Core/Shell Hole Spin Qubits**

20:30	<div><b>Speaker</b> Artemii Efimov</div> <div><b>[842] Operational Sweet Spot of Hole Spin Qubit</b></div> <div><b>Speaker</b> Taras Patlatiuk</div>
	<div><b>[845] Trainability barriers and opportunities in quantum generative modeling</b></div> <div><b>Speaker</b> Sacha Lerch</div>
	<div><b>[841] Coupling a mechanical oscillator to the quantum devices</b></div> <div><b>Speaker</b> Marcin Kisiel</div>
	<div><b>[846] Charge sensing of Ge/Si Core/Shell nanowire quantum dots using a high-impedance NbTiN resonator</b></div> <div><b>Speaker</b> Pierre Chevalier Kwon</div>
	<div><b>[847] Dispersive charge sensing of quantum dots in Ge/Si core/shell nanowires</b></div> <div><b>Speaker</b> Simon Svab</div>
	<div><b>[848] Coherent manipulation of <math>\text{Er}^{3+}</math> electronuclear spin states: Towards quantum information processing</b></div> <div><b>Speaker</b> Tianyang Shen</div>
	<div><b>[844] Impact of screening gates on reproducible quantum dot formation</b></div> <div><b>Speaker</b> Jessica Richter</div>
	<div><b>[849] Germanium/Silicon Core Shell Nanowires for Spin/Hole Qubits Fabricated by Chemical Vapour Deposition</b></div> <div><b>Speaker</b> Nicolas Forrer</div>
19:00	<div><b>Poster Session: Spintronics and Magnetism at the Nanoscale</b> <b>Poster Session</b>   <b>Location:</b> Hall 1st floor</div> <div><b>[645] Nanoscale imaging of materials for memories and quantum bits with Scanning NV Magnetometry</b></div> <div><b>Speaker</b> Liza Žaper</div>
	<div><b>[644] From randomly distributed to short range ordered spins: Dy/HOPG</b></div> <div><b>Speaker</b> Alexis Rary-Zinque</div>
	<div><b>[643] Anisotropic Spin Orbit Torque in Epitaxial Pt (110) Thin Films</b></div> <div><b>Speaker</b> Ryan Thompson</div>

**[642] 2D curved nano-conduits for magnonic transport made of GaYIG****Speaker**

Andrey Voronov

**[641] Phase Transitions and Magnetic Order in a Twisted Form of the Kagome Artificial Spin Ice****Speaker**

Gavin Macauley

**[640] Phase Transitions and Magnetic Order in a Ruby Lattice Artificial Spin Ice****Speaker**

Luca Berchialla

**[639] High frequency antennas for all-electrical excitation and detection of propagating spin waves****Speaker**

Andreas Höfner

**[638] Magnetic phase transition in Molybdenum disulfide detected with AFM****Speaker**

Akash Gupta

**[637] Remarkable robustness of metastable skyrmion lattice in NdMn<sub>2</sub>Ge<sub>2</sub> at room temperature****Speaker**

Samuel Treves

**[636] Full dipolar model for the Archimedean lattices of spin ices****Speaker**

Aleksandra Pac

**[635] Spin Waves in a Three-Dimensional Artificial Spin Ice Structure****Speaker**

Sourav Sahoo

**[634] Strong lateral exchange coupling and current-induced switching in single-layer ferrimagnetic films with patterned compensation temperature****Speaker**

Ales Hrabec

**[633] Ultrafast Magnetization Dynamics in Arrays of Dipolar-Coupled Permalloy Nanostructures****Speaker**

Davide Pecchio

**[632] Nonlinear spin-wave transport in the YIG nano-waveguides****Speaker**

Kristýna Davidková

**[631] Controlling interactions in a kagome artificial spin ice coupled to a cobalt underlayer****Speaker**

Tianyue Wang

19:00

**Poster Session: Surfaces, Interfaces and Thin Films****Poster Session** | **Location:** Hall 1st floor**【243】 Magnetoelectric Coupling in  $\text{La}_{0.9}\text{Ba}_{0.1}\text{MnO}_3/\text{BaTiO}_3$  Multiferroic Heterostructures Imaged by X-ray Photoemission Electron Microscopy****Speaker**

Dr Gyanendra Panchal

**【241】 Towards dielectric relaxation at a single molecule scale****Speaker**

Prof. Stefan Muellegger

**【242】 Controlling skyrmion density and formation mechanism by tuning ferromagnetic layer thicknesses in thin film multilayers****Speaker**

Ms Reshma Peremadathil Pradeep

20:30

19:00

**Poster Session: TASK - FAKT****Poster Session** | **Location:** Hall 1st floor**【366】 Measurement of the Branching Fraction  $\mathcal{B}(B^+ \rightarrow \bar{D}^0 K^+)$  using  $186.75 \text{ fb}^{-1}$  of  $\Upsilon(4S)$  data from Belle II****Speaker**

Nikolaus Schneider

**【365】 A positron trap for observing molecules containing positronium****Speaker**

Alina Weiser

**【364】 Calibration of Xenoscope, the full-scale vertical DARWIN Demonstrator****Speaker**

Andrej Maraffio

**【363】 Study of Low Energy Antiproton Annihilations on Nuclei****Speaker**

Viktoria Kraxberger

**【362】 Measurement of the Isotopic Composition of Light Nuclei in Cosmic Rays with AMS****Speaker**

Manbing Li

**【361】 Prospects to the PIONEER Experiment****Speaker**

Stefan Hochrein

20:30

## Wednesday 6 September

12:45

14:30

### Poster Session: Poster Session and Lunchbuffet

**Poster Session** | **Location:** Hall 1st floor