

Session Program

August 30, 2021 to September 3, 2021



Joint Annual Meeting of ÖPG and SPS 2021

Condensed Matter Physics

University of Innsbruck
Technikerstr. 25, Viktor-Franz-Hess-Haus, AT-6020 Innsbruck

Tue, August 31

1:30 PM

Condensed Matter Physics: I: Spin Phenomena

Session | Location: Room A

1:30 – 1:45 PM

101 Cherenkov radiation of spin waves by ultra-fast-moving magnetic flux quanta

Speaker

Oleksandr Dobrovolskiy

1:45 – 2:00 PM

102 Nano-scale magnonic directional coupler

Speaker

Prof. Andrii Chumak

2:00 – 2:15 PM

103 Inverse-design magnonic devices

Speaker

Dr Qi Wang

2:15 – 2:30 PM

104 Long-lived coherence in driven spin systems: from two to infinite spatial dimensions

Speaker

Walter Hahn

2:30 – 2:45 PM

105 Directly imaged non-standing spin-waves in rectangular microstrips under uniform excitation

Speaker

Santa Pile

2:45 – 3:00 PM

106 Magnetic correlations in the semimetallic hyperkagome iridate $\text{Na}_3\text{Ir}_3\text{O}_8$

Speaker

Gediminas Simutis

3:00 – 3:15 PM

107 Non-thermal generation of a new metastable skyrmion phase in Cu_2OSeO_3

Speaker

Alexey Sapozhnik

3:15 – 3:30 PM

108 Controlled skyrmion lattice rotation in Cu_2OSeO_3 driven by femtosecond mid-infrared laser pulses

Speaker

Phoebe Tengdin

3:30 – 3:45 PM

109 Magnetic response and topology of a staggered-Rashba superconductor

Speaker
Mark Fischer

3:45 – 4:00 PM **110 The effect of social balance on social fragmentation**

Speaker
Dr Tuan Pham

4:00 PM

4:30 PM

Condensed Matter Physics: II: Photonics

Session | Location: Room A

4:30 – 4:45 PM

111 Giant Kerr nonlinearity of intersubband transitions - Origin of self-starting frequency combs

Speaker
Nikola Opačak

4:45 – 5:00 PM

112 Optical injection locking enables coherent dual-comb spectroscopy

Speaker
Johannes Hillbrand

5:00 – 5:15 PM

113 Phase locking of two free running Quantum Cascade Laser frequency combs

Speaker
Sandro Dal Cin

5:15 – 5:30 PM

114 Measuring the Linewidth Enhancement Factor of a Laser Frequency Comb

Speaker
Florian Pilat

5:30 – 5:45 PM

115 Interband cascade lasers: beating intersubband transitions

Speaker
Hedwig Knötig

5:45 – 6:00 PM

116 Frequency comb operation and phase locking of a Y-coupled THz quantum cascade laser

Speaker
Mr Urban Senica

6:00 – 6:15 PM

117 Terahertz Intersubband Electroluminescence from Nonpolar m-Plane ZnO Quantum Cascade Structures

Speaker
Martin Franckić

6:15 – 6:30 PM

118 Temporal solitons from a ring quantum cascade laser

Speaker
Bo Meng

6:30 – 6:45 PM

119 InAs/AlAsSb Quantum Cascade Detector Below 3 μm

Speaker
Miriam Giparakis

6:45 - 7:00 PM

120 Multilayer mirrors for wavelengths beyond the extreme ultraviolet

Speaker
Ronald Meisels

7:00 PM

Wed, September 1

2:00 PM

Condensed Matter Physics: III: Superconductors

Session | Location: Room A

2:00 – 2:15 PM

121 Fate of charge order in overdoped La-based cuprates

Speaker

Karin von Arx

2:15 – 2:30 PM

122 Evidence for antiferromagnetism coexisting with charge order in the trilayer cuprate $\text{HgBa}_2\text{Ca}_2\text{Cu}_3\text{O}_{8+\delta}$

Speaker

Siham Benhabib

2:30 – 2:45 PM

123 Charge correlations and charge fluctuations in cuprate superconductors

Speaker

Wojciech Tabis

2:45 – 3:00 PM

124 Acoustic plasmon excitation and its doping dependence in superconducting $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+x}$

Speaker

Wenliang Zhang

3:00 – 3:15 PM

125 Engineering Ultradense Vortex Pinning Arrays by Focused He Ion Beam Irradiation In Copper-Oxide Superconductors

Speaker

Bernd Aichner

3:15 – 3:30 PM

126 Anomalous Phonon Dispersion Relation in Cuprates

Speaker

Izabela Biało

3:30 – 3:45 PM

127 Fermi liquid scaling of the scattering rate in cuprates

Speaker

Benjamin Klebel-Knobloch

3:45 – 4:00 PM

128 Electronic correlations in novel superconductor $\text{Ba}_{2-x}\text{CuO}_{3+y}$

Speaker

Paul Worm

4:00 – 4:15 PM

129 Evidence for even parity unconventional superconductivity in Sr_2RuO_4

Speaker

Prof. Andrej Pustogow

4:30 PM

4:15 – 4:30 PM

130 Murunskite - a bridge between cuprates and pnictides**Speaker**

Davor Tolj

5:00 PM

Condensed Matter Physics: IV: 2D Systems and Light-Matter Interaction**Session** | **Location:** Room A

5:00 – 5:15 PM

131 Correlated many-body physics in moiré superlattices of graphene**Speaker**

Prof. Mathias Scheurer

5:15 – 5:30 PM

132 Energy dissipation on twisted bilayer graphene at magic angle twist**Speaker**

Mrs Alexina Ollier

5:30 – 5:45 PM

133 Does ARPES truly represent high-Tc superconductivity in cuprates?**Speaker**

Vladimir N. Strocov

5:45 – 6:00 PM

134 Colloidal Supercrystal Growth studied in-situ by X-ray Scattering**Speaker**

Dr Rainer Lechner

6:00 – 6:15 PM

135 Quantum Cascade Lab-on-a-Chip for Protein Sensing**Speaker**

Florian Pilat

6:15 – 6:30 PM

136 Experimental Tuning of Transport Regimes in Hyperuniform Disordered Photonic Materials**Speaker**

Geoffroy Aubry

6:30 – 6:45 PM

137 Strong coupling of antiferromagnetic resonance with subterahertz cavity fields**Speaker**

Marcin Bialek

6:45 – 7:00 PM

138 Advancements in In-free III-nitride heterostructures emitting in the near infrared**Speaker**

Anna Spindlberger

7:00 PM

Thu, September 2

2:30 PM

Condensed Matter Physics: V: Topological Systems

Session | Location: Room A

2:30 – 3:00 PM

141 New fermions with large topological charges in chiral topological semimetals

Speaker

Dr Niels B. M. Schröter

3:00 – 3:15 PM

142 Quantized Floquet topology with temporal noise

Speaker

Lukas Sieberer

3:15 – 3:30 PM

143 Classification and higher-order topology of triple nodal points

Speaker

Patrick M. Lenggenhager

3:30 – 3:45 PM

144 Multicellularity of delicate topological insulators

Speaker

Aleksandra Nelson

3:45 – 4:00 PM

145 Quantised topological invariants and topological pumping in a one-dimensional open quantum system

Speaker

Paolo Mognini

4:00 – 4:15 PM

146 Fragile topology and flat-band superconductivity

Speaker

Valerio Peri

4:30 PM

5:00 PM

Condensed Matter Physics: VI: Miscellanea and Devices

Session | Location: Room A

5:00 – 5:15 PM

151 Coherent Broadening and Tuning of QCL Frequency Combs via RF-Injection

Speaker

Barbara Schneider

5:15 – 5:30 PM

152 In-situ Small-Angle Neutron Scattering study of hydrogen physisorption in nanoporous carbons

Speaker

Sebastian Stock

5:30 – 5:45 PM

153 Novel quantum cascade detectors (QCD) for telecommunication applications between 9 - 10 μm wavelength

Speaker

Mr Georg Marschick

5:45 – 6:00 PM

154 Hybrid semiconductor-metal plasmonic waveguide for on-chip sensors in the longwave infrared

Speaker

Mauro David

6:00 – 6:15 PM

155 Photon Correlations in Nanoparticle-on-Mirror Cavities

Speaker

Dr Rocío Sáez-Blázquez

6:15 – 6:30 PM

156 Deep Learning Enhanced Optical Control of Quantum Cascade Random Lasers

Speaker

Benedikt Limbacher

6:30 – 6:45 PM

157 DigiTwin PV: Digital Twins in Photovoltaic for performance analysis and failure detection

Speaker

Fatme Hakka

6:45 – 7:00 PM

158 Visible light backscatter: The illumination-sensor system-dualism of lighting

Speaker

Franz Wenzl

7:00 PM

Fri, September 3

11:15 AM

Condensed Matter Physics: VII: Quantum Phenomena and Phases of Matter

Session | Location: Room C

11:15 - 11:30 AM

161 Oscillatory dynamics in simple systems at elevated temperatures -- beyond a perturbational treatment of anharmonicity

Speaker

Michael Leitner

11:30 - 11:45 AM

162 Capacitive Coupling between an on-chip resonator and a semiconductor nanowire

Speaker

Mr Jann Hinnerk Ungerer

11:45 AM - 12:00 PM

163 Ice XIX: The second hydrogen-ordered polymorph related to ice VI

Speaker

Mr Alexander Thoeny

12:00 - 12:15 PM

164 Metastability and discrete spectrum of long-range systems

Speaker

Nicolo Defenu

12:15 - 12:30 PM

165 Broken-Symmetry Ground States of the Heisenberg model on the Pyrochlore Lattice

Speaker

Nikita Astrakhantsev

12:30 - 12:45 PM

166 Negative Spin Current Correlation in a Cooper Pair Splitter

Speaker

Dr Arunav Bordoloi

12:45 - 1:00 PM

167 Chiral Heisenberg Gross-Neveu-Yukawa criticality: honeycomb vs. single Dirac cone

Speaker

Thomas C. Lang

1:00 - 1:15 PM

168 Systematic study of magnetotransport with the Berry-Boltzmann equations

Speaker

Stepan Tsirkin

1:15 - 1:30 PM

169 Signatures of non-Hermitian Dynamical Topology: From short-range to long-range couplings

Speaker

Elias Starchl

1:30 - 1:45 PM

170 Evolution of Electron-Phonon Coupling across the Metal-Insulator Transition of Rare-Earth Nickelates

Speaker

Teguh Citra Asmara

1:45 PM