



# Joint Annual Meeting of ÖPG and SPS 2021

## Tuesday, August 31, 2021

### Atomic Physics and Quantum Optics: I: Quantum Gases - Room E (1:30 PM - 3:30 PM)

time	[id] title	presenter
1:30 PM	[108] □401□Striped Self-Bound Dipolar Droplets	STAUDINGER, Clemens
1:45 PM	[123] □402□Fermi polarons in a strongly interacting Fermi-Bose mixture	BARONI, Cosetta
2:00 PM	[124] □403□Efficient production of a resonantly interacting Fermi-Fermi mixture of $^{161}\text{Dy}$ and $^{40}\text{K}$	SOAVE, Elisa
2:15 PM	[224] □404□Observation of confinement-induced resonances in a 3D lattice	CAPECCHI, Deborah
2:30 PM	[272] □406□Transport in a highly confined system	HORVATH, Milena
2:45 PM	[357] □407□Topological pump of ultracold fermions in a one dimensional Floquet optical lattice	MINGUZZI, Joaquin
3:00 PM	[405] □408□Emergent atomic pump driven by dissipation in an optical cavity	BAUMGÄRTNER, Alexander
3:15 PM	[406] □409□Dynamics towards multistable inverted states of an open three-level Dicke model	LIN, Rui

### Atomic Physics and Quantum Optics: II: Quantum and Nano Optics - Room E (4:30 PM - 6:30 PM)

time	[id] title	presenter
4:30 PM	[45] □411□Efficient frequency selective single photon antennas based on a bio-inspired nano-scale atomic ring design with 9-fold symmetry	Prof. RITSCH, Helmut
4:45 PM	[165] □412□High fidelity biexciton generation through adiabatic rapid passage in GaAs quantum dots	Mr KAPPE, Florian
5:00 PM	[344] □413□Electronic Transport in Polaritonic Semiconductor Heterostructure Systems	LIMBACHER, Benedikt
5:15 PM	[380] □414□Unidirectional emission of single-molecule based on DNA origami assembled ultracompact antenna	ZHU, Fangjia
5:30 PM	[4] □415□Electrically Pumped Difference Frequency Generation in Bragg-reflection Waveguides	SCHLAGER, Alexander
5:45 PM	[61] □416□From atom to nanoparticle: Spectroscopy of potassium clusters in helium nanodroplets	MESSNER, Roman
6:00 PM	[47] □417□Ultra-low threshold lasing through phase front engineering via a metallic circular aperture	WANG, Zhixin
6:15 PM	[417] □418□High harmonic generation inside thin-disk laser oscillators	DRS, Jakub

## Wednesday, September 1, 2021

### Atomic Physics and Quantum Optics: III: Quantum Sensing and Precision Measurement - Room E (2:00 PM - 4:30 PM)

time	[id] title	presenter
2:00 PM	[334] □421□Discrete-time signal processing with NV centers	CUJIA, Kristian
2:30 PM	[304] □422□Light Shift Induced Heading Characteristics of a Coherent Population Trapping Based Scalar Magnetometer	AMTMANN, Christoph
2:45 PM	[11] □423□Quantum Variational Optimization of Ramsey Interferometry and Atomic Clocks	KAUBRUEGGER, Raphael
3:00 PM	[26] □424□SI-traceable frequency dissemination at 1572.06 nm in a stabilized fiber network with ring topology	Dr HUSMANN, Dominik
3:15 PM	[36] □425□Spectroscopy of Rydberg States in Erbium using Electromagnetically Induced Transparency	EDRI, Hagai
3:30 PM	[68] □426□Observation of the narrow inner-shell orbital transition in atomic erbium at 1299nm	PATSCHEIDER, Alexander
3:45 PM	[153] □427□Positronium precision spectroscopy: Measurement of the 1S-2S and excited state fine and hyperfine transitions	HEISS, Michael
4:00 PM	[105] □428□Towards the first demonstration of quantum gravitational states of atoms with a cryogenic hydrogen beam	KILLIAN, Carina
4:15 PM	[164] □429□Measurement of the dynamic polarizability of Dy atoms near the 626-nm intercombination line	KREYER, Marian

### Atomic Physics and Quantum Optics: IV: Matter Waves and Optomechanics - Room E (5:00 PM - 6:45 PM)

time	[id] title	presenter
5:00 PM	[6] □431□Bragg diffraction of large organic molecules	SIMONOVIĆ, Ksenija
5:15 PM	[9] □432□High-mass matter-wave interferometry and quantum-assisted metrology	PEDALINO, Sebastian
5:30 PM	[20] □433□Three path Quantum Cheshire Cat observed in neutron interferometry	DANNER, Armin
5:45 PM	[418] □434□Strong coupling of a mechanical oscillator and atomic spins 1 m apart	NGAI, Chun Tat
6:00 PM	[299] □435□Quantum control of levitated nanoparticles	DELIC, Uros
6:15 PM	[302] □436□Measurement of Gravitational Coupling between Millimeter-Sized Masses	HEPACH, Hans
6:30 PM	[321] □437□Testing quantum mechanics with heavy objects -- using magnetically-levitated superconducting microparticles	HIGGINS, Gerard

# Thursday, September 2, 2021

## Atomic Physics and Quantum Optics: V: Molecular physics - Room E (2:30 PM - 3:45 PM)

time	[id] title	presenter
2:30 PM	[179] □441□Measurement of the quantum tunneling reaction $H^+ + D^+ \rightarrow HD + H^+$	Dr WILD, Robert
2:45 PM	[158] □442□Core-valence attosecond transient absorption spectroscopy of polyatomic molecules	Dr GOLUBEV, Nikolay
3:00 PM	[118] □443□Convolutional Neural Networks as Kinetic Energy in Orbital-free Functional Theory	LUKIC, Daniel
3:15 PM	[212] □444□Relativistic coupled cluster for exascale supercomputers	POTOTSCHNIG, Johann
3:30 PM	[125] □445□Stacked sheets of porous 2D carbon materials for chiral selection	ZIMMERMANN, Jörg