# **Session Program**

June 30, 2025 to July 4, 2025



# **ECAMP 15**

**Poster Session 2** 

# Tue, July 1

Po	OSTER SESSION 2 Dester Session   Location:
Q	uantum Monte Carlo study on positron binding to atomic anion dimers
•	Sneaker
r	Masanori Tachikawa Tachikawa
T	he features of binding of two multi-charged meso-porphyrins to nucleic acids
S	Speaker
[	Dr Olga Ryazanova
v	ariable Charge Effects on Triple Differential Cross Section for The Ionization of N2 Mole
	······································
3	speaker
2	
T	he Cumulant Expansion Approach: the Good, the Bad and the Ugly
5	Speaker
Ν	Ar Johannes Kerber
с	ollisional effects in the ultracold Rb-Hg system
s r	speaker
_	
T	riggered photons from an ion-mirror system
5	Speaker
(	Giovanni Cerchiari
2	D Coulomb Crystal Vibrational Dynamics for Qubit Application
¢	Speaker
1	Niklas Lausti
_	
Α	ngle-resolved spectroscopy of secondary electrons from surfaces emitted by highly ch
ic	on impact
S	Speaker
ŀ	• Anna Niggas
D	issociative electron attachment as a mechanism for formation of negative molecular i
tł	he interstellar medium
ç	Speaker
1	/iatcheslav Kokoouline
D	oes electron emission in highly charged ion collisions with surfaces occur above the su
0	r deiow?
	Speaker
2	

The ground state hyperfine splitting in muonic hydrogen experiment (HyperMu) at PSI

Dr Ahmed Ouf

# Photoionisation, Rayleigh, and Raman scattering cross sections for the hydrogen molecule and its ion

Speaker

Prof. Dmitry Fursa

#### From Quantum Statistics to Work: The Pauli Engine and Beyond

Speaker

Prof. Thomas Busch

## Self-Assembled Chains and Solids of Dipolar Atoms in a Multilayer

Speaker

Grecia Guijarro

#### Collective light scattering in an array of dysprosium atoms

Speaker

Britton Hofer

### The Mutual Neutralization of Hydronium and Hydroxide.

Speaker

Alon Bogot

#### Cryogenic single nanoparticle mass spectrometry

Speaker

Dr Björn Bastian

#### Electron Diffraction Imaging of Molecules via Ionization by Compton Scattering

Speaker

Prof. Philipp Demekhin

# Enabling independent electrical control of two quantum emitters via introducing mid cavity structural division in photonic crystal microcavities .

Speaker

Monilka Singh

#### **Progress toward Neutral Atom Array Processor**

**Speakers** Mr Jinyu Zhou, Kai Xiang Lee

#### Development of ion trap technologies for studying mesoscopic quantum states

Speaker

Samuel J. M. White

#### An Apparatus for Controlling the Sr Clock Qubit

**Speaker** Marijn Venderbosch

# Methods for analysing photoelectron momentum distributions from attosecond light pulses

Speaker

Emilia Kjærsdam Telléus

### **Electronic coherences in molecules with XFAIMS**

#### Speaker

Celso Manuel González-Collado

# The primary steps of ion solvation in helium nanodroplets

Speaker

Simon Høgh Albrechtsen

# High-Fidelity Individual Addressing of Single Atoms in Quantum Registers at Three-Photon Laser Excitation of Rydberg States

Speaker

Artūrs Ciniņš

### Spectroscopic Studies of Cold, Trapped Negative Ions in Radiofrequency Multipole Traps

Speaker

Sruthi Purushu Melath

### Ground and First Excited States of the NaSr Molecule: Experimental and Theoretical Study

Speaker

Jacek Szczepkowski

### Chip-scale Rydberg Quantum Electrometry

Speaker

Avital Giat

#### Molecular spectroscopy in the THz range under sub-Doppler regime

**Speaker** Ms Andjela Zarin

## Prospects for Laser Cooling BN\$^-\$

Speaker

Katrin Erath-Dulitz

#### Density functional studies of vortices in rotating squeezed Bose-Bose mixtures

Speaker

Ivan Poparić

#### Creation of ultracold Bosonic 39K133Cs Molecules in the rovibrational ground state

Speaker

Charly Beulenkamp

### Atomistic Computer Simulations of Fe(CO)<sub>5</sub> Fragmentation Dynamics on a Substrate

Speaker

Hlib Lyshchuk

#### Experiments on Three-Body Association of Noble Gases in an RF Multipole Ion Trap

Speaker

**Michael Philipp Hauck** 

# Optical Frequency Division for Ultra-Stable Microwave Generation and Remote Clock Referencing

Benjamin Pointard

## **3D-Printed Optical Cavity for Laser Stabilization**

#### Speaker

Dr Suman Mondal

# Optical creation and manipulation of localised vortices in two-component Bose–Einstein condensates

Speaker

Yakov Braver

### Ternary association of H\$\_3^+\$ with H\$\_2\$: effect of rotational excitation

Speaker

Radek Plašil

# Spatially-resolved spin manipulation and readout of individual ultracold molecules in an optical lattice

**Speaker** Dr Benjamin Maddox

# Excited-State Dynamics of Pyrazine and the Role of Electronic Coherences

**Speaker** Luke Moore

# Caesium photoionization for monochromatic electrons source for surface electron microscopy

#### Speaker

Mr Florent Vallée

#### Modelling sequential ionisation within time-dependent R-Matrix Theory

Speaker

Hugo van der Hart

# Ultra-fast nonlinear optical response of chiral molecules with a focus on conformer sensitivity

Speaker

Elena Aethra Christou

# Unitary Transformations using Robust Optimal Control on a Cold Atom Qudit

Speaker

Eloi Flament

### Gravity in the Cavity: Cavity QED as a quantum simulator for cosmological perturbations

#### Speaker

Simon Brunner

# Internal decay processes in electron-rich symmetric dimer anions: An experimental probing using trapped ions in an Electrostatic ion-beam trap (EIBT)

**Speaker** Roby Chacko

Quantum information processing and error correction in molecular rotation

Brandon Furey

# Coherent control, state preparation and readout of polyatomic molecular ions via Quantum Logic Spectroscopy Speaker Mariano Isaza Monsalve

### Single and double ionization of pyridine and pyridine clusters

Speaker

Sitanath Mondal

#### Measuring the Electron's Electric Dipole Moment Using Ultracold YbF Molecules

Speaker

Ms Shirley Zheng

# Experimental & theoretical cross sections for single & double ionization of open-4d-shell ions Xe\$^{12+}\$ to Xe\$^{14+}\$ by electron impact

**Speaker** Michel Döhring

# Towards deterministic ionization, loading, and sympathetic cooling of molecular ions for quantum logic spectroscopy

Speaker

René Nardi

#### Highly oriented pyrolytic graphite chemical bonding structure after gallium implantation

**Speaker** Dr Tasabeeh Jafer

#### Many-Body Theory Calculations of Positron Binding to Picolines

Speaker

Tiarnan Smyth

# All-optical coherent control of chiral electronic transitions for highly enantioselective photochemistry

Speaker

Andrés Ordóñez

#### Cold Rydberg Strontium Atoms for the Thermometry of Optical Lattice Clocks

Speaker

Hugo Tortel

### High resolution spectroscopy of molecules confined in gas cells of sub-wavelength thickness

Speaker

Athanasios Laliotis

#### Electron-impact ionization of water molecules at low impact energies

Speaker

Lorenzo Ugo Ancarani

#### Perfect Optical Vortex for atom trapping

Prof. Laurence PRUVOST

### Monochromatic source of ions and electrons for nanosciences

#### Speaker

Clélia Bastelica

### Electron collisions with liquid microjets: spectroscopy and reactivity

Speaker

Juraj Fedor

## The moving Fermi polaron

Speaker

Johanna Hennebichler

### Hydrogen atom diffraction through free-standing single-layer graphene

Speaker

Pierre GUICHARD

# Measuring ion-induced biomolecular fragmentation using a Velocity Map Imaging spectrometer

Speaker

Mr Antonin Bourgeteau

#### Correlated vortex generation in coherent medium

**Speaker** Mr Priyabrata Seth

#### Nonadiabatic relativistic and QED rovibrational energy levels of the hydrogen molecule

Speaker

Jacek Komasa

# Dipole-Mode Spectrum and Hydrodynamic Crossover in a Resonantly Interacting Two-Species Fermion Mixture

Speaker

Alberto Canali

### Spatiotemporal inversion dynamics in laser filaments

Speaker

Maria Richter

#### Squeezing-enhanced accurate differential sensing under large phase noise

Speaker

Marco Malitesta

#### Excitations of a binary dipolar supersolid

**Speaker** Prof. Russell Bisset

### Perfect Optical Vortex for Orbital Angular Momentum pairs

Speaker

Mr Paul Seguigne

### Ionization-induced proton-transfer dynamics in formic acid dimer

#### Speaker

Saroj Barik

### New magic wavelength for Sr clock transition

#### Speaker

Xin Yuan Ma

# Mid-infrared frequency comb spectroscopy in uniform supersonic flows: A look into vibrational excitation in Laval nozzles

#### Speaker

Lok Yiu (Kathy) Wu

#### Attosecond magnetic pulses emerging from ring-current gates

Speaker

Alba de las Heras

#### How rotation shapes the decay of diatomic carbon anions

**Speaker** Viviane C. Schmidt

# Characterization of the spectral signal of the double-well broad potential curve of NaH D state

Speaker

Chin-Chun Tsai

#### Squeezing atomic p-orbital condensates for detecting gravitational waves

Speaker

Xiaopeng Li

#### Laser slowing of Aluminium-monofluoride in the deep ultraviolet

Speaker

Lajos Palanki

# Characterizing far from equilibrium states of the one-dimensional nonlinear Schrodinger equation

#### Speaker

Dr Abhik Kumar Saha

#### The interplay of bulk- and microviscosity effects on BODIPY-based molecular sensors

Speaker

Dr Stepas Toliautas

# Multi-platform theoretical calculations of oscillator strengths and transition probabilities in the Yb I isoelectronic sequence (Ta IV - Pt IX) for nuclear applications

Speaker

Maxime Brasseur

# State selective charge-exchange cross sections in collisions between Cq+ ions with sodium atoms

Speaker

Karoly Tokesi

Electron and Positron Impact Ionization of Water Molecules at low and intermediat	te
energies.	

Imene Khiat

# Atomic cascade computations for astro and plasma physics

Speaker

Stephan Fritzsche

# Chirality induced spin polarization in one-photon ionization by circularly polarized light

Speaker

Dr Philip Caesar Flores

## Quantum Metrology in the Ultrastrong Coupling Regime of Light-Matter Interactions: Leveraging Virtual Excitations without Extracting Them

Speaker

Karol Piotr Gietka

#### Dynamical quasicondensation in the weakly interacting Fermi-Hubbard model

Speaker

Iva Brezinova

#### Autodetachment and autofragmentation in anionic species

Speaker

Mr Sergio Sánchez Pinel

# Measurement of atom-surface interactions in evanescent light filed by cold atomic fountain

## Speaker

Satoshi Tojo

# Helium and silver co-implantation into SiC at 350 °C and sequential annealing: Effects of temperature and helium bubbles on SiC structure and migration behaviour of silver

Speaker

Dr Zaki Abdalla

#### Comb-based Fourier-transform cavity-ringdown spectroscopy

#### Speaker

Piotr Maslowski

5:00 PM