



# European Conference on Trapped Ions | hybrid ECTI 2021

## Tuesday, 23 November 2021

### online ECTI: TUE-1 (09:00 - 10:30)

-Conveners: Roee Ozeri

time	[id] title	presenter
09:00	[21] Optical frequency measurements with sub-hertz accuracy using highly charged ions	Dr KING, Steven A.
09:30	[3] Quantum technologies for molecular ions	WILLITSCH, Stefan
10:00	[20] MissIons: Missing Ions in Laboratory	SCHLEMMER, Stephan

### online ECTI: TUE-2 (11:00 - 12:30)

-Conveners: Tobias Schaetz

time	[id] title	presenter
11:00	[47] Solitons and thermal effects in ion chains	MORIGI, Giovanna
11:30	[14] Scalable and programmable bosonic network and quantum simulation with 2D ion crystals	KIM, Kihwan
12:00	[2] Correlation spectroscopy with multi-qubit-enhanced phase estimation	ROOS, Christian

### online ECTI: TUE-3 (14:00 - 16:00)

-Conveners: Christian Roos

time	[id] title	presenter
14:00	[25] A qudit quantum processor with trapped ions	RINGBAUER, Martin
14:30	[22] Feedback cooling and efficient detection of a levitated nanoparticle in a Paul trap	NORTHUP, Tracy
15:00	[33] Integrated microwave quantum computation register with trapped $9\text{Be}^+$ ions	OSPELKAUS, Christian
15:30	[27] High-fidelity laser-free universal control of trapped ion qubits	SRINIVAS, Raghavendra

### online ECTI: TUE-4 (16:30 - 18:30)

-Conveners: Christian Ospelkaus

time	[id] title	presenter
16:30	[19] Quantum state control and precision spectroscopy of single molecular ions	CHOU, Chin-wen
17:00	[17] Quantum simulation and sensing with 2D ion crystals in a Penning trap <sup>{1,2}</sup>	BOLLINGER, John
17:30	[11] Trapping electrons in a room-temperature quadrupole trap: towards an all-electronic microwave-enabled trapped electron qubit system for QIP	HAEFFNER, Hartmut
18:00	[57] Quantum Simulations and Algorithms with Ion Trap Systems	MONROE, Christopher

**Wednesday, 24 November 2021****online ECTI: WED-1 (09:00 - 10:30)****-Conveners: Henning Schmidt**

time	[id] title	presenter
09:00	[13] Precision Ramsey-comb spectroscopy at short wavelengths for fundamental tests	Prof. EIKEMA, Kjeld S. E.
09:30	[32] Non-equilibrium coupling of a quartz resonator to the motion of ions in a Penning trap	Prof. RODRÍGUEZ, Daniel
10:00	[9] Reaction studies with internally cold molecular ions in the CSR storage ring	NOVOTNY, Oldrich

**online ECTI: WED-2 (11:00 - 12:30)****-Conveners: Stephan Schlemmer**

time	[id] title	presenter
11:00	[5] Recent results from the double ion-storage ring, DESIREE	SCHMIDT, Henning
11:30	[18] Communication and energy transfer between ionic chromophores in tailor-made systems	Prof. BRØNDSTED NIELSEN, Steen
12:00	[10] Ion-atom systems in the quantum regime	JACHYMSKI, Krzysztof

**online ECTI: WED-3 (14:00 - 16:00)****-Conveners: Stefan Willitsch**

time	[id] title	presenter
14:00	[7] Observation of chemical reactions between a trapped ion and ultracold Feshbach dimers	Dr LOUS, Rianne
14:30	[56] Ions in atomic Bose-Einstein condensates and Fermi gases	BRUUN, Georg Morten
15:00	[49] Energy-dependence and quantum logic detection of atom-ion interactions	AKERMAN, Nitzan KATZ, Or
15:30	[12] Optical Traps for Ions & Ultracold Atoms: The onset of controlling atom-ion quantum effects via Feshbach resonances	Prof. SCHAETZ, Tobias

**online ECTI: WED-4 (16:30 - 18:00)****-Conveners: Markus Hennrich**

time	[id] title	presenter
16:30	[23] Optical clocks with trapped Yb <sup>+</sup> ions for autonomous operation	HUNTEMANN, Nils
17:00	[31] Four-second optical coherence between different atomic species and the search for new physics with atomic clocks	LEIBRANDT, David
17:30	[50] Advancing clock measurement precision to the 21st digit	YE, Jun

# Thursday, 25 November 2021

## **online ECTI (09:00 - 10:30)**

-Conveners: Kihwan Kim

time	[id] title	presenter
09:00	[58] Integrated optical control of trapped-ion systems	MEHTA, Karan
09:30	[28] Optimal metrology with programmable quantum sensors	MARCINIAK, Christian
10:00	[16] Improved isotope-shift-based bounds on bosons beyond the Standard Model through direct frequency-comb Raman spectroscopy of Ca <sup>+</sup> ions.	Dr SOLARO, Cyrille

## **online ECTI (17:00 - 18:30)**

-Conveners: Michael Drewsen

time	[id] title	presenter
17:00	[24] Tailored States and Measurements for Ion Clocks	HAMMERER, Klemens
17:30	[15] A multiqubit quantum network node with trapped ions	KRUTYANSKIY, Victor
18:00	[55] hybrid ECTI - closing remarks	Prof. DREWSEN, Michael