SFB *BeyondC* Autumn Workshop

@ ÖPG-SPS Meeting 2025 / University of Vienna

21 & 22 February 2025

Universitätsring 1, 1010 Wien / HS 7

Workshop Program

THURSDAY 21.08.2025	
Time	Program
12:00	PI Lunch @ Audimax buffet (for PIs and invitees)
13:00	Business Meeting online & HS 27 (for PIs and invitees)
14:00	801 Florian Meier Precision is not limited by the second law of thermodynamics
14:15	802 Pharnam Bakhshinezhad Quantum Master Equations in the Presence of Continuous Measurement and Feedback: Theory and Applications
14:30	805 Lukas J. Fiderer Information Thermodynamics of Agents
14:45	806 Tom Rivlin On the second law of thermodynamics in isolated quantum systems
15:00	807 Christopher Popp Stabilizer-based entanglement and secure key distillation
15:15	
15:30	Coffee Break
16:00	811 Nicky Kai Hong Li High-dimensional entanglement witnessed by correlations in arbitrary bases
16:15	812 Florian Kanitschar A Framework for the Security Analysis of Practical High-Dimensional QKD Setups
16:30	813 Mohammad Mehboudi Bypassing Losses in Quantum Optics: A Robust Measurement Design
16:45	814 Julia Mathe Estimating entanglement monotones of non-pure spin-squeezed states
17:00	815 Tobias Christoph Sutter The Impact of Architecture and Cost Function on Dissipative Quantum Neural Networks
17:15	816 Sina Zeytinoglu Generalized Parity Measurements and Efficient Large Multi-component Cat State Preparation with Quantum Signal Processing
17:30	817 Shuheng Liu Quantum entanglement in Wigner functions
17:45	818 Martin J. Renner Exact Steering Bound for Two-Qubit Werner States
19:00	Conference dinner at the Wiener Rathaus (advance registration required)

FWF Österreichischer Wissenschaftsfonds · universität wien · universität innsbruck · ISTA Institute of Science and Technology Austria · JKU Johannes Kepler Universität Linz

FRIDAY 22.08.2025	
Time	Program
11:00	821 Jan Mandrysch How to implement a causal measurement scheme for quantum fields?
11:15	822 Paolo Abiuso On the Planckian time of thermalization
11:30	823 Lin-Qing Chen Events and their Localisation are Relative to a Lab
11:45	825 Andrea Caprotti Optimising quantum tomography with classical post-processing
12:00	
12:30	Poster Awards and Closing Cer emony (Großer Festsaal)
14:00	831 Philipp Koller High finesse microcavities for quantum science and technology
14:15	832 Giuseppe Vitagliano Experimental certification of high-dimensional entanglement with randomized measurements
14:30	833 Paul Erker Entropic costs of the quantum-to-classical transition in a microscopic clock
14:45	834 Vikas Remesh Robust generation of multiphoton states from quantum dots
15:00	835 Sudhan Bhadad Quantum network node based on trapped ions coupled to a cavity
15:15	836 Stefan Aimet Experimentally probing Landauer's principle in the quantum many-body regime
15:30	837 Dorian Schiffer High-Dimensional Time-Bin Entanglement for Quantum Key Distribution
15:45	838 Martin Mauser Experimental data re-uploading with provable enhanced learning capabilities
16:15	Lab Tours

Pre-Program

MONDAY 18.08.2025	
The **Women's Breakfast** is this time planned as lunch at the *4th Women in Physics Career Symposium.*	
12:30	Light lunch at the Senatssaal
13:00	Start Symposium

Poster Session

WEDNESDAY 20.08.2025	
TP #	Poster
P92	841 Xinhe Jiang Subjective nature of path information in quantum mechanics
P93	842 Johannes Kerber The Cumulant Expansion Approach: the Good, the Bad and the Ugly
P94	843 Amin Babazadeh Random Numbers from Cosmic Microwave Background for Bell test
P95	844 Dimpi Thakuria Uncertainty relations and entanglement with finite Fourier transformed variables
P96	845 Bhargava Thyagarajan Approaching the mechanical ground state in an inductively coupled electromechanical system
P97	846 Mehdi Rizvandi Towards a Quantum Network Node: Trapped Calcium Ions Coupled to a High-Finesse Optical Cavity
P98	847 Bruna Sahdo Adding and removing systems in quantum reference frames
P99	848 Christoph Grüner A new view on Quantum Computers
P100	849 Nicky Kai Hong Li Detecting genuine multipartite entanglement in multi-qubit devices with restricted measurements
P101	850 Florian Kanitschar Security Analysis and Implementation of Finite-Size Multi-User CV-QKD with Discrete Modulation
P102	851 James Bate Robust quantum memory in a trapped-ion quantum network node with an optical cavity
P103	852 Martin Zemlicka Josephson Gravimeter - Gravity Sensing by Quantum Tunneling in Superconducting Circuit