

NQW

Nonequilibrium Quantum Workshop

December 14 – 18, 2025
Hotel Krvavec, Cerklje, Slovenia

TIMETABLE

- Invited talk
- Contributed talk
- Tutorial
- Poster session




Sunday, December 14, 2025










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|---------------|--------------------------------|---|
| 14:00 – 16:15 | REGISTRATION | |
| 16:15 – 16:30 | Opening: NQW 2025 | |
| | | <i>Chair: Tomaž Mertelj</i> |
| 16:30 – 17:00 | <i>Robin Steinigeweg</i> | Boundary-driven magnetization transport in the spin-1/2 XXZ chain and the role of the system-bath coupling ● ● |
| 17:00 – 17:30 | <i>Fabian Heidrich-Meisner</i> | The race of energy and spin: who is faster? ● |
| 17:30 – 17:45 | <i>Peter Prelovšek</i> | Transport and thermalization in modulated spin chains: classical vs. quantum processor study ● |
| 17:45 – 19:30 | DINNER | |
| | | <i>Chair: Fabian Heidrich-Meisner</i> |
| 19:30 – 20:00 | <i>Alfred Zong</i> | Structural contribution to light-induced gap suppression in Ta_2NiSe_5 ● |
| 20:00 – 20:15 | <i>Rok Venturini</i> | Equilibrium and electrically driven charge density wave states in EuTe_4 ● |
| 20:15 – 20:30 | <i>Nikolaj Klinkby</i> | Ultrafast order by non-thermal disorder ● |
| 20:30 – 22:00 | DISCUSSIONS | |

Monday, December 15, 2025

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| | | | Chair: Alfred Zong |
| 9:00 – 9:30 | Dragan Mihailović | Phantom quasiparticles and zero modes in 1T-TaS ₂ |  |
| 9:30 – 10:00 | Melanie Mueller | Ultrafast local charge-order dynamics and THz-induced metastability in 1T-TaS ₂ |  |
| 10:00 – 10:15 | Yevhenii Vaskivskyi | The Timescale for the Electron Dynamics in 1T-TaS ₂ |  |
| 10:15 – 10:45 | COFFEE BREAK | | |
| | | | Chair: Lev Vidmar |
| 10:45 – 11:15 | Philipp Werner | Amplitude modes in 2D coherent spectroscopy |  |
| 11:15 – 11:30 | Rafał Świątek | Mechanism of Eigenstate Thermalization Breakdown |  |
| 11:30 – 12:00 | POSTER SESSION: FLASH TALKS | |  |
| 12:00 – 16:30 | LUNCH, POSTER SESSION AND FREE TIME | | |
| | | | Chair: Melanie Mueller |
| 16:30 – 17:00 | Peter Jeglič | Quantum Devices with Rydberg Atoms |  |
| 17:00 – 17:30 | Jaka Vodeb | From Critical Dynamics to Coarsening: Bias-Tuned Quantum Phase Transitions on a 2400 Qubit Coherent Annealer |  |
| 17:30 – 17:45 | Marlena Dziurawiec | High Harmonic Spectroscopy of Multifractality, Mobility Edges and Topology in Quasiperiodic Chains |  |
| 17:45 – 18:00 | Aleksey Lunkin | Josephson effect in strongly disordered metallic wires |  |
| 18:00 – 19:45 | DINNER | | |
| | | | Chair: Philipp Werner |
| 19:45 – 20:15 | Mikhail Feigelman | Evidence for a Two-Dimensional Quantum Glass State at High Temperatures |  |
| 20:15 – 20:30 | Jože Gašperlin | To Be Announced |  |
| 20:30 – 21:45 | DISCUSSIONS AND POSTER SESSION | |  |









Tuesday, December 16, 2025

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| Chair: Jaka Vodeb | | |
| 9:00 – 9:30 | Tomaž Prosen | To Be Announced  |
| 9:30 – 10:00 | Miroslav Hopjan | Eigenstate transitions in exactly self-dual 1D and 3D Aubry-André models  |
| 10:00 – 10:15 | Zala Lenarčič | Neural Networks and GGEs for simulation of light-matter coupled systems  |
| 10:15 – 10:45 | COFFEE BREAK | |








| | | | Chair: Anže Mraz | |
|----------------------|----------------------------------|---|---|--|
| 10:45 – 11:30 | Simon Gerber | Tutorial + Interlayer stacking controls the electronic properties of the van der Waals material 1T-TaS ₂ |  |  |
| 11:30 – 12:00 | Gabriel Aeppli | Phase locking and comb synthesis at free electron lasers | |  |
| 12:00 – 16:30 | LUNCH, DISCUSSIONS AND FREE TIME | | | |
| Chair: Zala Lenarčič | | | | |
| 16:30 – 17:00 | Yuta Murakami | What can we learn from high-harmonic generation in strongly correlated electronic systems? | |  |
| 17:00 – 17:30 | Denis Golež | To Be Announced | |  |
| 17:30 – 17:45 | Iris Ulčakar | Conserved quantities enable the quantum Mpemba effect in weakly open systems | |  |
| 17:45 – 18:00 | Francesco Valiera | Stochastic resonance in disordered charge-density-wave systems | |  |
| 18:00 – 19:45 | DINNER | | | |
| Chair: Denis Golež | | | | |
| 19:45 – 20:15 | Janez Bonča | Signature of preformed pairs in angle-resolved photoemission spectroscopy | |  |
| 20:15 – 20:30 | Viktor Kabanov | Simulation of a pinning in the vortex glass model | |  |
| 20:30 – 22:00 | SOCIAL EVENT | | | |

Wednesday, December 17, 2025

| Chair: Simon Gerber | | | |
|----------------------|----------------------------------|--|--|
| 9:00 – 9:30 | Simon Wall | Disorder-Driven Phase Transitions from Phonon and Photoexcitation |  |
| 9:30 – 10:00 | Jon Gorchon | Optical detection of out-of-equilibrium spin accumulations in multilayers |  |
| 10:00 – 10:15 | Jaka Strohsach | Stabilization of Antiferromagnetic Grains in Co/CoO Ultrathin Films by Gaq ₃ Adsorption |  |
| 10:15 – 10:45 | COFFEE BREAK | | |
| Chair: Yuta Murakami | | | |
| 10:45 – 11:15 | Marcin Mierzejewski | Finding local integrals of motion in quantum lattice models in the thermodynamic limit |  |
| 11:15 – 11:45 | Masud Haque | Entanglement Entropies of Eigenstates of Many-Body Systems and Random Matrices |  |
| 11:45 – 12:00 | Rustem Sharipov | Beyond the Off-Diagonal Eigenstate Thermalization Hypothesis |  |
| 12:00 – 16:30 | LUNCH, DISCUSSIONS AND FREE TIME | | |

| | | | Chair: Simon Wall |
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| 16:30 – 17:00 | Daniele Fausti | Controlling the functionality of quantum materials by light |  |
| 17:00 – 17:30 | Jure Demšar | Interplay Between Ferromagnetism and Charge Density Waves in SmNiC ₂ Probed by Femtosecond Optical Spectroscopy |  |
| 17:30 – 17:45 | Nicolai Taufertshöfer | Van der Waals devices for surface-sensitive experiments |  |
| 17:45 – 18:00 | Viktoriia Yursa | To Be Announced |  |
| 18:00 – 19:45 | DINNER AND DISCUSSIONS | | |
| Chair: Marcin Mierzejewski | | | |
| 19:45 – 20:15 | Martin Eckstein | Tensor-Network Compression for Fast Real-Time Evaluation of Multidimensional Spectroscopy |  |
| 20:15 – 20:30 | Antonio Picano | On the light-induced rotated charge-density wave state in Rare-Earth Tritellurides |  |
| 20:30 – 20:45 | Maksymilian Środa | Exploring relaxation dynamics of electron-phonon systems with tensor-train Green's function methods |  |
| 20:45 – 21:45 | DISCUSSIONS AND POSTER SESSION | | |
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Thursday, December 18, 2025

| Chair: Rok Venturini | | | |
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| 9:00 – 9:30 | <i>Tomaž Mertelj</i> | Critical Photoinduced Reflectivity Relaxation Dynamics in Single-Layer Bi-Based Cuprates Near the Pseudogap End Point |  |
| 9:30 – 9:45 | <i>Moritz Cimeter</i> | Coherent transfer of optically induced THz magnons to charges in an antiferromagnet |  |
| 9:45 – 10:00 | <i>Gregor Humar</i> | Ballistic false vacuum decay in the 2D Ising model |  |
| 10:00 - 10:15 | <i>Simon Jiricek</i> | Universal Relation between Spectral and Wavefunction Properties at Criticality |  |
| 10:15 – 10:45 | COFFEE BREAK | | |
| Chair: Antonio Picano | | | |
| 10:45 – 11:15 | <i>Patrycja Lydźba</i> | Fidelity susceptibility in closed quantum systems |  |
| 11:15 – 11:30 | <i>Michele Coppola</i> | Exact solution to a Bhatnagar-Gross-Krook-type equation for quantum lattice gases with dephasing noise |  |
| 11:30 – 11:45 | <i>Kohei Ogane</i> | New type of ETH breakdown |  |
| 11:45 – 12:00 | CLOSING | | |
| 12:00 – 14:00 | LUNCH AND DEPARTURE | | |