

# NQW

# Nonequilibrium Quantum Workshop

Color codes	Invited talk	Contributed talk	Tutorial
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12:00 - 16:00	<i>REGISTRATION</i>	Sunday, December 10
16:00 - 16:15	<b>Opening:</b> NQW 2023	
	<b>Chair: Jaka Vodeb</b>	
16:15 - 16:45	<b>Robin Steinigeweg:</b> Constructing nonequilibrium steady states from equilibrium correlation functions	
16:45 - 17:15	<b>Rok Zitko:</b> Richardson model description of spin-orbit coupling in superconducting islands	
17:15 - 17:45	<b>Simon Gerber:</b> Direct characterization of photo- and electrically-induced “hidden” state switching of 1T-TaS <sub>2</sub>	
17:45 - 18:00	<b>Corinna Burri:</b> Spatial mapping of the electronic structure of 1T-TaS <sub>2</sub>	
18:00 - 19:30	<i>DINNER</i>	
	<b>Chair: Tomaz Mertelj</b>	
19:30 - 20:00	<b>Patrycja Lydźba:</b> Integrals of motion in dipole-conserving models	
20:00 - 20:15	<b>Miroslav Hopjan:</b> Critical quantum dynamics of observables at eigenstate transitions	
20:15 - 20:30	<b>Hui Zhao:</b> Laser-induced tunnel ionization and femtosecond nonthermal melting in MgO	
20:30 - 20:45	<b>Rok Venturini:</b> Nanoscale polytype transformation	
20:45 - 21:00	<b>Yevhenii Vaskivskyi:</b> Electronic Amorphous State of 1T-TaS <sub>2</sub> : An Order Embedded in the Disorder	

	<b>Chair: Simon Gerber</b>	Monday
9:00 - 9:45	<b>Dragan Mihailovic:</b> Trajectories through emergent metastable states in 2D correlated electron systems	
9:45 - 10:15	<b>Yuta Murakami:</b> Possible hidden phases in photo-doped Mott insulators	
10:15 - 10:45	<i>COFFEE BREAK</i>	

<b>Monday, December 11</b>		<b>Chair: Patrycja Lydzba</b>
	10:45 - 11:15	<b>Zala Lenarčič:</b> Flavours of openness
	11:15 - 11:45	<b>Gergely Zarand:</b> Non-equilibrium transport and quantum information jet in the Hubbard model
	11:45 - 12:00	<b>Poster flash talks</b>
	12:00 - 13:15	<i>LUNCH</i>
	13:15 - 16:30	<i>Free Time / Poster Session</i>
		<b>Chair: Miroslav Hopjan</b>
	16:30 - 17:00	<b>Fabian Heidrich-Meisner:</b> Nonequilibrium dynamics and transport in Holstein models
	17:00 - 17:30	<b>Tomaz Prosen:</b> Critical Full Counting Statistics in Integrable Spin Chains
	17:30 - 18:00	<b>Denis Arčon:</b> The pairing symmetry in the quasi-one-dimensional superconductors $A_2Mo_3As_3$ (A=Rb, Cs)
	18:00 - 19:30	<i>DINNER</i>
		<b>Chair: Gregor Jotzu</b>
	19:30 - 20:00	<b>Jure Demsar:</b> TBD
	20:00 - 20:15	<b>Nelson Hua:</b> Ultrafast Electronic Domain Fluctuations Detected in a Nonequilibrium X-Ray Speckle Visibility Experiment
20:15 - 20:30	<b>Gregor Humar:</b> False vacuum decay in the transverse field Ising model on a quantum annealer	
20:30 - 21:45	<i>Social Event</i>	

<b>Tuesday, December 12</b>		<b>Chair: Jure Demsar</b>
	9:00 - 9:30	<b>Daniele Fausti:</b> Cavity-Mediated Thermal Modulation of the Metal-to-Insulator Transition in 1T-TaS <sub>2</sub>
	9:30 - 10:00	<b>Martin Eckstein:</b> Light-matter hybrids made from strongly correlated electron systems
	10:00 - 10:15	<b>Federico Cilento:</b> Ultrafast Dynamics of the Charge Density Wave in Kagome Metals
	10:15 - 10:45	<i>COFFEE BREAK</i>
		<b>Chair: Nelson Hua</b>
	10:45 - 11:15	<b>Michael Sentef:</b> Light-Matter Control of Quantum Materials
	11:15 - 11:45	<b>James McIver:</b> Ultrafast control of topological transport in quantum materials
	11:45 - 12:00	<b>Sourav Nandy:</b> Emergent dipole moment conservation and subdiffusion in tilted chains

12:00 - 13:15	<i>LUNCH</i>	<i>Tuesday, December 12</i>
13:15 - 16:30	<i>Free Time / Poster Session</i>	
	<b>Chair: Janez Bonca</b>	
16:30 - 17:00	<b>Andrei Kirilyuk:</b> Shaken, not stirred: a recipe for ultrafast magnetic switching via phononic resonances	
17:00 - 17:30	<b>Philipp Werner:</b> Photo-induced nonthermal metals	
17:30 - 17:45	<b>Kazuki Yamamoto:</b> Entanglement phase transition under continuously monitored dynamics in many-body localized systems	
17:45 - 18:00	<b>Giuliano Chiriacco:</b> Entanglement transition and monogamy effects in non-Markovian systems	
18:00 - 19:30	<i>DINNER</i>	
	<b>Chair: Yuta Murakami</b>	
19:30 - 20:00	<b>Jaka Vodeb:</b> Probing Dynamical Resonances In A 5564 Qubit Quantum Annealer	
20:00 - 20:15	<b>Jernej Mravlje:</b> Ta <sub>2</sub> NiSe <sub>5</sub> : excitonic or not?	
20:15 - 20:30	<b>Alexander Osterkorn:</b> Current-induced excitonic condensation in bilayer systems	
20:30 - 21:45	<i>Social Event</i>	

	<b>Chair: Denis Golez</b>	<i>Wednesday, December 13</i>
9:00 - 9:30	<b>Marcin Mierzejewski:</b> Long-living prethermalization in nearly integrable spin ladders	
9:30 - 10:00	<b>Jacek Herbrych:</b> Breakdown of Hilbert space fragmentation	
10:00 - 10:15	<b>Žiga Krajnik:</b> Dynamical universality of charged single-file systems and integrable spin chains	
10:15 - 10:45	<i>COFFEE BREAK</i>	
	<b>Chair: Daniele Fausti</b>	
10:45 - 11:15	<b>Theo Rasing:</b> Optical control of magnetism thru strongly non-equilibrium phases	
11:15 - 11:45	<b>Andrea Caviglia:</b> TBD	
11:45 - 12:00	<b>Viktor Kabanov:</b> The correlated random anisotropy model of the Co-organic composite films	
12:00 - 13:15	<i>LUNCH</i>	
13:15 - 16:30	<i>Free Time / Poster Session</i>	

<b>Wednesday, December 13</b>		<b>Chair: James McIver</b>
	16:30 - 17:00	<b>Gregor Jotzu:</b> Ultrafast Magnetometry of (Light-Induced) Superconductors
	17:00 - 17:30	<b>Andrei Shumilin:</b> Emergent spin phenomena from hyperfine interaction of localized electrons and nuclear spins
	17:30 - 17:45	<b>Madhumita Sarkar:</b> Manipulating exciton binding by floquet engineering in Fermi Hubbard ladder
	17:45 - 18:00	<b>Jaka Strohsack:</b> Influence of Metal/Organic-Molecules Interface on Magnetic Anisotropy in Co Thin Films: A Time-Resolved MOKE Investigation
	18:00 - 19:30	<i>DINNER</i>
		<b>Chair: Zala Lenarčič</b>
	19:30 - 20:00	<b>Denis Golez:</b> Chirped amplitude mode in photo-doped superconductors
	20:00 - 20:15	<b>Carlo Vanoni:</b> A renormalization group analysis of the Anderson model in infinite dimensions
	20:15 - 20:30	<b>Rafał Świątek:</b> A note on weak eigenstate thermalization and normalization of operators

<b>Thursday, December 14</b>		<b>Chair: Lev Vidmar</b>
	9:00 - 9:30	<b>Andrew George Green:</b> Phase Transitions in the Classical Simulability of Open Quantum Systems
	9:30 - 10:00	<b>Till Domröse:</b> Light-induced hexatic state observed by ultrafast nanobeam diffraction
	10:00 - 10:15	<b>Anze Mraz:</b> Switching of the nanocryotron-driven charge configuration memristor in real time
	10:15 - 10:45	<i>COFFEE BREAK</i>
		<b>Chair: Federico Cilento</b>
	10:45 - 11:15	<b>Tomaz Mertelj:</b> Unconventional photo-induced charge-density-wave dynamics in 2H-NbSe <sub>2</sub> compared to the conventional in 1T-VSe <sub>2</sub>
	11:15 - 11:30	<b>Manuel Tuniz:</b> Manipulation of the charge-density-wave in VTe <sub>2</sub> by femtosecond light pulses
	11:30 - 11:45	<b>Iris Ulčakar:</b> Iterative construction of conserved quantities in dissipative nearly integrable systems
	11:45 - 12:00	<b>Jože Gašperlin:</b> The interplay of lattice dynamics, stacking effects and Mott physics in charge-density-wave systems
12:00 - 12:15	<b>Closing:</b> NQW 2023	