



FRIAS

FREIBURG INSTITUTE
FOR ADVANCED STUDIES
ALBERT-LUDWIGS-
UNIVERSITÄT FREIBURG

Workshop for Quantum Simulations of Open Quantum Systems

A FRIAS Junior Researcher Conference

Date: 13-15 November 2013

Program

Wed, Nov 13th	Arrival Day
09:00	Heinz-Peter Breuer, Freiburg: <i>Quantum dynamics of open systems: Non-Markovianity, initial correlations and nonlocal memory effects</i>
09:45	Julian Struck, Hamburg: <i>Artificial Gauge Fields in Driven Optical Lattices</i>
10:30	Coffee Break
11:00	Alejandro Bermudez, Ulm: <i>Sympathetic dissipative gadgets and spread of correlations in ion crystals</i>
11:45	Jonathan Home, Zürich: <i>Beryllium/calcium ion chains for open-system quantum simulations</i>
12:30	Lunch
14:00	Akihito Ishizaki, Tokyo: <i>Electronic and Vibrational Wavepackets in Photosynthetic Energy Transfer</i>
14:45	Klaus Hornberger, Duisburg: <i>Macroscopicity of quantum superposition states</i>
15:30	Coffee Break
16:00	Zach Blunden-Codd, London: <i>Polarons: The Next Generation</i>
16:45	Yiheng Lin, Boulder:

	<i>Dissipative production of a maximally entangled steady state</i>
17:30	Lab Tours / Discussions
19:30	Conference Dinner at Restaurant Paradies

Thu, Nov 14th	
09:00	Claudiu Genes, Innsbruck: <i>Protected State Enhanced Quantum Metrology with Interacting Two-Level Ensembles</i>
09:45	Robert Loew, Stuttgart: <i>A single electron in a Bose-Einstein-Condensate</i>
10:30	Coffee Break
11:00	Johannes Majer, Wien: <i>Coupling Spins and Diamond Color Centers to Superconducting Cavities</i>
11:45	Yui Kubo, Saclay: <i>Electron Spin Resonance Detected by a Superconducting Qubit</i>
12:30	Lunch
14:00	Moritz Hiller, Freiburg: <i>A spectral Approach to the tunneling Decay of two interacting Bosons</i>
14:45	Joe Britton, Boulder: <i>tba</i>
15:30	Coffee Break
16:00	Erik Gauger, Singapore: <i>Superabsorption of Light via Quantum Engineering</i>
16:45	Jakob Iles-Smith, London: <i>A simple approach to dissipative energy transport in non-perturbative regimes</i>
17:30	Lab Tours / Discussions

Fri, Nov 15th	
09:00	Diego Porras, Madrid: <i>Mesoscopic entanglement induced by dissipation in quantum optical systems</i>
09:45	Ahsan Nazir, London: <i>Unveiling environmental entanglement in strongly dissipative qubits</i>
10:30	Coffee Break
11:00	David Gross, Freiburg: <i>The complexity-theoretic view on simulating open quantum systems</i>
11:45	Ulrich Schneider, Munich: <i>Negative absolute Temperatures and the emergence of coherence for bosons in optical lattices</i>
12:30	Lunch
14:00	Dmitry Krimer, Vienna: <i>QED of a single-mode cavity coupled strongly to a nitrogen-vacancy spin ensemble under the action of rectangular pulses</i>
14:45	Thomas Wellens, Freiburg: <i>Quantum transport of interacting bosons in random potentials</i>
15:30	Coffee Break
16:00	Juliane Klatt, Freiburg: <i>Phononic Properties of Molecular Junctions Subject to Vibronic Coupling</i>
16:45	Michael Johanning, Siegen: <i>Quantum Simulations Based on Magnetic Manipulation of Ions</i>
17:30	Lab Tours / Discussions