

 **SFB/Transregio 21**

Workshop 2013

CO.CO.MAT
Common perspectives
of mesoscopic systems
and quantum gases

October, 27th – 30th, 2013
Schloss Reisenburg, Günzburg

Arrival:	Sunday, October 27th (evening)
Departure (non SFB):	Wednesday, October 30th (after lunch)
Departure (SFB):	Wednesday, October 30th (afternoon, after coffee break)

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Program Schedule

Monday, October 28th, 2013

07:30 – 08:30	Breakfast	
08:30 – 09:30	Martin Holthaus (Carl von Ossietzky Universität, Oldenburg) <i>"Quantum many-body dynamics beyond the mean field level"</i>	
09:30 – 10:00	Coffee break	
10:00 – 10:30	Peter Michler (Universität Stuttgart) <i>"Deterministic generation of indistinguishable polarization-entangled photon pairs"</i>	SFB C3
10:30 – 11:00	Philipp Neumann, Gerald Waldherr (Universität Stuttgart) <i>"High fidelity spin entanglement and quantum error correction"</i>	SFB C4
11:00 – 11:30	Jan Wiersig (Universität Magdeburg) <i>"Semiconductor quantum dots in optical microcavities: photon correlations and coupled modes"</i>	
11:30 – 12:00	Andreas Günther (Universität Tübingen) <i>"Interaction of atoms and nanotips"</i>	SFB C9
12:00 – 14:00	Lunch	
14:00 – 14:30	Gergely Zaránd (Budapest University of Technology and Economics, Hungary) <i>"Loschmidt echo and the many-body orthogonality catastrophe in a qubit-coupled one-dimensional gas"</i>	
14:30 – 14:40	Björn Kubala (Universität Ulm) <i>"Cooperative effects between atoms and a superconducting cavity" (Theory)</i>	SFB C2
14:40 – 14:50	Helge Hattermann (Universität Tübingen) <i>"Coherence of cold atoms on a superconducting atom chip" (Experimental)</i>	SFB C2
14:50 – 15:00	Matthias Rudolph (Universität Tübingen) <i>"SQUIDS for coupling to ultracold atom clouds" (Experimental)</i>	SFB C2
15:00 – 15:30	Rosina Menditto (Universität Tübingen) <i>"Phi Josephson junctions" (Experimental)</i>	SFB A5
15:30 – 15:45	Matthias Zimmermann (Universität Ulm) <i>"Using current injectors to tune the ground state of a ϕ-Josephson junction" (Theory)</i>	SFB A5
15:45 – 16:00	Harald Losert (Universität Ulm) <i>"Quantum mechanics in a driven Morse potential: Excitation and tunneling" (Theory)</i>	SFB A5
16:00 – 16:30	Coffee break	
16:30 – 18:00	Poster session	
18:00 – 20:00	Dinner	
20:00 – 21:00	Christopher Alan Fuchs (Perimeter Institute for Theoretical Physics, Waterloo, Ontario, Canada) <i>"Quantum Theory from Quantum Information? (What would Feynman say?)"</i>	

Tuesday, October 29th, 2013

07:30 – 08:30	Breakfast	
08:30 – 09:30	Piet O. Schmidt (PTB Braunschweig and QUEST Hannover) <i>"Quantum Logic Spectroscopy of Trapped Ions"</i>	
09:30 – 10:00	Coffee break	
10:00 – 10:30	Alexander Krupp (Universität Stuttgart) <i>"Coupling a single electron to a Bose-Einstein condensate"</i>	SFB B6
10:30 – 10:45	Alejandro Muramatsu (Universität Stuttgart) <i>"Ultra-cold fermionic atoms on a honeycomb lattice" (Theory)</i>	SFB B4
10:45 – 11:00	Benjamin Deissler (Universität Ulm) <i>"Ultra-cold fermionic atoms on a honeycomb lattice" (Experimental)</i>	SFB B4
11:00 – 11:30	Igor Lesanovsky (The University of Nottingham, UK) <i>"Dissipative dynamics of Rydberg lattice gases"</i>	
11:30 – 12:00	Graham Lothead (Universität Stuttgart) <i>"High resolution excitation and imaging of single Rydberg atoms in an ultracold gas"</i>	SFB B10
12:00 – 14:00	Lunch	
14:00 – 14:30	Sebastian Hofferberth (Universität Stuttgart) <i>"Single photon nonlinearities in an ultracold Rydberg gas"</i>	SFB C12
14:30 – 15:00	Beatriz Olmos-Sanchez (The University of Nottingham, UK) <i>"Long-range interactions and steady state properties of a driven atomic ensemble with non-local dissipation"</i>	
15:00 – 15:30	Felipe Caycedo-Soler (Universität Ulm) <i>"Signatures of excitonic delocalization among different harvesting structures in <i>R. rubrum</i> purple bacteria"</i>	SFB C11
15:30 – 16:30	Coffee break	
16:30 – 18:00	Poster session	
18:00 – 20:00	Dinner	
20:00 – 21:00	Terence Rudolph (Imperial College London) <i>"Realism and the Epistemic View of Quantum States"</i>	

Wednesday, October 30th, 2013

07:30 – 08:30	Breakfast	
08:30 – 09:30	Stephan Schiller (Heinrich-Heine-Universität Düsseldorf) <i>"Quantum optics and precision physics with molecular hydrogen ions"</i>	
09:30 – 10:00	Coffee break	
10:00 – 10:30	Artjom Krüchow (Universität Ulm) <i>"Cold few-body collisions of atoms and ions"</i>	SFB A8
10:30 – 11:00	Matthias Schmitt (Universität Stuttgart) <i>"Towards dysprosium quantum gases"</i>	SFB A2
11:00 – 11:30	Simone Montangero (Universität Ulm) <i>"Information and control of tailored matter"</i>	SFB A7
11:30 – 12:00	Liam McGuinness (Universität Ulm) <i>"Few spin nuclear magnetic resonance with a strongly coupled sensor"</i>	SFB B11
12:00 – 14:00	Lunch	
14:00 – 15:00	Meeting of PI's (only for SFB members)	
15:00 – 15:30	Coffee break	



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CONTROL OF QUANTUM CORRELATIONS IN TAILORED MATTER
SFB/TRR 21 – STUTTGART, ULM, TÜBINGEN

7th Workshop 2013, Schloss Reisensburg, Günzburg - Overview -

Arrival (all): Sunday, 27.10.2013 (evening, get-together)
Departure (non SFB): Wednesday, 30.10.2013 (after talks)
Departure (SFB): Wednesday, 30.10.2013 (afternoon, after coffee break)

Schedule	Monday, 28.10.2013		Tuesday, 29.10.2013		Wednesday, 30.10.2013	
07:30 – 08:30	<i>Breakfast</i>					
08:30 – 09:30	Martin Holthaus (Carl von Ossietzky Universität, Oldenburg)		Piet O.Schmidt (PTB Braunschweig and QUEST Hannover)		Stephan Schiller (Heinrich-Heine-Universität Düsseldorf)	
09:30 – 10:00	<i>Coffee break</i>					
10:00 – 11:00	C3	C4	B6 (exp./theory)	B4	A8	A2
11:00 – 12:00	Jan Wiersig (Universität Magdeburg)	C9	Igor Lesanovsky (The University of Nottingham, UK)	B10	A7	B11
12:00 – 14:00	<i>Lunch</i>					
14:00 – 15:00	Gergely Zaránd (Budapest University of Technology and Economics, Hungary)	C2	C12	Beatriz Olmos Sanchez (The University of Nottingham, UK)	<i>Meeting of PI's (SFB intern)</i> <i>Coffee break: ca. 15:00 – 15:30</i>	
15:00 – 16:00	A5 (exp.)	A5 (theory)	C11			
16:00 – 16:30	<i>Coffee break</i>					
16:30 – 18:00	Poster		Poster			
18:00 – 20:00	<i>Dinner</i>					
20:00 – 21:00	Christopher Alan Fuchs (Perimeter Institute for Theoretical Physics, Waterloo, Ontario, Canada)		Terence Rudolph (Imperial College London)			

Update: 24.10.2013