

 **SFB/Transregio 21**

Workshop 2008

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

December, 2nd – 6th, 2008
Schloss Reisenburg, Günzburg

Arrival: Tuesday, December 2nd (dinner: 18:00 h)
Departure: Saturday, December 6th (after breakfast)


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Program Schedule

Wednesday, December 3rd, 2008

7:30 – 8:30	Breakfast	
8:30 – 9:30	H. Hilgenkamp (University of Twente (NL)) <i>"Mobius in Quantumland; Superconducting structures with built-in phase shifts"</i>	
9:30 – 10:00	Coffee break	
10:00 – 10:30	C. Hermannstädter (Universität Stuttgart) <i>"Photoluminescence polarization properties of electric field controlled single lateral InGaAs quantum dot molecules embedded in a planar micro-cavity"</i>	SFB C3
10:30 – 11:00	H. Weimer (Universität Stuttgart) <i>"Quantum critical behavior in strongly interacting Rydberg gases"</i>	SFB B6
11:00 – 11:30	P. Treutlein (LMU Ludwig-Maximilians-Universität München) <i>"Ultracold atoms coupled to solid-state micro- and nanostructures: towards hybrid quantum systems"</i>	
11:30 – 12:00	T. Kippenberg (MPI für Quantenoptik, Garching/ Ecole Polytechnique Fédérale de Lausanne (EPFL)) <i>"Cavity Optomechanics: Backaction Cooling of Mechanical Oscillators"</i>	
12:00 – 14:00	Lunch	
14:00 – 14:30	A. Ardavan (Oxford University) <i>"Coherent control of quantum spin systems using electron and nuclear magnetic resonance"</i>	
14:30 – 15:00	J. van Slageren (University of Nottingham) <i>"Pulsed EPR Studies on Single-Molecule Magnets"</i>	
15:00 – 15:30	L. Bogani (Universität Stuttgart) <i>"Detection of single quantum magnets with carbon nanotube electronic devices"</i>	SFB A3
15:30 – 16:00	T. Meunier (CNRS, Institut Neel, Grenoble) <i>"Spin qubits in quantum dots: relaxation and coherent manipulation"</i>	
16:00 – 16:30	Coffee break	
16:30 – 18:00	Poster session	
18:00 – 20:00	Dinner	
20:00 – 21:00	J. Mannhart (Universität Augsburg) <i>"Interfaces – a Fantastic World for Electrons; From MOSFETs to Novel Electron Systems"</i>	

Thursday, December 4th, 2008

7:30 – 8:30	Breakfast	
8:30 – 9:30	E. Demler (Harvard University) <i>"Learning about order from noise"</i>	
9:30 – 10:00	Coffee break	
10:00 – 10:30	W. Zwerger (TU München) <i>"Attractive Fermi gases at infinite coupling"</i>	
10:30 – 11:00	T. Lahaye (Université Toulouse) <i>"Experiments with a dipolar quantum gas"</i>	
11:00 – 11:30	V. Jacques (Universität Stuttgart) <i>"Dynamic polarization of single nuclear spins in a room temperature diamond"</i>	SFB C4
11:30 – 12:00	G. Schön (Universität Karlsruhe) <i>"Circuit QED: lasing, cooling, and nonequilibrium photon states"</i>	
12:00 – 14:00	Lunch	
14:00 – 14:30	M. Efremov (Universität Ulm) <i>"Efimov states in rearrangement collisions"</i>	
14:30 – 15:00	L. Santos (Universität Hannover) <i>"Dipolar and spinor quantum gases"</i>	
15:00 – 15:30	K. Sengstock (Universität Hamburg) <i>"Spectroscopy of quantum gases in optical lattices"</i>	
15:30 – 16:00	J. Hecker Denschlag (Universität Innsbruck) <i>"Ultracold Rb₂ molecules in the rovibrational groundstate"</i>	
16:00 – 16:30	Coffee break	
16:30 – 18:00	Poster session	
18:00 – 20:00	Dinner	
20:00 – 21:00	K. Mølmer (University of Aarhus) <i>"Collective qubits"</i>	

Friday, December 5th, 2008

7:30 – 8:30	Breakfast	
8:30 – 9:30	C. Schönenberger (University of Basel) <i>"Electron Interference and Correlation Experiments in Solid-State Nanostructures"</i>	
9:30 – 10:00	Coffee break	
10:00 – 10:30	J. Weis (MPI für Festkörperforschung, Stuttgart) <i>"Quantum Hall effect: The role of compressible and incompressible regions"</i>	SFB C3
10:30 – 11:00	E. Goldobin (Universität Tübingen) <i>"Manipulation, readout and quantum behavior of fractional Josephson vortices"</i>	SFB A5

11:00 – 11:30	U. Poschinger (Universität Ulm) <i>"Raman ground state cooling and coherent manipulations in the segmented micro ion trap"</i>	SFB C5
11:30 – 12:00	D. Cano (Universität Tübingen) <i>"Meissner Effect in Superconducting Microtraps"</i>	SFB C2
12:00 – 14:00	Lunch	
14:00 – 14:30	S. Wessel (Universität Stuttgart) <i>"Simulations of Tailored Quantum Systems in and out-of Equilibrium"</i>	SFB B4 B8
14:30 – 15:00	K. Schönhammer (Universität Göttingen) <i>"Quantum quenches: entanglement entropy, full counting statistics and the Jarzynski relation"</i>	
15:00 – 16:00	B. Altshuler (University of Columbia) <i>"Anderson Localization – 50 years after the discovery"</i>	
16:00 – 16:30	Coffee break	
16:30 – 18:00		
18:00 – 20:00	Dinner	

**Workshop 2008, Reisensburg, Ulm:****Overview program schedule**

Arrival: Tuesday, Dec. 2nd, evening

Departure: Saturday, Dec. 6th, morning

Schedule	Wednesday, December 3rd		Thursday, December 4th		Friday, December 5th	
7:30 – 8:30	<i>Breakfast</i>					
8:30 – 9:30	H. Hilgenkamp		E. Demler		C. Schöenberger	
9:30 – 10:00	<i>Coffee break</i>					
10:00 – 11:00	<i>C. Hermannstädter</i> (SFB, C3)	<i>H. Weimer</i> (SFB, B6)	W. Zwerger	T. Lahaye	<i>J. Weis</i> (SFB, C3)	<i>E. Goldobin</i> (SFB, A5)
11:00 – 12:00	P. Treutlein	T. Kippenberg	<i>V. Jacques</i> (SFB, C4)	G. Schön	<i>U. Poschinger</i> (SFB, C5)	<i>D. Cano</i> (SFB, C2)
12:00 – 14:00	<i>Lunch</i>					
14:00 – 15:00	A. Ardavan	J. v. Slageren	M. Efremov	L. Santos	<i>S. Wessel</i> (SFB, B4, B8)	K. Schönhammer
15:00 – 16:00	<i>L. Bogani</i> (SFB, A3)	T. Meunier	K. Sengstock	J. Hecker-Denschlag	B. Altshuler	
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	After dinner talk: J. Mannhart		After dinner talk: K. Mølmer			