

 **SFB/Transregio 21**

Workshop 2010

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

November, 28th – December 2nd, 2010
Schloss Reisenburg, Günzburg

Arrival: Sunday , November 28th (evening)
Departure: Thursday, December 2nd (morning)


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Program Schedule

Monday, November 29th, 2010

07:30 – 08:30	Breakfast	
08:30 – 09:30	H.-C. Nägerl (Universität Innsbruck) <i>"Quantum engineering at nanokelvin temperatures: Quantum phase transitions, strong correlations, and novel many-body systems"</i>	
09:30 – 10:00	Coffee break	
10:00 – 10:30	J. Billy (Universität Stuttgart) <i>"Dipolar quantum gases in a 1D optical lattice"</i>	SFB A2
10:30 – 11:00	A. Härter (Universität Ulm) <i>"Dynamics of an ion in a Rb Bose-Einstein condensate"</i>	SFB A8
11:00 – 11:30	F. Schmidt-Kaler (Universität Mainz) <i>"Designing spin-spin interactions in cold ion crystals with magnetic gradients - from 1D to 2D"</i>	SFB C5
11:30 – 12:00	S. Montangero (Universität Ulm) <i>"Control of Many Body quantum systems"</i>	SFB A7
12:00 – 14:00	Lunch	
14:00 – 14:30	J. Balewski (Universität Stuttgart) <i>"Atom molecule coherence in Rydberg dimers"</i>	SFB B6
14:30 – 15:00	J. Honer (Universität Stuttgart) <i>"Collective many-body interaction in Rydberg dressed atoms"</i>	SFB B6
15:00 – 15:30	K. Buckenmaier (Universität Tübingen) <i>"Activation energy of fractional vortices"</i>	SFB A5
15:30 – 16:00	D. Heim <i>"Tunable barrier for fractional Josephson two-vortex molecule"</i>	SFB A5
16:00 – 16:30	Coffee break	
16:30 – 18:00	Poster session	
18:00 – 20:00	Dinner	
20:00 – 21:00	T. Esslinger (ETH Zürich) <i>"Synthetic Quantum Many-Body Systems"</i>	

Tuesday, November 30th, 2010

07:30 – 08:30	Breakfast	
08:30 – 09:30	C. Chin (University of Chicago, USA) <i>"Observation of Scale Invariance and Universality in Two-Dimensional Quantum Gases"</i>	
09:30 – 10:00	Coffee break	
10:00 – 10:30	G. Refael (California Institute of Technology, Pasadena, CA, USA) <i>"Putting Floquet Hamiltonians to work: Dyson singularity and topological phases in time-periodic hamiltonians"</i>	
10:30 – 11:00	A. Moreno (Universität Stuttgart) <i>"Strongly Correlated Fermions out of Equilibrium"</i>	SFB B4
11:00 – 11:30	F. Rempp (Universität Stuttgart) <i>"Understanding spin bath noise"</i>	SFB C4
11:30 – 12:00	L. Bonnes (Universität Stuttgart) <i>"Correlated Bosons beyond Pairwise Interactions"</i>	SFB B8
12:00 – 14:00	Lunch	
14:00 – 14:30	H. Ott (Technische Universität Kaiserslautern) <i>"Electron Microscopy of Ultracold Quantum Gases"</i>	
14:30 – 15:00	J. Thywissen (University of Toronto) <i>"Dynamics of a tunable superfluid junction"</i>	
15:00 – 15:30	L. Bogani (Universität Stuttgart) <i>"Interaction of light and molecular magnets"</i>	SFB A3
15:30 – 16:00	A. Günther (Universität Tübingen) <i>"Ultracold Atoms Near Carbon Nanotubes"</i>	SFB C9
16:00 – 16:30	Coffee break	
16:30 – 18:00	Poster session	
16:30 – 17:30	Meeting of principal investigators SFB/TRR 21 B. Langer (Universität Stuttgart), Talk on Measures promoting gender equality	
18:00 – 20:00	Dinner	
20:00 – 21:00	R. Gross (Technische Universität München) <i>"Playing Quantum Games with Superconducting Circuits"</i>	

Wednesday, December 1st, 2010

07:30 – 08:30	Breakfast	
08:30 – 09:30	M. Fleischhauer (Technische Universität Kaiserslautern) <i>"Relativistic and many-body physics with slow-light polaritons"</i>	
09:30 – 10:00	Coffee break	
10:00 – 11:00	A. Ustinov (Karlsruher Institut für Technologie (KIT)) <i>"Control of quantum correlations between superconducting artificial atom and microscopic defects in solids"</i>	
11:00 – 11:30	R. Butté (Ecole Polytechnique Fédérale de Lausanne, Switzerland) <i>"Room temperature polariton lasing and condensation effects in III-nitride microcavities: latest advances"</i>	
11:30 – 12:00	J. Custers (Technische Universität Wien) <i>"Quantum Criticality in the YbRh₂Si₂ system"</i>	
12:00 – 14:00	Lunch	
14:00 – 14:30	E. Koroknay (Universität Stuttgart) <i>"Towards lateral positioning of vertically coupled quantum dot systems"</i>	SFB C3
14:30 – 15:00	L. Schulz (MPI für Festkörperforschung, Stuttgart) <i>"Interference in transport in two laterally arranged quantum-dots. An RKKY-interaction setup?"</i>	SFB A1
15:00 – 15:30	S. Slama (Universität Tübingen) <i>"Surface Quantum Optics with cold atoms"</i>	SFB B7
15:30 – 16:00	I. Sapina (Universität Tübingen) <i>"Collective Modes of a dipolar BEC in a harmonic trap"</i>	SFB C2
16:00 – 16:30	Coffee break	
18:00 – 20:00	Dinner	