

**8<sup>th</sup> Annual Retreat of the SFB/TR 49, Hotel Heinz, Höhr-Grenzhausen,  
September 25 – 26, 2014**

**Programme**

**Thursday, September 25, 2014**

<b>1. Ultracold Gases &amp; Cold Ion Crystals</b>		
10:00 <sup>(5)</sup>	Michael Lang	<i>Welcome</i>
10:05 <sup>(12+8)</sup>	Andreas Geißler (A3)	<i>Inhomogeneous quantum phases and dynamics in ultracold gases and hybrid atom-ion systems</i>
10:25 <sup>(12+8)</sup>	Sebastian Eggert (A5)	<i>Advanced numerical methods for correlated quantum gases</i>
10:45 <sup>(12+8)</sup>	Herwig Ott (A9)	<i>Ultracold Bose gases with variable interactions</i>
11:05 <sup>(25)</sup>	<b>Coffee Break</b>	
11:30 <sup>(12+8)</sup>	F. Schmidt-Kaler (A10)	<i>Designing spin-spin interactions in cold ion crystals</i>
11:50 <sup>(12+8)</sup>	Artur Widera (A12)	<i>Multi-polaron effects with spinless and spinful impurities in a bosonic quantum gas</i>

<b>2. Quantum Spin Systems (I)</b>		
12:10 <sup>(12+8)</sup>	Bernd Wolf (B1)	<i>Interacting magnetic excitations in quantum spin systems – Thermodynamic investigations</i>
12:30 <sup>(17+8)</sup>	Harald Jeschke (B2)	<i>Ab initio modelling and design of correlated materials</i>
12:55 <sup>(65)</sup>	<b>Lunch</b>	

<b>3. Quantum Spin Systems (II)</b>		
14:00 <sup>(12+8)</sup>	Sebastian Eggert (B3)	<i>Correlations in antiferromagnets</i>
14:20 <sup>(12+8)</sup>	Cornelius Krellner (B4)	<i>Single crystal growth of tunable quantum spin systems</i>
14:40 <sup>(12+8)</sup>	Martin Baumgarten (B5)	<i>Rational design with input from DFT calculations and preparation of coordination polymer-based quantum magnets</i>
15:00 <sup>(10)</sup>	<b>Break</b>	

15:10 (60)	<b>Poster Flash Presentations</b>
16:10 (30)	<b>Coffee Break</b>

16:40 (90)	<b>Mentoring (1) &amp; Posters</b>
18:10 (20)	<b>Break / Treffen Steering Committee</b>

18:30 (60)	<b>Mitgliederversammlung (bis 19:30)</b>
19:15 (60)	<b>Dinner</b>

20:15	<b>Poster Session (bis 23:00)</b>
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### **Friday, September 26, 2012**

XX:XX – 09:00	<b>Breakfast</b>
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<b>3. Magnon Gases</b>		
09:00 (12+8)	Oleksandr Serha (A7)	<i>Collective effects and instabilities of a magnon gas</i>
09:20 (12+8)	Peter Kopietz (A8)	<i>Interacting magnons and critical behavior of bosons</i>

<b>4. Charge-Transfer Salts</b>		
09:40 (12+8)	Michael Lang (B6)	<i>Collective phenomena in organic charge-transfer salts close to the Mott transition</i>
10:00 (12+8)	Gerd Schönhense (B8)	<i>High-resolution photoelectron momentum microscopy of organic charge-transfer salts at variable temperature</i>
10:20 (20)	<b>Coffee Break</b>	
10:40 (12+8)	Michael Huth (B9)	<i>Tuning and monitoring the ferroelectric state in thin film organic charge transfer systems</i>
11:00 (12+8)	Jens Müller (B11)	<i>Low-frequency electron dynamics of organic charge-transfer salts studied by fluctuation spectroscopy</i>

11:20 (12+8)	Hans-Joachim Elmers (B12)	<i>Investigation of electron correlation in organic charge-transfer salts using scanning tunneling spectroscopy</i>
11:40 (5)	Michael Lang	<i>Concluding remarks</i>
11:45 (60)	<b>Lunch</b>	

12:45 (45)	<b>Mentoring (2)</b>	
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