

Program

Sunday, 15 April 2012

17:00 – 21:00 Registration

from 18:30 *WELCOME BUFFET / Informal get together*

Monday, 16 April 2012

7:45 *BREAKFAST*

8:30 – 9:00 Raymond Bishop

Welcome and introduction

Ernst Dreisigacker

About the Wilhelm and Else Heraeus Foundation

9:00 – 9:40 Peter Holdsworth

Spin ice: Static and dynamic properties of an emergent Coulomb gas

9:40 – 10:20 Roser Valenti

Frustration in antiferromagnets and spin liquids

10:30 – 11:00 *COFFEE BREAK*

11:00 – 11:40 Leon Balents

Field-anisotropy phase diagram for $S=1/2$ triangular antiferromagnets

11:40 – 12:20 Matthias Troyer

Interacting anyons: Generalizations of quantum magnetism

12:20 **Conference photo** (in front of the Physikzentrum)

12:30 *LUNCH*

Program

Monday, 16 April 2012

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|---------------|---------------------|---|
| 14:30 – 15:10 | Garnet Chan | Variational wavefunctions and molecular quantum magnetism |
| 15:10 – 15:50 | Oliver Waldmann | Molecular nanomagnets: A challenge for quantum many-body physics in "small" spin systems |
| 16:00 – 16:30 | <i>COFFEE BREAK</i> | |
| 16:30 – 17:10 | Frederic Mila | Exactly dimerized ground state of spin-S chains with three-body interactions |
| 17:10 – 17:50 | Oleg Derzhko | Flat-band spin and electron systems: Ground-state and low-temperature properties |
| 17:50 – 18:30 | Jozef Strecka | Quantum phase transitions in the exactly solved spin-1/2 Heisenberg-Ising two-leg ladder |
| 19:00 | <i>DINNER</i> | |

Followed by a social evening on invitation of the Wilhelm and Else Heraeus Foundation in the Physikzentrum

Program

Tuesday, 17 April 2012

7:45	<i>BREAKFAST</i>	
8:30 – 9:10	Andreas Läuchli	SU(N) quantum magnetism: A new arena for exotic ground states
9:10 – 9:50	Frank Verstraete	Density matrix renormalization group methods for quantum field theories
10:00 – 10:30	<i>COFFEE BREAK</i>	
10:30 – 11:10	Andreas Honecker	Order by disorder and phase transitions in a highly frustrated spin model on the triangular lattice
11:10 – 11:50	Helger Rosner	Surprises in low dimensional spin 1/2 magnets - from crystal chemistry to microscopic magnetic models of complex oxides
11:50 – 12:30	Stefan-Ludwig Drechsler	Frustrated edge-shared chain cuprates: Achieved understanding and remaining open problems
12:30	<i>LUNCH</i>	
14:30 – 15:10	Jesko Sirker	New aspects of transport in spin chains
15:10 – 15:50	Stefano Carretta	Molecular nanomagnets as quantum simulators
15:50 – 16:30	Lapo Bogani	Controlling the dynamics of molecular magnets with photons
16:30 – 17:30	<i>COFFEE BREAK</i>	
17:00 – 17:40	Peter Lemmens	Spin liquid response in the Kagome lattice: Insight from inelastic light scattering
17:40 – 18:20	Bella Lake	Asymmetric thermal linehape broadening in dimerised antiferromagnets - evidence for strong correlations at finite temperature
18:45	<i>DINNER</i>	
19:45	Poster Session	

Program

Wednesday, 18 April 2012

7:45	<i>BREAKFAST</i>	
8:30 – 9:10	Mike Zhitomirsky	Magnon pairing in quantum spin nematic
9:10 – 9:50	Karlo Penc	Exact ground states with deconfined gapless excitations for the 3-leg spin-1/2 tube
10:00 – 10:30	<i>COFFEE BREAK</i>	
10:30 – 11:10	Peter Prelovsek	Transport in pure and disordered spin chains
11:10 – 11:50	Philipp Sindzingre	Multiple spin exchange model on the triangular lattice
11:50 – 12:30	Damian Farnell	Coupled cluster theories of quantum magnetism
12:30 – 12:45	Jürgen Schnack	Concluding remarks and poster awards
12:45	<i>LUNCH</i>	

End of the seminar and departure