



International Workshop

From Electronic Correlations to Functionality

Preliminary Program

Kloster Irsee, Germany

September 12-15, 2016

Monday, September 12, 2016

12:00	Lunch	
13:20	Opening	A. Loidl
Session I		Chair: D. Vollhardt
13:30	S. S. P. Parkin	Giant spin and anomalous Hall conductivities in triangular antiferromagnets
13:55		Discussion
14:05	Ch. Pfleiderer	Stability and decay of magnetic order in chiral magnets
14:20		Discussion
14:25	R. Wiesendanger	Observation and manipulation of individual nanoscale skyrmions by local spin currents and electric fields
14:50		Discussion
15:00	Coffee	
Session II		Chair: P. Böni
15:30	A. Yazdani	Majorana fermions in atomic chains: Spin and charge signatures
15:55		Discussion
16:05	M. Kollar	Correlated electrons in non-equilibrium
16:20		Discussion
16:25	E. Hassinger	Fermi surface topology and chirality in putative Weyl semimetals
16:50		Discussion
17:00	Coffee	
Session III		Chair: W. Petry
17:30	Y. Tokura	Magnetoelectric responses from topological magnets
17:55		Discussion
18:05	Zhe Wang	From confined spinons to emergent fermions: Evolution of elementary excitations in a transverse-field Ising chain
18:20		Discussion
19:00	Dinner	
20:00	Poster Session	



Tuesday, September 13, 2016

7:30 – 9:00	Breakfast	
Session IV		Chair: U. Eckern
9:00	Y. Ando	Topological superconductivity in doped topological insulators
9:25		Discussion
9:35	C. Hugenschmidt	Revealing the Fermi surface using spin-polarized positrons
9:50		Discussion
9:55	M. Vojta	Landau levels of Majorana fermions in a spin liquid
10:20		Discussion
10:30	Coffee	
Session V		Chair: D. Grundler
11:00	A. Rosch	Pumping approximately integrable systems
11:25		Discussion
11:35	W. Kreuzpaintner	In-situ neutron reflectometry during thin film growth
11:50		Discussion
11:55	M. Kläui	Spin dynamics of topological spin structures due to spin orbit effects
12:20		Discussion
12:30	Lunch	
	<i>Excursion</i>	
19:00	Conference Dinner	



Wednesday, September 14, 2016

7:30 – 9:00	Breakfast	
Session VI		Chair: A. Tsirlin
9:00	R. J. Cava	Chemical approaches to looking for new superconductors
9:25		Discussion
9:35	B. Keimer	High-resolution neutron spectroscopy in cuprate superconductors
9:50		Discussion
9:55	C. Felser	Heusler compounds: Tunable materials with non trivial topologies
10:20		Discussion
10:30	Coffee	
Session VII		Chair: H.-A. Krug von Nidda
11:00	B. Büchner	Anisotropic magnetism and spin gap in α - RuCl_3
11:25		Discussion
11:35	P. Gegenwart	Kitaev interaction in hexagonal iridates and rhodates
11:50		Discussion
11:55	R. Thomale	Life on the edge: One-dimensional topological surface terminations
12:20		Discussion
12:30	Lunch	
Session VIII		Chair: T. Kopp
14:00	R. Valentí	Prospects for topologically non-trivial states in correlated kagome and honeycomb lattice materials
14:25		Discussion
14:35	A. P. Kampf	Spin textures in topological superconductors and insulators
14:50		Discussion
14:55	A. Weidenkaff	Direct energy conversion with photo-electrocatalytic and thermoelectric perovskite type materials
15:20		Discussion
15:30	Coffee	
Session IX		Chair: L. Chioncel
16:00	S. Stemmer	Non-Fermi liquid phenomena in oxide heterostructures
16:25		Discussion
16:35	R. Pentcheva	Design of Mott and Chern insulating phases in buckled 3d oxide honeycomb lattices
16:50		Discussion
16:55	W. E. Pickett	Strong correlations, spin-orbit coupling, symmetry, topologicality
17:20		Discussion
18:00	Dinner	
19:30	Poster Session	



Thursday, September 15, 2016

7:30 – 9:00	Breakfast	
Session X		Chair: G. Hammerl
9:00	N. Nagaosa	Nonlinear responses in topological systems
9:25		Discussion
9:35	I. Leonov	Electronic structure and lattice stability of correlated electron materials
9:50		Discussion
9:55	F. Pollmann	Dynamical signatures of topological spin liquids
10:20		Discussion
10:30	Coffee	
Session XI		Chair: P. Lunkenheimer
11:00	R. Coldea	Unconventional spiral order and Kitaev physics in the harmonic honeycomb iridates
11:25		Discussion
11:35	E. Benckiser	Tailoring magnetic order in NdNiO ₃ heterostructures
11:50		Discussion
11:55	I. Kézsmárki	Effect of Dzyaloshinskii-Moriya interaction and axial magnetic anisotropy on the stability range of Néel-type skyrmions
12:20		Discussion
12:30	A. Loidl	Concluding remarks
13:00	Lunch	