

**Foundations of Topological Matter: Symmetries, Disorder, and Correlations**  
**Wien, September 8 – 12, 2014**  
**Schedule**

**Monday, September 8, 2014**

09:00	Opening
09:10 – 10:00	<b>Yosi Avron</b> Braiding fluxes in Pauli Hamiltonians
10:10 – 11:00	<b>Jakob Yngvason</b> Incompressibility estimates in the Laughlin phase
11:10 – 11:40	Coffee Break
11:40 – 12:30	<b>Robert Seiringer</b> Validity of spin wave theory for the quantum Heisenberg model
12:40 – 14:00	Lunch Break
14:00 – 14:50	<b>Sebastian Diehl</b> Dissipatively induced quantum phases of atomic fermions
15:00 – 15:50	<b>Johannes Kellendonk</b> Topological interpretation of Levinson's theorem
16:00 – 16:20	Coffee Break
16:20 – 17:10	<b>Alexander Altland</b> Quantum criticality of the topological Anderson insulator
17:20 – 18:00	<b>Ricardo Kennedy</b> Homotopy theory of topological insulators

**Tuesday, September 9, 2014**

09:00 – 09:50	<b>Jean Bellisard</b> Periodic approximant to aperiodic Hamiltonian
10:00 – 10:50	<b>Paul Fendley</b> Parafermions and topological order
11:00 – 11:30	Coffee Break
11:30 – 12:20	<b>Karsten Flensberg</b> Tunneling spectroscopy of Majorana bound states
12:30 – 14:00	Lunch Break
14:00 – 14:50	<b>Reinhold Egger</b> Topological Kondo effect

- 15:00 – 15:50      **Alan Huckleberry**  
Constructions in low-dimensional complex geometry related to topological insulators and their symmetry classes
- 16:00 – 16:20      Coffee Break
- 16:20 – 17:10      **Simon Trebst**  
Chiral spin liquids, network models, and fractional quantum Hall states
- 17:20 – 18:00      **Maria Hermanns**  
Majorana metals and quantum spin liquids

**Wednesday, September 10, 2014**

- 09:00 – 09:50      **Christoph Schweigert**  
Topological surface defects, symmetries and dualities
- 10:00 – 10:50      **Zheng-Cheng Gu**  
Emergence of p+ip superconductivity in 2D strongly correlated Dirac fermions
- 11:00 – 11:30      Coffee Break
- 11:30 – 12:20      **Gian-Michele Graf**  
Bulk-boundary duality for topological insulators
- 12:30 – 14:30      Lunch Break
- 14:30 – 18:30      **Organized Social Event**
- 19:00 -              **Conference Dinner**

**Thursday, September 11, 2014**

- 09:00 – 09:50      **Xiao-Liang Qi**  
Generalized Kitaev models and slave genoms
- 10:00 – 10:50      **Achim Rosch**  
Skyrmions and emergent monopoles in chiral magnets
- 11:00 – 11:30      Coffee Break
- 11:30 – 12:20      **Immanuel Bloch**  
Probing and controlling topological Bloch bands using ultracold quantum gases
- 12:30 – 14:00      Lunch Break
- 14:00 – 14:50      **Thomas Quella**  
Topological aspects of SU(N) magnetism and its cold atom realization
- 15:00 – 15:50      **Anton Akhmerov**

Breaking Kramers degeneracy by superconducting phase differences

16:00 – 16:20

Coffee Break

16:20 – 17:10

**Jürg Fröhlich**

Gauge theory of states of matter – old and new

17:20 – 18:00

**Roberto Bondesan**

Lattice conformal fields at quantum Hall transitions

### **Friday, September 12, 2014**

09:00 – 09:50

**Bruno Nachtergaele**

Invariants for gapped ground state phases in dimensions one and higher

10:00 – 10:50

**Eddy Ardonne**

Constructing critical spin chains using modular invariance

11:00 – 11:30

Coffee Break

11:30 – 12:20

**Hermann Schulz-Baldes**

Invariants of disordered topological insulators

12:30 – 14:00

Lunch Break

14:00 – 14:50

**Heinz Siedentop**

Dipoles in 2D have infinitely many bound states

15:00 – 15:50

**Ilya Eremin**

Proximity-induced magnetization dynamics, interaction effects, and phase transitions on a topological surface

16:00 – 16:30

Coffee Break