

# Program

## Sunday, 8 May 2016

17:00 – 21:00 Registration

18:00 *DINNER / Informal get together*

## Monday, 9 May 2016

08:00 *BREAKFAST*

08:50 – 09:00 Axel Pelster

**Opening and Welcome**

### **Session 1: Topology**

09:00 – 09:45 Tilman Esslinger

**A cold grip on topology:  
the Haldane model**

09:45 – 10:30 Päivi Törmä

**Superfluidity and interactions in  
topologically and geometrically non-  
trivial bands**

10:30 – 11:00 *COFFEE BREAK*

11:00 – 11:45 Michael Fleischhauer

**Reservoir-induced topological order  
and quantized transport in open  
systems**

# Program

**Monday, 9 May 2016**

## **Session 2: Optical Lattices**

11:45 – 12:30 Peter Zoller **A 'dark state' optical lattice for cold atoms**

12:30 – 12:40 **Conference Photo** (in front of the lecture hall)

12:40 *LUNCH*

## **Session 3: Dynamics**

14:00 – 14:45 Corinna Kollath **Dissipative dynamics in ultracold atoms**

14:45 – 15:30 Tin-Lun Ho **Quantum turbulence**

15:30 -16:00 *COFFEE BREAK*

16:00 – 18:00 **Plenary Poster Flash Presentation**

18:00 *HERAEUS DINNER, social event  
(cold & warm buffet, free beverages)*

20:00 – 22:00 **Poster Session I**

# Program

**Tuesday, 10 May 2016**

08:00            *BREAKFAST*

**Session 4: Magnetism**

09:00 – 09:45    Rembert Duine

**Spintronics and magnon Bose-Einstein condensation**

09:45 – 10:30    Randall Hulet

**Quantum magnetism with ultracold atoms**

10:30 – 11:00    *COFFEE BREAK*

**Session 5: Polaron**

11:00 – 11:45    Rudolf Grimm

**Birth, life, and fate of a Fermi polaron**

11:45 – 12:30    Eugene Demler

**Bose polarons**

12:30            *LUNCH*

# Program

**Tuesday, 10 May 2016**

## **Session 6: Fermions**

- 14:00 – 14:45 Leonardo Fallani **Synthetic dimensions and strongly interacting two-electron Fermi gases**
- 14:45 – 15:30 Stefan Kuhr **Quantum-gas microscopes – a new tool for quantum-simulation with single-particle access**
- 15:30 – 16:00 *COFFEE BREAK*

## **Session 7: Contributed Talks I**

- 16:00 – 16:30 Daniel Greif **Fermionic many-body states under the microscope**
- 16:30 – 17:00 Patrizia Vignolo **Symmetry properties, density profiles and momentum distribution of multicomponent mixtures of strongly interacting 1D Fermi gases**
- 17:00 – 17:30 Nadine Meyer **Formation of Jones-Roberts solitons in a Bose-Einstein condensate**
- 17:30 – 18:00 Georg Bruun **Impurity atom in a Bose-Einstein condensate**
- 18:30 *DINNER*

## **Session 8: Evening Talk**

- 20:00 – 21:00 Dan Stamper-Kurn **Dynamics and thermodynamics of magnetic excitations in a spinor Bose gas**

# Program

**Wednesday, 11 May 2016**

08:00            *BREAKFAST*

**Session 9:    Quantum Droplets**

09:00 – 09:45    Igor Ferrier-Barbut    **Quantum droplets of a strongly dipolar Bose-Einstein condensate**

09:45 – 10:30    Luis Santos            **Ultra-cold dipolar gases: quantum droplets, non-equilibrium dynamics, and excitation transport**

10:30 – 11:00    *COFFEE BREAK*

**Session 10:   Lattices with Long-Range Interactions**

11:00 – 11:45    Andreas Hemmerich    **Bosons in a narrow-band optical resonator**

11:45 – 12:30    Walter Hofstetter      **Competing quantum phases in bosonic lattice systems with Rydberg dressing**

12:30            *LUNCH*

14:00            **Excursion**

18:30            *DINNER*

20:00 – 22:00    **Poster Session II**

# Program

Thursday, 12 May 2016

08:00            *BREAKFAST*

**Session 11: Low Dimensions**

09:00 – 09:45    Jörg Schmiedmayer    **High order correlations and what we can learn about the solution for many body problems from experiment**

09:45 – 10:30    Thierry Giamarchi    **Out of equilibrium phenomena in cold atomic systems**

10:30 – 11:00    *COFFEE BREAK*

**Session 12: Bosons**

11:00 – 11:45    Eugene Zaremba    **Persistent currents in a two-component Bose Gas in the ring geometry**

11:45 – 12:30    Sandro Stringari    **Superfluidity of a spin-orbit coupled Bose gas**

12:30            *LUNCH*

# Program

Thursday, 12 May 2016

## Session 13: Contributed Talks II

- |               |                           |   |
|---------------|---------------------------|---|
| 14:00 – 14:30 | Fabrizio Larcher          | <b>Generation and dynamics of solitonic defects: Kibble-Zurek in reduced dimensionality</b> |
| 14:30 – 15:00 | Lauriane Chomaz           | <b>Ultracold dipolar gases of magnetic atoms in lattices</b>                                |
| 15.00 – 15:30 | Frank Vewinger            | <b>Calorimetry of and symmetry breaking in a photon Bose-Einstein condensate</b>            |
| 15:30 – 16:00 | Milan Radonjic            | <b>Microscopic model of photon condensation</b>   |
| 16:00 – 16:30 | <i>COFFEE BREAK</i>       |   |
| 16:30 - 16:45 | Stefan Jorda              | <b>About the Wilhelm and Else Heraeus-Foundation</b>  |
| 16.45 – 18:30 | <b>Poster Session III</b> |   |
| 18:30         | <i>DINNER</i>             |   |

## Session 14 Evening Talk II

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|---------------|----------------------|--|
| 20:00 – 21:00 | Matthias Weidemüller | <b>Rydberg atom – light interfaces</b> |
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# Program

**Friday, 13 May 2016**

08:00            *BREAKFAST*

## **Session 15: Solitons**

09:00 – 09:45    Kazimierz Rzazewski    **Dipolar dark solitons**

09:45 – 10:30    Jacques Tempere        **Vortices and solitons in Fermi  
superfluids**

10:30 – 11:00    *COFFEE BREAK*

## **Session 16: Current Trends**

11:00 – 11:45    Anna Sanpera  
Trigueros            **Quantum thermometry in thermal  
states**

11:45 – 12:30    Johannes Hecker-  
Denschlag            **Cold molecules, collisions and  
reactions**

12:30 – 12:45    Carlos Sá de Melo      **Closing remarks**

12:45            *LUNCH and GOODBYE COFFEE*

**End of the seminar and departure**

*NO DINNER for participants leaving on Saturday morning*