

Program

Sunday, December 11, 2016

17:00 – 21:00 Registration

18:00 *BUFFET SUPPER*

Monday, December 12, 2016

08:00 *BREAKFAST*

09:00 – 09:10 Jürgen Berges **Opening**
Markus Oberthaler

09:10 – 10:10 Erez Zohar **Quantum simulation of lattice gauge theories with ultracold atoms in optical lattices**

10:10 – 10:45 *COFFEE BREAK*

10:45 – 11:45 Philipp Hauke **Lattice gauge theories with trapped ions**

11:45 – 12:25 Christine Muschik **Real-time dynamics of lattice gauge theories with a few-qubit quantum computer**

12:25 **Conference Photo** (in the front of the lecture hall)

12:35 *LUNCH*

Program

Monday, December 12, 2016

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| 14:00 – 15:00 | Raju Venugopalan | Universal dynamics in quark-gluon plasmas |
| 15:00 – 16:00 | Derek Teaney | Hydrodynamic long time tails for a Bjorken expansion |
| 16:00 – 16:45 | <i>COFFEE BREAK</i> | |
| 16:45 – 17:45 | Jörg Schmiedmayer | Probing quantum many body systems by correlations |
| 17:45 – 18:45 | Marcello Dalmonte | Real time dynamics of lattice gauge theories: from tensor network to atomic physics realizations |
| 19:00 | <i>DINNER</i> | |
| 20:00 | Poster Session | |

Program

Tuesday, December 13, 2016

08:00 *BREAKFAST*

09:00 – 10:00 Monika Aidelsburger **Artificial gauge fields with ultracold atoms in optical lattices using laser-assisted tunneling**

10:00 – 10:45 *COFFEE BREAK*

10:45 – 11:45 Florian Hebenstreit **Schwinger pair production with ultracold atoms**

11:45 – 12:25 Valentin Kasper **Implementing quantum electrodynamics with ultracold atomic systems**

12:25 *LUNCH*

14:00 – 15:00 Klaus Sengstock **Studying topology and quantum phases in Floquet engineered Bloch bands**

15:00 – 16:00 Nathan Goldman **Synthetic dimensions from shaking a harmonic trap**

16:00 – 16:45 *COFFEE BREAK*

16:45 – 17:45 Fabrice Gerbier **Driving an Ytterbium BEC on the clock transition: towards Hofstadter optical lattices**

17:45 – 18:45 Igor Ferrier-Barbut **Dipolar Quantum Droplets**

19:00 *DINNER*

20:00 **Poster Session**

Program

Wednesday, December 14, 2016

- 08:00 *BREAKFAST*
- 09:00 – 10:00 Tilman Esslinger **Supersolid phases in quantum gases**
- 10:00 – 10:45 *COFFEE BREAK*
- 10:45 – 11:45 Wilhelm Zwerger **Exact results on the many-body problem from short-distance expansions**
- 11:45 – 12:25 Stefan Flörchinger **Dissipation in quantum gauge theories - interesting open questions**
- 12:25 *LUNCH*
- 14:00 – 15:00 Eugene Demler **Dynamical copper pairing in non-equilibrium systems**
- 15:00 – 16:00 Tilman Enss **Strongly interacting fermions in two dimensions**
- 16:00 – 16:45 *COFFEE BREAK*
- 16:45 – 17:45 Hans Peter Büchler **Topological states in a microscopic model of interacting fermions**
- 17:45-18:45 Michael Lohse **Topological charge pumping with ultracold bosonic atoms in optical superlattices**
- 19:00 *HERAEUS DINNER*
(social event with cold & warm buffet with complimentary drinks)

Program

Thursday, December 15, 2016

08:00 *BREAKFAST*

09:00 – 10:00 Uwe-Jens Wiese **Quantum link models for quantum
simulation of gauge theories**

10:00 – 10:45 *COFFEE BREAK*

10:45 – 12:00 **Round-Table / Closing**

12:00 *LUNCH*

End of the seminar and departure

NO DINNER for participants leaving on Friday morning