

## St. Andrews – Bonn Workshop 28-31 August, 2024

### Bethe Center for Theoretical Physics, University of Bonn

#### Program

##### Wednesday, 28.08.2024

Until ~ 14:00 Arrival of international guests

~ 16:00 Guided visits to the city and dinner

##### Thursday, 29.08.2024

- 09:15-09:20 **Welcome**  
Peter Wahl (St. Andrews), Hans Kroha (Bonn)
- 09:20-09:45 Peter Wahl (St. Andrews, Exp)  
Physics in St. Andrews
- 09:45-10:30 Carolina de Almeida Marques (St. Andrews, Exp)  
Quasiparticle interference at the surface of strontium ruthenates: atomic-scale signatures of spin-orbit-coupling induced van Hove Singularities
- 10:30-11:00 **Coffee**
- 11:00-11:25 Hans Kroha (Bonn, Th)  
Dynamics in Fermi and Bose many-body systems: an overview
- 11:25-12:10 Luke Rhodes (St. Andrews, Th)  
The magic angle of  $\text{Sr}_2\text{RuO}_4$ : optimizing correlation-driven superconductivity
- 12:10-14:00 **Lunch**
- 14:00-14:45 Krzysztof Wojcik (Poznan/Bonn, Th)  
Interactions and high-order van Hove singularities: single impurities and lattices
- 14:45-15:30 Michael Turaev (Bonn, Th)  
Non-Hermitian phase transition in a driven, bulk solid state system, theory
- 15:30-16:00 **Coffee**
- 16:00-16:45 Sebastian Buchberger (St. Andrews, Exp)  
Probing charge density-wave dynamics in epitaxial  $\text{TiSe}_2$  monolayers by time- and angle-resolved photoelectron spectroscopy
- 16:45-17:30 Andrea Bergschneider (Bonn, Exp)  
Interacting excitons in atomically thin semiconductors
- 18:00 **Dinner**

## Friday, 30.08.2024

- 09:30-10:15 Sophie Weber (St. Andrews, Th)  
Emergent, symmetry-driven phenomena at the surface of quantum materials
- 10:15-11:00 Franko Lisandrini (Bonn, Th)  
Supersymmetric spin and charge dynamics
- 11:00-11:30 **Coffee**
- 11:30-12:15 David Luitz and Martina Gisti (Bonn, Th)  
Computational quantum many-body physics: U(1) symmetric matrix product operator
- 12:15-14:00 **Lunch**
- 14:00-14:45 Julian Schmitt (Bonn, Exp)  
Quantum gases of light
- 14:45-15:30 Rosemarijn de Witt (St. Andrews, Th)  
Process tensor approaches to modelling two-dimensional spectroscopy
- 15:30-16:00 **Coffee**
- 16:00-16:45 Stefan Linden (Bonn, Exp)  
Simulation of condensed-matter phenomena with plasmonic waveguide arrays
- 16:45-17:30 Brendon Lovett (St. Andrews, Th)  
Tensor networks for modelling open quantum systems that are strongly coupled to their environment
- 18:00 **Dinner**

## Saturday, 31.08.2024:

- ~ 12:00 Departure