

# Bad Honnef Physics School

Supported by the Wilhelm and Else Heraeus-Foundation

## Ultracold Quantum Gases

August 8 - 14, 2021, Physikzentrum Bad Honnef, Germany

### Organised by

**Axel Pelster (TU Kaiserslautern, Germany)**  
**and Carlos A. R. Sá de Melo (Georgia Tech, Atlanta, USA)**

Since the first Bose-Einstein condensate of ultracold atomic gases was realized experimentally in 1995, the research field of ultracold quantum gases has been extremely active and has expanded in many different directions. New areas of research are emerging at the borderlines of atomic and molecular physics, quantum optics, and condensed matter physics. The main goal of the school is to provide a common platform of understanding both theory and experiment in the field of ultracold quantum gases, aimed not only for PhD students, but also for interested master students and young postdocs.

### Speakers and topics:

- William Phillips (Gaithersburg, USA): Laser cooling
- Alexander Fetter (Stanford, USA): Superfluid Vortex Dynamics
- Antun Balaz (Belgrade, Serbia): Numerical analysis of the Gross-Pitaevskii physics for dipolar bosons and beyond
- Silke Ospelkaus (Hannover, Germany): Ultracold Chemistry
- Ulrich Schneider (Cambridge, UK): Atoms in optical lattices
- Jean Dalibard (Paris, France): Fresh News from Flatland - Testing Scale Invariance in the Lab
- Nathan Goldman (Brussels, Belgium): Artificial gauge fields in materials and engineered systems
- Richard Scalettar (Davis, USA): Monte-Carlo simulation of ultracold atoms

### Fees:

Covering full board and lodging at the Physikzentrum Bad Honnef  
200 € (for DPG members 100 €).

Application & more information: [www.pbh.de](http://www.pbh.de)



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