



Leibniz  
Universität  
Hannover

The group on Ultracold Quantum Gases (Prof. Luis Santos) at the Institute of Theoretical Physics of the Leibniz University Hannover invites applications for a

## Postdoctoral Position (m/f/d) in Theory of ultracold Gases (Salary Scale 13 TV-L, 100 %)

starting at the earliest possible date. The position is limited to 2 years with a possibility of extension. The location is Hannover.

Ultracold quantum gases constitute a fascinating research field at the interface between quantum optics, atomic physics, and condensed-matter physics. This position will focus on one of the most vibrant topics in this active field, namely dipolar quantum gases. Recent experimental and theoretical breakthroughs, in which our group was largely involved, have led to the realization of supersolids in dipolar gases, a novel state of matter long-sought for in condensed-matter physics. In this project, the successful candidate will investigate the exciting physics of dipolar supersolids, by a combination of numerical and analytical methods. Topics include, among others, two-dimensional supersolids and supersolid mixtures.

We are part of a vibrant research environment, including collaborations with experiments on ultracold atoms, molecules and trapped ions. The team is working in an excellent national and international network and is participating in important large collaborative projects, including the Excellence Cluster "QuantumFrontiers" and the Quantum Valley Lower Saxony.

### Responsibilities and duties

- Numerical simulation of dipolar gases under realistic experimental conditions
- Study of challenging problems, such as ultra-dilute droplet formation in binary dipolar mixtures, the formation of two-dimensional supersolids, and binary supersolids

### Employment conditions

- Scientific university degree in Physics
- Very good knowledge of Quantum and Condensed-matter Physics; previous experience on ultracold quantum gases will be positively evaluated
- Good programming skills
- High level of personal motivation, responsibility, and independence
- Pronounced communication and team building capabilities
- Openness to work in a diverse, international working environment
- Very good knowledge of the English language

Part-time employment is possible.

As an equal opportunities employer, Leibniz University Hannover intends to promote women and men. For this reason, suitably qualified women are specifically invited to apply. Preference will be given to equally qualified applicants with disabilities.



Leibniz  
Universität  
Hannover

For further information, please contact Prof. Dr. Luis Santos (Phone: +49 511 762-5890,  
Email: [santos@itp.uni-hannover.de](mailto:santos@itp.uni-hannover.de)). Further information about the group can be found on  
the website: <https://www.itp.uni-hannover.de/380.html>

Please submit your application with supporting documents by 15 March 2021 in electronic  
form to

Email: [gina.gerlach@itp.uni-hannover.de](mailto:gina.gerlach@itp.uni-hannover.de)

or via postal mail to:

**Gottfried Wilhelm Leibniz Universität Hannover**

Institut für Theoretische Physik

Frau Gina Gerlach

Appelstr. 2, 30167 Hannover

GERMANY

<http://www.uni-hannover.de/jobs>

Information on the collection of personal data according to article 13 GDPR can be found at  
<https://www.uni-hannover.de/en/datenschutzhinweis-bewerbungen/>.