



Universität Hamburg

DER FORSCHUNG | DER LEHRE | DER BILDUNG



# RESEARCH ASSOCIATE FOR THE PROJECT “CLUSTER OF EXCELLENCE ,CUI: ADVANCED IMAGING OF MATTER‘- ULTRACOLD AND ULTRAFAST: QUANTUM SIMULATION WITH DENSE RYDBERG ASSEMBLIES.” § 28 SUBSECTION 3 HMBHG

**Institution:** Cluster of Excellence „CUI: Advanced Imaging of Matter“ (photon and nanosciences)

**Salary level:** EGR. 13 TV-L

**Start date:** as soon as possible, fixed for a period of three years (This is a fixed-term contract in accordance with Section 2 of the academic fixed-term labor contract act [Wissenschaftszeitvertragsgesetz, WissZeitVG]).

**Application deadline:** 2026-03-18

**Scope of work:** part-time

**Weekly hours:** 75 % of standard work hours per week

## Your responsibilities

Duties include academic services in the project named above. Research associates may also pursue independent research and further academic qualifications.

The research associate will have the opportunity to conduct cutting-edge research at the intersection of ultracold quantum gases and ultrafast physics for investigating novel quantum systems in a joint research project of the groups of Prof. Dr. Markus Drescher and Prof. Dr. Klaus Sengstock.

The project involves generating ultracold rubidium atoms arranged in arbitrary geometries using optical tweezer technology for designing new functional quantum systems. As a unique tool, ultrafast laser pulses are used to excite atoms into high-lying Rydberg states for quantum simulation or to ionize ultracold atoms for investigating fundamental properties of atom-ion hybrid systems with applications in quantum technology.

## Your profile

A university degree in a relevant field.

■ a university master's degree in physics

- a strong experimental background in trapping and manipulating ultracold atoms or ions
- excellent candidates have an additional background in either ultrafast physics, optical tweezer technology, or in charged particle analysis, particularly in combination with velocity-map-imaging spectrometers or ion microscopes
- experience in programming with Python is helpful
- self-motivated and team player with good communication skills

## We offer



Reliable remuneration based on wage agreements



Continuing education opportunities



University pensions



Attractive location



Flexible working hours



Work-life balance opportunities



Health management, EGYM Wellpass



Educational leave



30 days of vacation per annum

Universität Hamburg—University of Excellence is one of the strongest research educational institutions in Germany. Our work in research, teaching, educational and knowledge exchange activities is fostering the next generation of responsible global citizens ready to tackle the global challenges facing us. Our guiding principle “Innovating and Cooperating for a Sustainable Future in a digital age” drives collaboration with academic and nonacademic partner institutions in the Hamburg Metropolitan Region and around the world. We would like to invite you to be part of our community to work with us in creating sustainable and digital change for a dynamic and pluralist society.

The University of Hamburg is committed to equity. Diversity enriches our university life, whether in our studies, research, teaching, education, or workplace. We therefore welcome all applications, regardless of gender, gender identity, sexual orientation, ethnic or social background, age, religion or belief, disability, or chronic illness.

The University of Hamburg strives to increase the number of women in academia, and encourages qualified female academics to apply.

Severely disabled and disabled applicants with the same status will receive preference over equally qualified non-disabled applicants.

## Instructions for applying

### Contact

Prof. Dr. Markus Drescher  
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 +49 40 8998-2262

Dr. Philipp Wessels-Staarmann  
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### Location

Luruper Chaussee 149  
 22761 Hamburg  
[Zu Google Maps](#)

### Reference number

376

### Application deadline

2026-03-18

Use only the online application form to submit your application with the following documents:

- cover letter
- CV

■ copies of degree certificate(s)

If you experience technical problems, send an email to [bewerbungen@uni-hamburg.de](mailto:bewerbungen@uni-hamburg.de).

More information on [data protection](#) in selection procedures.

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