HUMBOLDT-UNIVERSITÄT ZU BERLIN

Research fellow (m/f/d) in the field of Optical Metrology with expected 75% part-time employment - E 13 TV-L HU (third-party funding limited until 31 December 2025, extension may be possible)

Job ID: DR/143/24

Faculty of Mathematics and Natural Sciences - Department of Physics

Application until: 27.12.2024

We are looking for a research fellow / Ph.D. student (m/f/d) to participate in the development of a complex laser system as part of the project BECCAL and to implement a local test-setup for experiments with ultra-cold quantum gases.

BECCAL is a large joint endeavor by NASA and DLR (Deutsches Zentrum für Luft- und Raumfahrt) to implement a user facility for experiments with ultra-cold quantum gases of Rubidium and Potassium on the international space station ISS.

Job description:

- scientific service in research within the project BECCAL for the realization of a user facility for ultra-cold quantum gases on the international space station ISS
- participate in assembly, characterization and operation of the BECCAL laser system (including integration into the full BECCAL assembly)
- implement and use a local test-setup for experiments with ultra-cold quantum gases of Rubidium and Potassium
- work closely with postdoctoral fellows, other doctoral candidates and Master students
- interact intensively with partners in the BECCAL collaboration, including the Jet Propulsion Lab (JPL) and other NASA facilities in the USA
- present research results in international journals and conferences as well as to relevant project stakeholders
- possibility to work on your own scientific qualification (doctoral degree)

Requirements:

- completed scientific university education (master or similar) in physics (or in a related field with appropriate specialization)
- willingness and ability to work with NASA partners at locations in the USA
- good team spirit and ability to work effectively in a collaboration

Beneficial qualification:

- practical experience with ultra-cold quantum gases and/or atom interferometry
- expertise in the development and / or characterization of laser systems for laser cooling or precision measurement applications
- general laboratory skills (especially: optics, opto-mechanics, opto-electronics, RF-electronics)
- experience in computer aided design (preferably Autodesk)
- programming skills (preferably with experience in Python)
- good knowledge of analog and digital electronics
- gender and diversity sensitivity

Application to

Please send your application (including cover letter, a complete curriculum vitae and relevant certificates), referencing the **Job ID DR/143/24** to Humboldt-Universität zu Berlin, Faculty of Mathematics and Natural Sciences, Department of Physics, Prof. Achim Peters (located: Newtonstr. 15), Unter den Linden 6, 10099 Berlin or preferably in electronic form as a single PDF file to **achim.peters@physik.hu-berlin.de**.

The Humboldt-Universität zu Berlin is seeking to increase the proportion of women in research and teaching, and specifically encourages qualified female scholars to apply. Severely disabled applicants with equivalent qualifications will be given preferential consideration. People with an immigration history are specifically encouraged to apply. Since we will not return your documents, please submit copies in the application only.

Data protection information on the processing of your personal data in the context of the tender and selection procedure can be found on the homepage of Humboldt-Universität zu Berlin: https://hu.berlin/DSGVO.

Please visit our website www.hu-berlin.de/stellenangebote, which gives you access to the legally binding German version.