



Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

As a University of Excellence, Universität Hamburg is one of the strongest research universities in Germany. As a flagship university in the greater Hamburg region, it nurtures innovative, cooperative contacts to partners within and outside academia. It also provides and promotes sustainable education, knowledge, and knowledge exchange locally, nationally, and internationally.

The Faculty of Mathematics, Informatics and Natural Sciences, Department of Physics, Institute of Experimental Physics invites applications for a

RESEARCH ASSOCIATE (PHD STUDENT) FOR THE PROJECT “CLUSTER OF EXCELLENCE QUANTUM UNIVERSE” ADVANCED RECONSTRUCTION IN LIQUID SCINTILLATOR DETECTORS

- SALARY LEVEL 13 TV-L -

The position in accordance with Section 28 subsection 3 of the Hamburg higher education act (Hamburgisches Hochschulgesetz, HmbHG) commences on 1 July 2020 or later.

This is a fixed-term contract in accordance with Section 2 of the academic fixed-term labor contract act (Wissenschaftszeitvertragsgesetz, WissZeitVG). The term is fixed for a period of 3 years. The position calls for 26 hours hours.

RESPONSIBILITIES:

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

SPECIFIC DUTIES:

The Cluster of Excellence “Quantum Universe” performs research to understand mass and gravity at the interface between quantum physics and cosmology. The research team includes leading scientists from mathematics, particle physics, astrophysics, and cosmology at Universität Hamburg and DESY.

The successful candidate for this PhD position will participate in the development of multi-dimensional reconstruction methods in liquid scintillator detectors that are used in neutrino experiments. We are currently developing these tools in the context of the JUNO-experiment, but an application to other experiments (for example in medical imaging) is foreseen. The main task of the candidate will be to increase the robustness of this reconstruction using techniques inspired by machine learning techniques and/or regularization methods.

* Full-time positions currently comprise 39 hours per week.

He will also be a member of the JUNO collaboration and thus has to perform service on the code or for the experiment where necessary.

Doctoral research associates will become members of the Quantum Universe research school (QRS) and through this receive offers for academic training, soft skills, and career planning. In addition, they will receive individual budgets, meant to enable them to attend summer schools, conferences or other educational and supporting measures. Additional travel money for project-specific duties will be made available via the hosting research groups. Doctoral research associates may actively participate in the organization of the Cluster via an early career council.

REQUIREMENTS:

A university degree in a relevant field. Good programming skills in C++.

The Free and Hanseatic City of Hamburg promotes equal opportunity. As women are currently underrepresented in this job category at Universität Hamburg according to the evaluation conducted under the Hamburg act on gender equality (Hamburgisches Gleichstellungsgesetz, HambGleiG), we encourage women to apply for this position. Equally qualified and suitable female applicants will receive preference.

Qualified disabled candidates or applicants with equivalent status receive preference in the application process.

For further information, please contact Dr. Björn Wonsak (+49 40 8998-2164 or bwonsak@mail.desy.de) or consult our website at www.qu.uni-hamburg.de.

Applications should include a cover letter, a tabular curriculum vitae, and copies of degree certificate(s). Please send applications by 30 April 2020 to: Prof. Dr. Caren Hagner (caren.hagner@desy.de), Dr. Björn Wonsak (bwonsak@mail.desy.de), and office@qu.uni-hamburg.de. Applicants should also arrange for two letters of recommendation to be sent to the same addresses by the same deadline. Later applications will be considered until the position is filled.

Please do not submit original documents as we are **not** able to return them. Any documents submitted will be destroyed after the application process has concluded.