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 FOR THE PROJECT**

**“CLUSTER OF EXCELLENCE QUANTUM UNIVERSE”**

**REAL-TIME DATA SELECTION FOR DARK MATTER SEARCHES**

- 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 August 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 39 hours per week. This position is also suitable for part time employment.

**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.

This position is at the interface between highly topical physics research and state-of-the-art (micro-)electronic systems. It is intended to pursue research within the field of experimental particle and astroparticle physics on real-time data selection for Dark Matter searches using FPGAs. The project is part of a cross-disciplinary joint effort between members of the SuperCDMS collaboration and members of the Belle II collaboration, where the first is a direct

* Full-time positions currently comprise 39 hours per week.
Dark Matter search experiment and the second is an $e^+e^-$ collider experiment. The successful candidate will become a member of SuperCDMS and be in close contact with Belle II researchers. She/He is expected to develop Machine Learning classifier algorithms executing the inference step on FPGAs and to contribute to SuperCDMS data analyses.

Research associates will become member of the Quantum Universe research school (QURS) 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 conferences or other educational and supporting measures. Additional travel money for project-specific duties will be made available via the hosting research groups. Research associates may participate in the supervision of doctoral students, teaching at the University, and in the organization of the Cluster via an early career council.

**REQUIREMENTS:**

A university degree in a relevant field (this includes but is not limited to physics, electrical engineering, and informatics engineering). In addition, in-depth hands-on experience in FPGA programming and in C++ and/or Python programming. Desirable are a doctorate as well as a strong background in experimental (astro-)particle physics, data analysis and machine learning. Further required are a very good command of English, very good teamwork, communication and presentation skills and the ability and eligibility to travel to North America.

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. Belina von Krosigk (belina.von.krosigk@uni-hamburg.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 31 May 2020 to: belina.von.krosigk@uni-hamburg.de and office@qu.uni-hamburg.de. Applicants should also arrange for three 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.