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

THREE RESEARCH ASSOCIATES FOR THE PROJECT “DATA ANALYSIS AND MACHINE LEARNING IN EXPERIMENTAL PARTICLE PHYSICS”

- 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 1.6.2020 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 until 30.9.2021. 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:
Modern tools of data processing and machine learning are quickly becoming indispensable for experimental particle physics. The CMS groups at the University of Hamburg consist of more than 60 members and cover a wide range of physics topics — from precision measurements of the Higgs and top sectors, over a broad spectrum of searches for physics beyond the Standard Model, to the development of new deep learning methods for robust classification, anomaly detection, and fast detector simulation.

In this context, we invite application for post-doctoral positions on the following topics:

- Investigation of the Higgs boson with the CMS experiment, especially studies of Di-Higgs production
- Fast and unsupervised anomaly detection for the CMS trigger system
- Development of interpretable machine learning methods for complex data
Interested candidates will be offered the opportunity for own research, advanced training and development of teaching skills in a stimulating scientific environment.

Funding is available through third party grants by the German Ministry for Education and Research (BMBF) on the further development and physics program of the CMS experiment at the LHC as well as on dedicated programs for the development of new network architectures for fundamental processes. A close collaboration exists with other research groups in experimental and theoretical physics of the University and of DESY located on the same campus. Our group is part of the Cluster of Excellence “Quantum Universe” which 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.

REQUIREMENTS:

A university degree in a relevant subject plus doctorate. Excellent English communication skills are required. We expect candidates to be experienced in programming and using modern software design pattern, work successfully in a team environment and show initiative and engagement. Outstanding candidates will have prior knowledge in the analysis of LHC data, practical experience in deep learning methods, or trigger development.

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 Jun.-Prof. Gregor Kasieczka (gregor.kasieczka@uni-hamburg.de) and Prof. Peter Schleper (peter.schleper@uni-hamburg.de) or consult our website at https://www.physik.uni-hamburg.de/forschung/institute/iexp/forschung.html

Applications should include a cover letter, a tabular curriculum vitae, and copies of degree certificate(s). Please send applications by 30.4.2020 to: Ms. Hack (magdalene.hack@desy.de).

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.