Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

**Faculty/Departement** Mathematics, Informatics and Natural Sciences / Physics
**Seminar/Institute** Institute for Experimental Physics

Universität Hamburg invites applications for a Research Associate on

**R&D for the MADMAX experiment for the search for axions - Postdoc position**

in accordance with Section 28 subsection 3 of the Hamburg higher education act (Hamburgisches Hochschulgesetz, HmbHG) as part of the BMBF funded project: R&D für Scintillatorbasierte Detektoren (AHCAL). The position commences as soon as possible. It is remunerated at the salary level TV-L 13. The position is full time and comprises 39 hours per week.

The contract duration is initially fixed to two years, but can be subject to extension if funds are available. The fixed-term nature of this contract is based upon Section 2 of the academic fixed-term labor contract act (Wissenschaftszeitvertragsgesetz, WissZeitVG).

The University aims to increase the number of women in research and teaching and explicitly encourages women to apply. Equally qualified female applicants will receive preference in accordance with the Hamburg act on gender equality (Hamburgisches Gleichstellungsgesetz, HmbGleiG).

**Responsibilities:**
Duties include research within the MADMAX project. Research associates can pursue independent research and further academic qualifications as well as acquire teaching experience.

**Specific Duties:**
Duties include research within the MADMAX project, and teaching in the department of physics. The position involves research and development for a new experimental approach to search for Dark Matter axions with a mass around 100µeV as favored by a class of theoretical models. The new approach makes use of magnetized dielectric media and dedicated RF antenna in the 1-100 GHz range. The group is involved in the development of a simulation platform for dielectric-based axion searches, as well as in the development of an algorithm for the iterative alignment of the dielectric discs during the experiment. Furthermore, a prototype detector will be built and operated in the next three years. The group is responsible for the dielectric discs tiling, the booster mechanics, the discs positioning and alignment system.

**Requirements:**
A university degree in a relevant subject plus doctorate. Applicants are required to hold a doctoral degree in physics and to have an excellent research record as well as excellent communication skills. At least two of the following requirements should be fulfilled: proven experience in cryogenic systems, operation of high precision mechanics in vacuum, photon detection in MHz-GHz domain, profound competence in system simulation studies, system design and development, experience in machine learning techniques, extended experience simulating with CAD based tools.

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Severely disabled applicants will receive preference over equally qualified non-disabled applicants.

For further information, please contact Prof. Erika Garutti (erika.garutti@uni-hamburg.de).

Applications should include a cover letter, curriculum vitae, and copies of degree certificate(s). The application deadline is 25. July 2018. Later applications are accepted until the position is filled. Please send applications to: Ms Gundula Serbser, gundula.serbser@desy.de