Georg-August-Universität
Göttingen

Fakultät für Physik
II. Physikalisches Institut

PhD position at Georg-August-University Göttingen in ATLAS-Experiment

There is one opening for a

PhD position (pay scale E13 TV-L) (m/f/d)

(part-time, currently 19.9 hours per week, compared to full-time, currently 39.8 hours per week). The employment is initially for a period of three years.

The activity takes place in the working group of Prof. Arnulf Quadt on experimental particle physics at the University of Göttingen in the development of pixel detectors for the ATLAS upgrade to the High-Lumi LHC. Main focus is the development of pixel readout electronics, as well as participation in the execution and evaluation of test beam campaigns, module and sensor tests, as well as module construction and system integration. The successful candidate is expected to participate in the supervision of students, in the regular operation of the particle physics group in Göttingen and in the research activities of the group. The successful candidate is expected to participate in the supervision of students, in the regular operation of the particle physics group in Göttingen and in the research activities of the group.

The group has experience in the development and operation of radiation-hard semiconductor pixel detectors. It is integrated and engaged in the nationwide BMBF research focus "ATLAS" and the joint project "Research Infrastructure - FIS" on upgrade of the LHC.

The prerequisite for employment is

- completed university degree in physics or in another relevant field (diploma or master's degree),
- good knowledge of English,
- Interest in teamwork in international collaborations
- Software and programming skills in modern programming and scripting languages (C++ or Python),
- interest in FPGA programming or learning such skills, and
- Experience in detector development.
- Previous experience in experimental particle physics is desirable.

The topic of the project is the construction of the readout system of the pixel component of the new ATLAS track detector "ITk". This readout system consists of electronic boards based on Field Programmable Gate Arrays (FPGA), which in turn are networked with a farm of CPUs. During the construction of ITk as well as during its later operation, the system will take over the control, calibration and data taking by communicating with the specially designed chips (ASICs) inside the detector. Applicants are therefore expected to have or be able to acquire appropriate programming and electronics skills.

Applications with the usual documents should be sent at the latest on January 29, 2021 to:

Prof. Dr. A. Quadt
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Georg-August-Universität Göttingen
Friedrich-Hund-Platz 1
37077 Göttingen, Deutschland
aquadt@uni-goettingen.de

The University of Göttingen is an equal opportunity employer and places particular emphasis on fostering career opportunities for women. Qualified women are therefore strongly encouraged to apply as they are underrepresented in this field. Disabled persons with equivalent aptitude will be favoured.

Note:
We would like to point out that submitting your application constitutes consent under data protection law to the processing of your applicant data by us. You can find more details on the legal basis and use of data in the information sheet on the general data protection regulation (DSGVO)