

Electrical Engineer (Dedman College/Physics – ATLAS group)

Salary:

Salary commensurate with experience and qualifications.

Job Summary:

The SMU ATLAS group invites applications for Electrical Engineers specializing in FPGA firmware development. This position is for one year, with a possibility of extension dependent on funding. It is a full-time benefits eligible position.

This engineer will work in the Physics Department at SMU in collaboration with the ATLAS Experiment of CERN's Large Hadron Collider (LHC). This position will allow the applicant to contribute directly to the ongoing development of the ATLAS Detector electronic readout system through work on a system called the Fast Tracker (FTK). This system of fast data filtering will be part of the detector's upgraded trigger and data acquisition system, which determines which of the billions of LHC proton collisions will be recorded. The ATLAS Detector is important for physics research, but it is also in itself an extremely complicated engineering success.

The position will involve working together with a team of physicists and engineers at SMU and elsewhere to optimize and develop new functionality for FPGA firmware in HDL-based design. This will require good communication skills and organizational ability, as well as the ability to effectively oversee complex multi-FPGA firmware design systems.

Essential Functions:

Development of additional functionality for the Second Stage Board (SSB) of the ATLAS Fast Tracker.

Debugging and optimization of firmware for the Second Stage Board (SSB) of the ATLAS Fast Tracker.

Advanced development and maintenance of the Fast Tracker electronics stand at SMU.

Collaboration with students and post-docs at SMU, allowing for transferal of knowledge.

Collaboration with project members in other US and international institutes, as part of the SMU effort.

Education and Experience:

Minimum Qualifications:

BS or higher degree in Electrical Engineering

A minimum of 4 years of experience with FPGA firmware development (experience does not necessarily need to take place in industry, and could take place from projects during education)

Experience with Windows, Linux, and Mac OS

Experience with Xilinx software, VHDL and Verilog

Excellent written and verbal communication skills, skilled at code documentation

Microsoft Office skills (Word, Excel, and PowerPoint)

Knowledge, Skills and Abilities:

Must have excellent written and verbal communication skills. Must be skilled at code documentation.

Candidate must possess excellent organizational skills which include effective planning, time management and project management.

Must have knowledge and experience with FPGA firmware design and development with HDL-based languages.

Candidate must demonstrate excellent problem solving, analytical and critical thinking skills.

Must be able to work as part of a team, and in collaboration with students, post-doctoral fellows, and project members both within SMU and in other locations.

Must be willing and able to occasionally travel domestically and internationally to collaborate with external colleagues.

Physical/Environmental Demands:

This position must be able to: reach above shoulders, carry/lift 25 lbs., handle objects (dexterity) and sit for long periods of time.

Deadline to Apply:

DEADLINE TO APPLY: Full review of applications will begin on March 05, 2019 and continue until the position is filled.

Applicants must include a CV/resume, statement of past experience (no more than two pages) and contact information listing three references.

TO APPLY:

Please visit our website www.smu.jobs to access the online application. See Working at SMU. Click on Staff Career Opportunities and apply to: **Electrical Engineer (Dedman College/Physics ATLAS group) DED0000093**

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