GSI Helmholtzzentrum für Schwerionenforschung in Darmstadt operates one of the leading particle accelerators for science. In the next few years, the new FAIR (Facility for Antiproton and Ion Research) one of the world’s largest research projects, will be built in international cooperation. GSI and FAIR offer the opportunity to work together in this international environment with a team of employees committed to ensuring each day to conduct world-class science.

The department “Control Systems” (ACO), which currently includes about 60 hardware and software developers as well as national and international partners, is responsible for the control system of the existing and future accelerator equipment.

We are now inviting qualified candidates to apply for the following position:

**Project Leader Timing System of FAIR Accelerators,**

**M.Sc. or Diploma in physics, electronics, computing or equivalent,**

Reference no.: 6210-18.21

with focus on the technical lead and project management of the work package General Machine Timing (GMT) system. The GMT is a high-precision time synchronization and event distribution system based on White Rabbit PTP. You coordinate the goal-oriented and effective use of your project team of engineers and physicists. The position includes as well autonomous work on technical tasks within the work package.

**Your Responsibilities:**

- Gathering of requirements of the GMT in coordination with other work packages and projects of the accelerator with respect to technical objectives
- Coordination of development, testing and commissioning of all components of the GMT. Components are the ones provided by your project team as well as deliverables to FAIR by external partners
- Definitions of milestones and due dates on times scales from a few months to several years. Definition of the tasks of your team and effort estimation
- Planning and efficient use of financial and human resources, project tracking and reporting
- Planning and execution of quality assurance measures including documentation with the goal of acceptance
- Successful integration and commissioning of the GMT within the full stack of the accelerator control system. Support of users including integration of the GMT with other sub-systems of the accelerator and experiment facilities
- Technical work by yourself on sub-components of the GMT. This includes development, integration and maintenance of VHDL gateware, C firmware and C++ software from different sources; testing, debugging and commissioning of components of the GMT
- Willingness for GMT related on-call work
- All of the above tasks require close cooperation with other colleagues.

**Your Qualifications:**

- Excellent analytical skills in understanding existing components and gathering requirements for new solutions across components of the control system
- Tolerance of ambiguity when assessing conflicting requirements and priorities
- At least one year experience with project management and Office products
- Very good knowledge and several years of experience as developer with VHDL (Altera or Xilinx, SoC buses), C and C++11. In case one of the three is missing, the candidate must be highly interested, motivated and able to acquire the missing skills within a short time
- Good knowledge and experience with Linux and using tools such as bash scripting, GCC, make and GIT from the command line
- Good knowledge of distributed control systems and time synchronization. This includes networking basics such as IP, DHCP and TFTP
- Knowledge and experience with basics of test strategies for large scale systems as well as fault finding in high-speed digital electronics
- Good knowledge of natural sciences
- Very good verbal and written German and English.

Next to your references in the area of project management, we expect examples of code written by the candidate are included in the application, preferably as GIT URLs to open source projects.

In addition, your job demands a strong aptitude for conceptual work and the ability to learn new things quickly and independently. The close collaboration required with other professional groups requires extremely good communication skills, team working abilities and a precise, structured approach to working.

We offer an initial employment contract of 5 years. Salary is equivalent to that for public employees as specified in the collective agreement for public employees (TVöD Bund).

GSI supports the vocational development of women. Therefore women are especially encouraged to apply for the position.

Handicapped persons will be preferentially considered when equally qualified.

The department leader Mr. Bär will be happy to provide further information (please contact the human resources department). Further information about FAIR and GSI is available at www.gsi.de and www.fair-center.eu.

If you find this position interesting and challenging and would like to work in an exceptional, international, strongly technical environment, please send your full application documents, including the desired salary, with information of your earliest possible starting date and the reference number above to the following address by 16.03.2018 to

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