

Research Engineer platform aQCess European Center for Quantum Science

1. Context of the platform aQCess

Environment :

The “European Center for Quantum Sciences – CESQ” of the University of Strasbourg and CNRS is a transnational quantum research and educational hub. CESQ builds upon the exceptional tradition of interdisciplinary research in Strasbourg, focusing on quantum physics and its interfaces with chemistry, materials science, photonics and computing, towards new applications in basic science and for the emerging quantum industry.

Description of the platform aQCess, and of its structural environment:

The activity concerns the establishment of a new public research and user platform for quantum computing: “aQCess - Atomic quantum computing as a service” which brings together a large number of French and International academic and industrial partners and is supported by the “Plan d’Investissement d’Avenir” of the “Agence National de la Recherche” and the “Programme et Equipements Prioritaire de Recherche Quantique” (PEPR) within the national quantum strategy.

In this context, the research engineer of the platform will work closely with the coordination and scientific teams within an international consortium to realize a large-scale research infrastructure and sustainable quantum computing platform, contributing to the establishment of a quantum computing center and ecosystem in the east of France.

2. Position identification

Status : Fixed-term contract

Category : A

Corps : Research Engineer

Position : Project leader / Technical manager « aQCess » Atomic Quantum Computing as a service.

Job-type : Engineer in experimental physics

BAP : BAP C

Composante, Direction, Service : Université de Strasbourg, Institut de Science et d’Ingénierie Supramoléculaires (I.S.I.S), Centre Européen de Sciences Quantiques (CESQ)

Contact(s) for more information (identité, qualité, adresse mail, téléphone) :

Prof. Shannon Whitlock (whitlock@unistra.fr).

3. Mission

He/she will perform the technical development of the platform aQcess at the new European Center for Quantum Sciences of the University of Strasbourg.

4. Activities

Principal activities

Support the planning and execution of the technical installation of a full stack quantum computer

Based on atomic qubits

Lead the installation of a modular software stack for controlling the quantum computer

Ensure the technical development of the platform

Associated activities

Regularly report on the progress to the coordination team and other stakeholders

Help users to access to the platform

5. Skills

Professional environment skills :

PhD in experimental physics or related field

Experience working with laser cooling and trapping, lasers, electronics, computer control, vacuum systems

Computer programming experience and control of complex instruments

A good knowledge of technical English

Operational skills :

Implement technical solutions to difficult problems

Ensure the proper functioning of the platform

Team working

Behavioral skills :

Sense of organisation

Time management skills

Know how to be autonomous

Show initiative

Know how to report on your work

6. Environment and work context

Description of the department:

- Name of the department: European Center for Quantum Science
- Number of staff: 40
- Number of staff to supervise: 1-2 trainees
- Place of work: Campus Cronenbourg, Université de Strasbourg

Hierarchical relationship :

- Coordinator of the platform aQCess and the director of the CESQ

Functional relationships :

- Director CESQ
- Coordinator of the platform aQCess
- Director of the platform aQCess
- Project leader of the platform aQCess
- Technicians of the platform aQCess
- Administrative and financial assistant of the CESQ
- Responsible of health and security of the CESQ
- Partners of the platform aQCess

Special working conditions (cf attached annex):

- Fixed-term contract 12 months renewable

To apply, please send CV and motivation letter before 13/11/2024 to the attention of :

Prof. Shannon Whitlock, whitlock@unistra.fr