

## **Permanent researcher position in experimental solid-state physics with a focus on semiconductor spin qubits, CEA-IRIG, Grenoble**

### **Job description**

The Quantum Photonics, Electronics and Engineering Laboratory (PHELIQS, <https://www.pheliqs.fr/en>), a joint research unit of the CEA Fundamental Research Division in Grenoble (CEA-IRIG) and Université Grenoble Alpes (UGA), is hiring a permanent researcher in experimental solid-state physics with a focus on semiconductor spin qubits. PHELIQS is currently developing a large panel of experimental approaches for quantum technologies, including spin qubits, within the LaTEQS team. The successful candidate is expected to take active part in the development of germanium-based hole spin qubits and, more specifically, to be in charge of their design, fabrication, and measurement. This research topic is part of the ambitious French “Quantum Plan”, in which Pheliqs is deeply involved thanks to its expertise in silicon device technology, cryoelectronics, cryogenics, and nanofabrication at the Upstream Technological Platform at CEA-IRIG. The candidate is expected to develop her/his own project in close synergy with the LaTEQS team, establish and manage research collaborations with academic and industrial partners, including other groups within CEA and outside. The candidate will supervise the research activity of students and post-docs. A strong team spirit is therefore required.

Located in the French Alps and surrounded by a stunning natural environment, the international city of Grenoble hosts a rich scientific ecosystem formed by public research organizations (CEA, CNRS), Université Grenoble Alpes (UGA), Large Scale European Infrastructures (ESRF, ILL), and high-tech companies. Université Grenoble Alpes attracts a large number of students in a broad range of disciplines, including quantum technologies through its recently created Federation QuantAlps.

CEA is a French public research organization that stands at the crossroad between fundamental and applied research. PHELIQS is one of the 10 laboratories of the CEA Interdisciplinary Research Institute of Grenoble (CEA-IRIG), which gathers 1200 people in the fields of physics, chemistry, biology, health, and cryotechnologies.

### **Qualifications**

Applicants should own a PhD in physics and have a postdoctoral research experience. We require strong experimental skills and, more specifically, a solid expertise in the fabrication of semiconductor nano-electronic devices, as well as in the experimental manipulation of solid-state qubit devices and related radio-frequency techniques at very low temperature. Applicants are expected to hold an outstanding record of research achievements in internationally recognized scientific environments.

### **How to apply**

Applications including a CV and a cover letter should be sent to [francois.lefloch@cea.fr](mailto:francois.lefloch@cea.fr) no later than May 20<sup>th</sup>, 2022. In the cover letter, the candidates should provide a short description of their main research achievements and scientific interests related to this open position. In addition, each candidate should arrange for three letters of recommendation to be sent to the same address.

Short-listed candidates will be invited to visit the lab in June/July, and interviewed by a committee of experts in late Summer 2022.

For additional information, candidates are encouraged to contact Silvano De Franceschi ([silvano.defranceschi@cea.fr](mailto:silvano.defranceschi@cea.fr)) and/or François Lefloch ([francois.lefloch@cea.fr](mailto:francois.lefloch@cea.fr)).