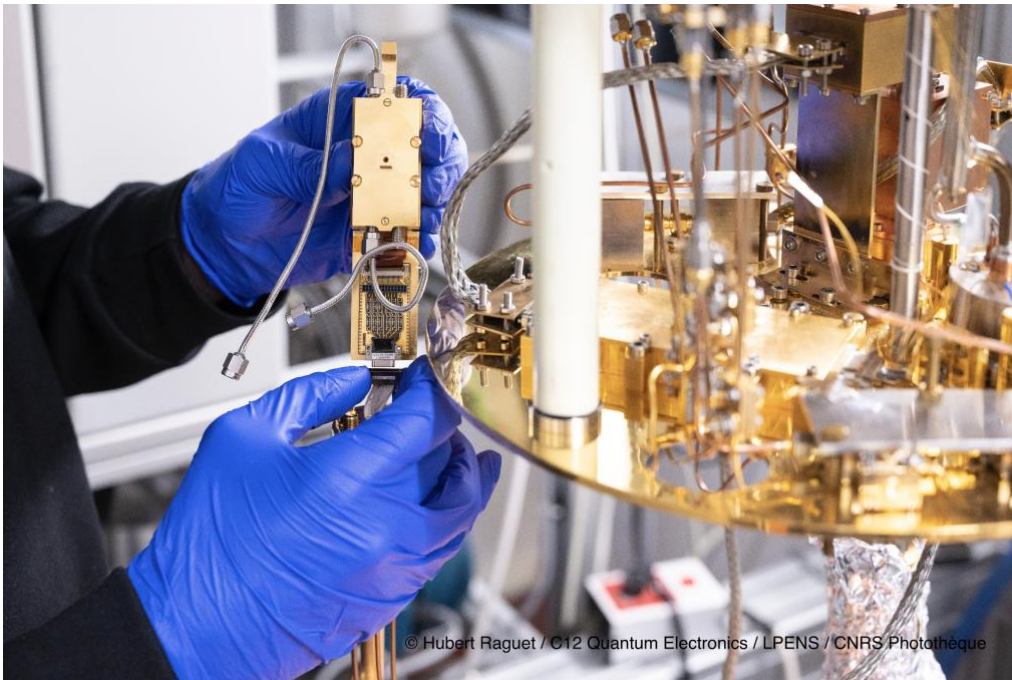




C12 Quantum Electronics, a deeptech startup developing quantum computers is looking for a ...

Senior quantum computing scientist

Permanent contract – January 2022 - Paris



C12 Quantum Electronics develops reliable & application-specific quantum computers, to solve highly complex computing tasks, currently out of reach of even most powerful supercomputers.

Building a quantum computer still needs **innovators** ready to tackle exciting challenges. C12 founders are convinced that only **a new material** for the qubit will bring a technological breakthrough.

C12 Quantum Electronics uniquely uses **carbon nanotubes** as the fundamental building blocks of its quantum processor. This **high-purity material minimizes errors**, radically improves performance and reduces hardware overhead for fault-tolerant computing. Combined with well-established semiconductor techniques, **carbon nanotubes will help scale quantum computing, just as silicon revolutionized classical computing.**

Founded in 2020, C12 Quantum Electronics is a fast-growing start-up, having raised a seed round of USD 10 million in June 2021 and building its **own lab space** in the center of Paris.

[Your role in C12 Quantum Electronics](#)

You will set up the architecture of a five-qubit chip with all-to-all connectivity between spin qubits. You will collaborate closely with other teams which are working on providing design of the quantum on-chip circuits, device fabrication, theoretical work on our qubits, and software engineering support.

- Designing the procedures for state preparation, 1 and 2-qubit gates and multi-qubit readout
- Conducting characterization and benchmarking experiments
- Supervising several tasks
 - Design of the experiments to improve gate fidelities and test all-to-all connectivity schemes
 - Design and test of microwave circuit layout
 - Specification, maintenance, and installation of RF control bench at room temperature and at cryogenic temperature
 - Automation of qubit calibration and multi-qubit control
- Sharing expertise and findings with other team members

About you

- PhD in Electrical engineering, Physics, Applied Physics, or other related field (or demonstrated industry experience)
- Minimum 2+ years of postdoc or R&D work involving microwave electronics and measurements of superconducting or spin qubits. Experience with multi qubits electronic circuits is seen as an advantage
- Basic understanding of good software development practices, Python language, and version control systems
- Ability to distil and communicate scientific information effectively with the wider team
- Good communication in English (verbal and written)
- Demonstrated leadership skills are seen as an advantage

You should join us if

- You want to contribute to achieve **landmark results in quantum computing**, making a difference in the emerging quantum technologies
- You want to work within an **18-people team** with various backgrounds in **nano-fabrication, quantum electronics and carbon nanotube science** to materialize the vision of a revolutionary quantum computing processor
- You want to thrive in a exceptional scientific environment with several **industrial and academic partners**
- You relate to our values (excellence, scientific integrity, diversity, curiosity and care) and want to help us define our product-focus **culture and ambition to accelerate**

C12 Quantum Electronics' unique technology

At C12 Quantum Electronics, a qubit, the fundamental functional unit of a quantum computer, is built from an ultra-pure carbon nanotube suspended above a silicon chip containing control electrodes and a quantum communication bus. Spin qubits coupled to a microwave cavity brings interesting perspectives for their individual control and manipulation as well as for the circuit architecture. A suspended isotopically pure ^{12}C nanotube holds great promises in terms of stability, as it reduces all sources of decoherence (charge noise, nuclear spin noise, phonon relaxation).

C12 Quantum Electronics encourages all who feel qualified to apply. Recruitment decisions are based solely on qualifications, skills, knowledge and experience. Applications from women are particularly welcomed.

Join the quantum race and contact: careers@c12qe.com

C12 Quantum Electronics - Connecting quantum power to reality