



Quantum Hardware Engineer

Paris, Île-de-France, France – Full-time – On site

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Engineering and System Integration Team – Junior

About Welinq:

Welinq's mission is to enable quantum computing by interconnecting quantum processors.

Welinq is building the most efficient solution to interconnect quantum processors and drastically increase their computational power, opening the solving of extremely complex problems, such as drug discovery, which are intractable with conventional supercomputers. Our quantum link solution relies on the use of quantum memories to synchronize the signals emitted by the processors and have them run at the same pace. Our team has leveraged cold-atom technology to demonstrate the world record in quantum storage efficiency of 90%. We develop a fullstack and reliable quantum link solution based on this technology to enable quantum computing to fully deliver its promises for industry verticals.

The job:

As part of the Engineering and System Integration Team in Paris, you will play a key role in the development of Welinq's hardware technologies. You will be responsible for contributing to the development and optimization of quantum computing hardware systems, with a particular focus on Atomic, Molecular, and Optical (AMO) physics. You will work closely with senior engineers and scientists to design, fabricate, and characterize quantum devices, helping to advance Welinq's industry-grade quantum memory products. As a quantum hardware engineer, your responsibilities will encompass to:

- Collaborate with senior engineers to design and optimize quantum hardware components based on AMO physics principles;
- Assist in the fabrication, assembly, and testing of our quantum devices;
- Conduct experimental research and data analysis to evaluate the performance and efficiency of quantum hardware systems;
- Troubleshoot and resolve technical issues related to hardware components, proposing innovative solutions to improve overall system performance;
- Stay up-to-date with the latest advancements in quantum technologies and AMO physics research, contributing to Welinq's knowledge base.

Required qualifications and Experience:

- PhD in quantum physics, quantum optics, condensed matter physics, or a related field with a focus on AMO physics;
- Strong background in quantum mechanics, quantum optics, atomic physics, and related theoretical principles;



- Experience with experimental techniques in quantum physics, including laser systems, vacuum technologies, and control electronics;
- Proficiency in programming languages such as Python, MATLAB, or C++ for data analysis, simulation, and automation;
- Excellent problem-solving skills and the ability to work independently as well as collaboratively in a team environment;
- Strong communication skills to effectively convey complex ideas and findings to both technical and non-technical stakeholders;
- Strong motivation for industrialization processes of quantum devices;
- English professional proficiency;

Preferred qualifications and Experience:

- Experience in designing and developing quantum hardware systems, including UHV systems, control electronics;
- Experience in laboratory experiments based on cold atoms;
- Experience in quantum memories based on neutral atoms;
- Good knowledge of quantum computing and quantum networks ecosystems;

Why joining Welinq:

- **Pioneering Innovation:** you will work with a team of visionaries and experts who are at the forefront of quantum technologies research and development.
- **Impactful work:** you will be part of a mission-driven organization that aims to revolutionize industries and solve real-world problems using quantum technologies.
- **Career growth:** you will grow personally and professionally in a supportive and challenging environment, with opportunities for career advancement as the company expands.
- **Collaborative culture:** you will join a diverse and inclusive team that values open communication, collaboration, excellence and knowledge sharing.
- **Attractive compensation:** you will enjoy a competitive salary and benefits package, including equity options.
- **Work location:** you will experience the vibrant and historical city of Paris, as our offices and laboratories are conveniently located in the center of this beautiful city. Employees will have the opportunity to work on our premises, surrounded by the cultural richness and innovation that Paris has to offer:
- **Flexible work arrangement:** we understand the importance of work-life balance and believe in offering flexible work arrangements to our employees. You will have the opportunity to work flexibly, allowing you to manage your time effectively and maintain a healthy work-life integration;

Welinq provides equal opportunity in all our employment practices to all qualified employees and applicants with regard to race, color, religion, gender, national origin, age, disability, marital status, military status, genetic information or any other category protected by state laws. This policy applies to all aspects of the employment relationship, including recruitment, hiring, compensation, promotion, transfer, disciplinary action, layoff, return from layoff, training and social, and recreational programs. All such employment decisions will be made without unlawfully discriminating on any prohibited basis.



Quantum Photonics Engineer

Paris, Île-de-France, France - Full-time

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Quantum Photonics Team – Experienced

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The job:

We are seeking a highly-skilled and passionate physicist to join our dynamic team and contribute to the development of cutting-edge quantum light source technologies. As a Quantum Photonics Engineer, you will:

- Conduct research and development activities in the field of quantum light sources.
- Design, model, and optimize quantum light sources tailored for specific applications, such as single-photon sources or entangled photon pairs.
- Collaborate with multidisciplinary teams to integrate quantum photonics technologies into larger systems.
- Perform experimental measurements and analysis to evaluate the performance of quantum light sources.
- Stay up-to-date with the latest advancements in quantum optics and light source technologies.
- Document research findings, prepare technical reports, and contribute to scientific publications.
- Contribute to intellectual property development through patent filings and other relevant activities.
- Participate in brainstorming sessions and contribute innovative ideas to shape the company's technological roadmap.



Required qualifications and Experience:

- Ph.D. in Quantum Optics, Photonics, Quantum State Engineering, or a related field.
- Strong background in quantum photonics, including theoretical and experimental knowledge.
- Proficiency in designing and characterizing quantum photonic devices and systems.
- Proficiency in modeling and simulation software for quantum optical systems.
- Experience with advanced laser systems and related optical components.
- Familiarity with quantum information science and quantum computing.
- Excellent analytical and problem-solving skills.
- Strong communication and teamwork abilities.
- Self-motivated, comfortable working both independently and collaboratively with people of all disciplines on complex projects and in a fast-paced environment.
- Fluency in English.

Preferred qualifications and Experience:

- 5+ years combined academic or industry experience in a relevant discipline.
- Strong theoretical and experimental background in quantum light sources, with expertise in optical cavities and non-linear crystals.
- Proficiency in designing, characterizing, and optimizing quantum light sources.
- Experience with liaising with suppliers.
- Proven track record of research and innovation in the field of quantum photonics.

Why joining Welinq:

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- **Career growth:** you will grow personally and professionally in a supportive and challenging environment, with opportunities for career advancement as the company expands.
- **Collaborative culture:** you will join a diverse and inclusive team that values open communication, collaboration, excellence and knowledge sharing.
- **Attractive compensation:** you will enjoy a competitive salary and benefits package, including equity options.
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Quantum Algorithms Researcher

Paris, Île-de-France, France - Full-time

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Algorithms and Distributed Computing Team – Experienced

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The job:

As part of the Algorithms and Distributed Computing Team in Paris, you will you will be an integral part of Welinq's quantum computing research team. You will work on designing and implementing novel quantum algorithms that leverage distributed and multi-core architectures to tackle complex computational challenges. As a Quantum Algorithms Researcher, you will join our growing R&D team to:

- Conduct cutting-edge research to devise novel quantum algorithms for multi-core and distributed quantum computing systems, with an emphasis on scalability, fault-tolerance, and performance optimization;
- Translate theoretical quantum algorithms into practical implementations, collaborating closely with our quantum hardware and software teams; as well as end-users of quantum computing and quantum computer providers;
- Analyze and optimize quantum algorithms to maximize their efficiency and accuracy. Employ quantum simulators, emulators and quantum processors to test and validate algorithms;
- Collaborate between our multi-disciplinary team of quantum physicists, engineers, and software developers to explore the synergies between quantum hardware and algorithms;
- Keep up-to-date with the latest research in quantum computing, quantum algorithms, quantum networking and distributed computing. Apply state-of-the-art technique to drive our quantum research forward;
- Prepare and publish research papers, presenting findings at conferences and contributing to the quantum science and technology community;
- Contribute to the generation of intellectual property though patents and novel algorithm designs.



Required qualifications and Experience:

- A PhD in Quantum Computing, Quantum Networking, Computer Science, Physics, Mathematics, or related field. Strong academic achievements and publications in quantum algorithms or distributed quantum computing will be highly valued;
- Solid theoretical knowledge of quantum computing and quantum algorithms.
- Proficiency in programming languages commonly used in quantum computing, such as Python, Qiskit, Cirq, or equivalent;
- Familiarity with leading quantum software platforms and tools for quantum algorithm development and simulation;
- Strong problem-solving skills and the ability to develop innovative solutions to complex computational challenges;
- A team player who can work effectively within a collaborative research environment.

Preferred qualifications and Experience:

- Demonstrated experience in quantum algorithm research, preferably with hands-on experience in quantum algorithm design and simulation;
- Experience in multi-core or distributed quantum computing will be considered as a significant advantage;
- Demonstrated track record of publications in renowned quantum science and technology journals and conference;
- Potential to lead and mentor a team of researchers in the future;
- Basic understanding of quantum hardware components and their impact on algorithm design.

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