Senior Quantum Engineer

Company Description

Viqthor develops, manufactures and offers a unique combination of photonics and microwave electronics in solutions that will enable the next generation of Quantum computers. We design low noise architectures and circuits with high-fidelity large-scale signal processing.

Not only our industrial solutions bring state of the art performance but, more importantly, a 1000x lower energy consumption than traditional instruments, this is one of our takes for the planet. We also believe that Quantum processors will enable a much faster drug simulation & discovery leading to better medicine solutions for mankind.

Today, we are opening the path towards locally designed and produced high added value products thanks to our growing team of talents like you. Our base camp is the incubator at iXcampus in Saint Germain en Laye, France, where academia and impact-driven startups work together.

Job Description

Viqthor is looking for an enthusiastic **Senior Quantum Engineer** to join us on our mission to bring quantum computers to the necessary scale for real-life, practical applications. To enable this, we are building Microwaves and photonics systems that bridge the gap between the world of quantum processing software and actual Qubits. These low-noise new transceivers provide a missing link to build large scale quantum computing solutions and future quantum networking; it can also be used to unlock quantum-enhanced sensitivity for a wide range of sensing applications (clocks, radars).

As a Senior Quantum Engineer you will collaborate within our R&D team in all necessary development stages of our photonic and electronic devices - the work involves simulation, design, and prototyping of digital systems that includes FPGAs, DAC/ADC, analog RF links down to the cryogenic environment of the targeted qubits.

You will contribute to exploration of the architectural and information-theory possibilities enabled by such devices, in major collaboration with partners and clients.

Some key competences we are looking for

- PhD (or Master's degree with equivalent experience) in physics, engineering physics, quantum engineering, photonics, electrical engineering, a related field or equivalent practical experience
- Experience in development (modelling/theory, design, process, control, characterization) of multiple quantum devices in a multidisciplinary environment
- Experience with and knowledge of quantum information and quantum systems
- Experience with microwave engineering and/or optical measurement techniques linked to quantum device development
- Ability to collaborate in a multidisciplinary team, including theory and experimental profiles
- Flexible and willing to take on multiple tasks in a startup environment
- A hands-on, practical attitude (our team is too small to not get your hands dirty!)
- Excellent verbal and written communication skills
- Proficiency in English and French and additional languages are a plus

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More specialized competences you may already have or that you will build with us

- Experience with control and characterization of quantum systems in a cryogenic environment
- Proven experience as project leader, i.e. being involved in all aspects of the development (modelling/theory, design, characterization) of e.g. superconducting circuits and/or MEOS (micro-electro-optic systems)
- Experience with control and characterization of superconducting quantum systems/qubits in a cryogenic environment; experience with and knowledge of cQED
- Experience with design and characterization of S-parameters; experience in frequency conversion
- Experience with RF over Fiber use cases

- Working knowledge of optical, microwave and cryogenic properties of the relevant materials
- Experience working in a (similar) technical role in industry or startup environment

Your profile

You are rigorous, methodical and autonomous. You have a critical and analytical mind and you have a positive, committed, and dynamic personality. You demonstrate a strong capacity for adaptation and flexibility thanks to your qualities of listening and collaboration. You know how to work in an organized manner, both independently and in a team.

Our offer

- Participation in an international team with industrial and academic partners.
- Contribution to challenging industrial R&D as well as scientific projects.
- Exciting possibilities to put your knowledge into practice and make an impact.
- Being part of a fast-growing, investor-backed deep-tech startup
- Part-time remote work possible, when you don't need the lab ;-)
- Permanent contract (CDI)
- Annual salary range: 50k€ to 80k€ depending on experience (salaire brut annuel)
- Highly attractive working environment, in the heart of the iXcampus, Saint Germain en Laye, France

If you are interested and think you would be a good fit for our team, please send your application (CV, cover letter, references,...) to careers@viqthor.com and mention the title of the job superposition !

Our website: www.Viqthor.com
Our amazing location: www.iXcampus.eu