

Senior Signal Processing Engineer

Company Description

Viqthor develops, manufactures and offers cutting edge photonics and electronics solutions for next generation Quantum sensing, networking and computing.

Our industrial solutions bring state of the art performance with a lower energy consumption than traditional instruments, our personal contribution to make the world a better place. At Viqthor we build low noise complex systems for high sensitivity measurements and high-fidelity qubits to enable large-scale quantum computing processors.

Our base camp is the iXcampus in Saint Germain en Laye, France, close to the most prestigious International high school in the Paris region.

Job Description

Viqthor is looking for an enthusiastic **Senior Signal Processing 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, bidirectional 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 Signal Processing 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 also contribute to exploration of the architectural and information-theory possibilities enabled by such devices, in collaboration with partners and clients.

Minimum qualifications

- PhD (or Master's degree with equivalent experience) in digital signal processing on FPGA, quantum engineering, a related field or equivalent practical experience
- Experience in development (modelling/theory, design, process, control, characterization) of multiple Rx/Tx channels on FPGA
- Experience and knowledge of transmission information and digital modulations waveforms like OFDM.
- 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

Preferred qualifications (i.e. considered a plus but not a must)

- Experience with microwave engineering and/or optical measurement techniques linked to quantum device development
- Proven experience as project leader, i.e. being involved in all aspects of the development (modelling/theory, design, characterization) of Microwaves or RF digital transmissions.
- Experience with control and characterization of superconducting quantum systems/qubits in a cryogenic environment.
- 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
- Highly attractive working environment, in the heart of the iXcampus, Saint Germain en Laye, France

We are an Equal Opportunity Employer and do not discriminate against any employee or applicant for employment because of race, color, sex, age, national origin, religion, sexual orientation, gender identity, status as a veteran, and basis of disability or any other protected class.

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 position. We look forward having a coffee with you!