



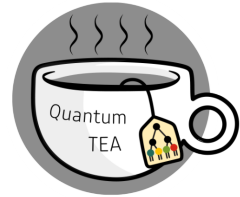
Job Announcement: Software Developer for Quantum Technologies

The Quantum Information and Matter Group at the University of Padova (<https://quantum.dfa.unipd.it/>) is seeking a talented and motivated **Software Developer** or **Computational Physicist** to join our dynamic team. We are specialized in developing and applying cutting-edge numerical and theoretical methods to advance quantum science and technology. If you are passionate about creating high-performance computing solutions and excited by the potential of quantum technologies, we would love to hear from you!

Role and Responsibilities

As a Software Developer, you will:

- Maintain and manage the **Quantum Tensor Network Emulator Applications** codebase (<https://www.quantumtea.it>), coordinating development efforts with team members.
- Participate and support original research related to quantum physics.
- Lead the development workflow and maintain the tooling environment.
- Integrate code for **HPC clusters** with multi-node and multi-GPU computation capabilities.



Required Qualifications

We are looking for candidates with the following skills and experience:

- **Proficiency in Python and NumPy**, familiarity in **C++ and Cuda** is a plus.
- **Object-oriented programming** expertise.
- Knowledge of **MPI** for parallel computing and experience with **GPUs** via Python APIs.
- Experience with build workflows and code development workflows, e.g. **Scrum**
- Fluent in **English** with excellent communication skills.
- A Master's degree in a **STEM** field.
- Ability to work independently while excelling in a team-oriented environment and capacity to mentor and provide guidance to junior developers.
- High interpersonal and organizational skills, with the flexibility to manage diverse tasks and adapt to dynamic timelines.

Preferred Qualifications

Additional skills that will set you apart:

- Experience with **GitLab repositories**, including code reviews and merge requests.
- Familiarity with **tensor networks** and basic **quantum mechanics**.

- Knowledge of **machine learning** techniques and ML libraries like **PyTorch**, **TensorFlow**, and **JAX**.
- Familiarity with **Docker**, **Jenkins** for CI/CD processes or similar technologies.

What We Offer

- A 13-month salary in the range of 30-40K per year, depending on qualifications, with a two-year contract extendable for up to three additional years.
- Opportunities to work on groundbreaking technologies in a collaborative work environment at the forefront of quantum physics research.
- Possibility to publishing in scientific journal and to present at international conferences.
- Opportunity to collaborate with top academic institutions and industry.
- An office in the city center of Padova with flexible working time.
- A chance for professional growth through high-impact projects, gaining exposure to cutting-edge HPC and tensor network methods.

If you are ready to push the boundaries of quantum computing and computational research, apply now to become part of our team.

How to Apply: Please submit your CV and a cover letter outlining your relevant experience and motivation for this role by sending an email to giuseppe.calajo@pd.infn.it

Application deadline: 30th of April.

Submissions received after this date may not be considered.

We look forward to reviewing your application!