

Postdoctoral Fellowship in Experimental Quantum Computation with Trapped Rydberg Ions

The Trapped Ion Quantum Technology group at Stockholm University (<https://qtech.fysik.su.se>) invites applications for a postdoctoral position. The successful applicant will work on an experiment to perform fast trapped ion quantum gates and quantum algorithms via Rydberg interaction.

Trapped Rydberg ions are a newly developed system for quantum computation. By laser pulses the ions' outermost electron is excited to a high-lying Rydberg orbital. Such Rydberg ions are million times bigger than ions in the ground state, and due to their size, they obtain very peculiar properties.

In particular, trapped ions can be entangled via a strong Rydberg interaction in less than a microsecond. This method supports fast entangling gates in large ions crystals, thus enabling a fast trapped ion quantum computer or quantum simulator.

The experimental postdoctoral project will take place in the Trapped Ion Quantum Technology group at Stockholm University. Application deadline is 28 February, 2021. For more information how to apply for this position please see: <https://www.su.se/english/about-the-university/work-at-su/available-jobs?rmpage=job&rmjob=p14122>.