

RA/intern positions on quantum computing applications, we are looking for excellent CS Maths/Science/Engineering graduates, or undergraduates, ideally with experience on developing and applying classical or quantum machine learning(ML) or optimization algorithms.

They will join the group on projects on quantum and quantum inspired approaches to ML and optimization, for applications in finance, supply chain, chemistry, energy and other industrial sectors.

Excellent programming experience (3 year at least) with Python and/or C++ is essential, as well as solid analytical thinking is required. Experience in working on industry projects in ML or optimization will be a plus as well as good communication skills for both technical and non-technical audiences.

Knowledge of the basics of quantum computing is desirable. Exposure to one of the quantum programming languages out there is welcome but not essential (Qiskit, CIRQ, Quantum TensorFlow, PennyLane etc).

The work will involve both analytical ‘pen and paper’ studies as well as numerical simulations; it is also expected that use of prototype quantum computers will be involved for testing of the algorithms (in direct collaboration with experimentalists, or remotely, through access to online quantum hardware).

Interested applicants should **first** send their CV and maximum two sample of published works (or project/course reports) to the group leader at dimitris.angelakis-at-gmail.com.

Postdoc positions in quantum computation and quantum simulation, we are looking for highly motivated candidates with a strong research background and a PhD in quantum information or quantum physics/optics or quantum many-body or quantum condensed matter physics or topological physics.

Experience in quantum algorithm design or numerical simulation of quantum many-body systems or quantum machine learning and optimization problems, especially with NISQ devices for real world applications (chemistry, supply chain, finance etc) will be a strong plus.

The research will involve both analytical ‘pen and paper’ studies as well as numerical simulations; it is also expected that use of prototype quantum computers will be involved for testing of the algorithms (in direct collaboration with experimentalists, or remotely, through access to online quantum hardware).

A **strong** publication record in high impact research journals is essential, motivation for research excellence as well as ability to work in an interdisciplinary team is desired.

The group’s research interests range from quantum simulation and computation, to quantum many-body physics, topological photonics, quantum machine learning and optimization with NISQ processors (see [group’s website](#)). The group has active collaborations with world leading theory and experimental quantum groups in Singapore, Europe and US.

The positions are available as soon as possible and can be up to 3 years with possible extension. More senior research appointments can also be considered for experienced candidates. Salary is very competitive and depends on experience, with access to travel funds as well.

Informal inquiries should be **first** sent by email to dimitris.angelakis@gmail.com. They should contain: a CV, a summary of past research (2 pages), a motivation letter (1 page), 1 paper/draft you consider your best work, and the contact details (email) of three referees. We accept applications until a suitable candidate is found.