



Bachelor's and Master's Student Projects: **Semiconductor Nanowire-Based Superconducting Qubits**

Center for Quantum Devices or Microsoft Quantum Copenhagen

Superconducting qubits are a leading platform for building a quantum computer. Our group has recently developed a new type of superconducting qubit based around a semiconductor nanowire element that enables simplified control.

Bachelor's and Master's projects are available exploring experimentally how these qubits can be scaled to multi-qubit processors that allow us to execute primitive quantum algorithms with high precision. Projects will focus on different aspects of this goal, from fabrication of multi-qubit devices to high fidelity qubit control and readout, working as a part of a team of researchers and collaborating closely with theorists and computer scientists. Experiments will utilise state-of-the-art nanofabrication and low temperature measurement facilities at the Center for Quantum Devices.

If you are interested in being involved please contact **Karl Petersson** (karl.petersson@nbi.ku.dk) or **Charlie Marcus** (marcus@nbi.dk).

