CHALMERS UNIVERSITY OF TECHNOLOGY | Department of MICROTECHNOLOGY AND NANOSCIENCE

WACQT | Wallenberg Centre for Quantum Technology

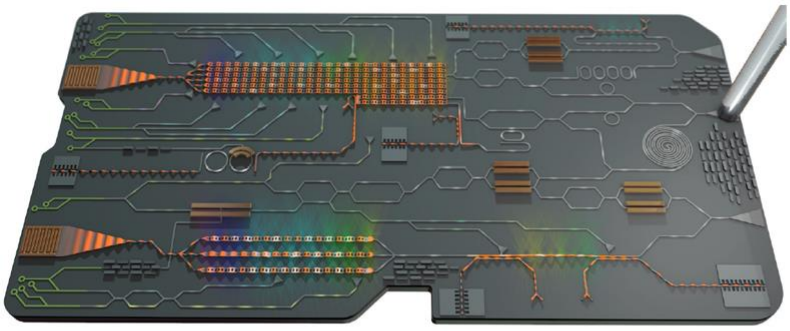
Master thesis projects in **quantum hardware and engineering**

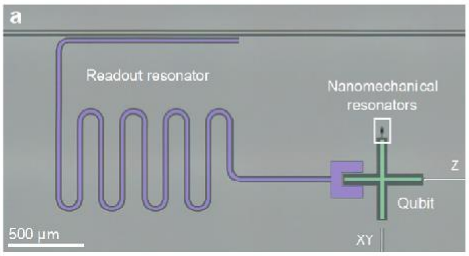
Hi there! Are you interested in cutting-edge research? Do you like interdisciplinary work? Are you curious about quantum engineering, photonics, nanomechanics, and/or superconducting qubits? Do you have a background in engineering, photonics, or physics? If so, our Master's thesis projects might be of interest to you.

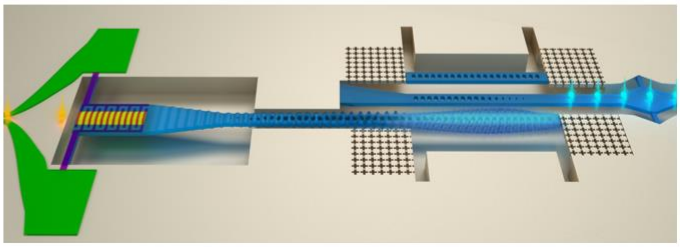
We are a new team of applied physicists and engineers working at the intersection of quantum technologies and photonics. We explore the flow of and interactions between light, sound, and microwaves for coherent classical and quantum information processing. There are several opportunities for Master's (and PhD/postdoc) projects in our team:

1) **Realizing quantum optical interconnects between distant microwave qubits**. In this project, you will contribute to building nanoscale devices that convert between microwave and optical quantum information.

2) **Extending the coherence of superconducting qubits**. In this project, you will contribute to improving the computational capabilities of microwave qubits based on Josephson junctions by engineering their decay mechanisms.







There may be opportunities for PhD research continuing on a successful Master's project.

Contact A.Prof. Raphaël Van Laer for more information: raphael.van.laer@chalmers.se

Quantum Photonics Lab, part of Quantum Technology Division and MC2.