

Vertiefungsempfehlung Quantum Technologies
für den Kernbereich Qunatum Engineering

Empfohlene Kernmodule

Modul-Nr.	Modulname	Semester	Credits
CIT443030	Electromagnetic Fields and Waves	WS	5
IN2381	Introduction to Quantum Computing	WS	5
CIT4430005	Photonic Quantum Technologies	WS/SS	5
EI76471	Quantum Information Theory	WS/SS	5
EI73751	Quantum Nanoelectronics (Introduction to Quantum Theory)	SS	5
EI71093	Quantum Optomechanics	SS	5
CIT4330012	Software for Quantum Computing	WS	5

Empfohlene Wahlmodule

Modul-Nr.	Modulname	Semester	Credits
CIT443019	Advanced Topics in Nano and Optomechanical Quantum Technologies	WS/SS	5
EI71101	Computational Methods for Nanoelectronics: Quantum Models	SS	6
IN71064	Introduction to Quantum Networks	WS/SS	5
CIT433022	Introduction to Quantum Optics and Applications	WS/SS	5
EI71073	Quantum Computers and Quantum Secure Communications	SS	5
EI70760	Simulation of Quantum Devices (<i>vom Kernbereich Micro- and Nanoelectronics</i>)	WS/SS	5

Empfohlene Praktika

Modul-Nr.	Modulname	Semester	Credits
CIT441018	Advanced Technologies für Superconducting Qubits: Coplanar Waveguide Resonators	WS/SS	6
CIT441017	Advanced Technologies für Superconducting Qubits: Josephson Junctions	WS/SS	6
EI78037	Fabrication and Characterization of Quantum-LEDs	WS/SS	5
CIT4410000	Fabrication and Characterization of Single-Photon Detectors	WS/SS	5
EI78070	Nanomechanical Systems Lab	WS/SS	5
CIT4310000	Quantum Computing Software Lab	SS	6
EI78036	Quantum Key Distribution	WS/SS	5

Empfohlene wissenschaftliche Seminare

Modul-Nr.	Modulname	Semester	Credits
CIT443017	Scientific Seminar How to Build a Quantum Computer	WS/SS	5
CIT442001	Scientific Seminar Quantum Engineering and Machine Learning	WS/SS	5
CIT432005	Scientific Seminar Quantum Information Processing Devices	WS/SS	5
CIT4320003	Scientific Seminar Quantum Networks	WS/SS	5
EI77006	Scientific Seminar: Current Topics in Photonic Quantum Technologies	WS/SS	5