Quantum computing: Variable topics on the thermal management of a quantum processor unit

Contact

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Work content

Quantum computers use 2-state quantum systems and quantum entanglement instead of traditional bit states. The experimental basis of the underlying quantum systems are ultra-cold, charged atoms, which are generated, controlled and functionalized (entanglement) in a cryogenic ultra-high vacuum with a magneto-optical trap. The focus of the experiment is the reversible contacting of the technology platform with the help of the quantum processor unit (QPU). This QPU consists of a mounting frame and a base with integrated, micro-technological components. In the context of progressive integration towards a compact quantum system and thus utilization of the technologies in an industrial application, these components are to be further developed and evaluated.

Please send me your complete application documents (CV and proof of performance) by email.

Type of work

Bachelor and student work

Requirements

Interested, independent and capable students of mechanical engineering, electrical engineering, mechatronics, information technology, (technical) computer science, physics and similar courses

Starting date

From July