

TG Quantum Computation Concepts Overview

TG Leader	Christian Ospelkaus
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TG Activities

- Use the results from other TGs to develop new QC concepts

TG Competences/Services

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Involved QF Members

Members	Institution	Relevant Expertise
Christian Ospelkaus, leader	LUH / PTB	Scalable Surface-Electrode Ion Traps; Integrated Microwave and RF Control Elements
Jörg Schöbel	TUBS	Radio and Microwave Frequency Technologies
Tobias Osborne	LUH	Tensor networks for many body localized systems
Tbd/Heurs/Osborne	AEI / LUH	Quantum Machine Learning
	LUH / TUBS	Tensor networks for many body localized systems
Christoph Karrasch	TUBS	Tensor networks for many body localized systems
Patrik Recher	TUBS	Theory of Emergent Correlated Quantum Matter; Josephson Junctions; Twisted Bilayer Graphene; Twisted-bilayer-graphene physics in ultracold atoms in optical potentials
Peter Silvestrov	TUBS	Twisted Bilayer Graphene
Wolfram Brenig	TUBS	strongly correlated electron systems, quantum transport, quantum critical systems, low dimensional quantum magnets
Andrey Surzhykov	PTB / TUBS	Light-Matter Interfaces and Dynamics
Peter Lemmens	TUBS	Propagation of Twisted Light through Media: New Possibilities for Information Transfer