

TG Open Many-Body Quantum Systems Overview

TG Leader	Hendrik Weimer
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TG Activities

- Contribute to CRC DQ-mat
- Contribute to TG Quantum Computing

TG Competences/Services

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Involved QF Members

Members	Institution	Relevant Expertise
Hendrik Weimer, Leader	LUH	Theory of Dynamics of Manybody Quantum Systems
Luis Santos	LUH	Theory of Dynamics of Manybody Quantum Systems; Twisted-bilayer-graphene physics in ultracold atoms in optical potentials
Vijay Singh	LUH	Theory of Dynamics of Manybody Quantum Systems
Tanja Mehlstäubler	PTB / LUH	Integrated Chip Traps and Optical Components; Dynamics of Ion Coulomb Crystals
Lars Timm	PTB / LUH	Dynamics of ion Coulomb Crystals
Christian Ospelkaus	LUH / PTB	Scalable Surface-Electrode Ion Traps; Integrated Microwave and RF Control Elements
Tobias Osborne	LUH	Tensor networks for many body localized systems
	LUH / TUBS	Tensor networks for many body localized systems
Christoph Karrasch	TUBS	Tensor networks for many body localized systems
Piet Schmidt	PTB / LUH	Quantum Logic Spectroscopy of Highly Charged Ions
Patrik Recher	TUBS	Theory of Emergent Correlated Quantum Matter; Josephson Junctions; Twisted Bilayer Graphene; Twisted-bilayer-graphene physics in ultracold atoms in optical potentials
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