

## TG Topological Systems Overview

<b>TG Leader</b>	Patrik Recher
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### TG Activities

- Contribute to Applications Q. Electrical Standards and Q. Computing
- Offer workshops with external guests (improve visibility);
- Offer a lecture series as a crash course into the topic (for PhDs especially);
- Co-teach “Spezialvorlesungen” e.g. 'Topological Systems and Q. Computing;

### TG Competences/Services

- ....

### Involved QF Members

Members	Institution	Relevant Expertise
Patrik Recher, Leader	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	Theory of Emergent Correlated Quantum Matter
Daniel Frombach	TUBS	Josephson Junctions, Topological Systems
Fernando Dominguez	TUBS	Josephson Junctions, Topological Systems
Hans Werner Schumacher	PTB	Macroscopic Quantum Standards; Precision current metrology of single electron pumps; NV-centre-based magnetometry
Thomas Gerster	PTB	precision current metrology of single electron pumps
Fernandez-Scarioni	PTB	Macroscopic Quantum Standards
David Reifert	PTB	Macroscopic Quantum Standards
Rolf Haug	LUH	Two-dimensional materials, Electrical Quantum Effects, Magnetic Quantum Effects
Michael Oestreich	LUH	Spin and charge dynamics of single carriers in single semiconductor quantum dots
Lina Bockhorn	LUH	Electrical Quantum Effects
N.N.	LUH	Two-Dimensional Materials
Meinhard Schilling	TUBS	Electronic Quantum Metrology; Optical Voltage Standard - Fast Prototyping and HTS Superconductors
Hansjörg Scherer	PTB	Anomalous Quantum Hall Effect with Topological Materials



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
Hendrik Weimer	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
	LUH	Theory of Dynamics of Manybody Quantum Systems
Wolfram Brenig	TUBS	strongly correlated electron systems, quantum transport, quantum critical systems, low dimensional quantum magnets
Peter Lemmens	TUBS	Propagation of Twisted Light through Media: New Possibilities for Information Transfer; Spectroscopics of Topological Materials
Andrey Surzhykov	PTB	Light-Matter Interfaces and Dynamics
Yuriy Bidasyuk	PTB	Interaction of twisted light with Bose-Einstein condensates