

IMPRS for Quantum Science and Technology

Courses for the curriculum

Lecture	Institution	Lecturer / Module responsible	Term
Advanced Computational Physics	LMU	Pollet	SS
Advanced Quantum Field Theory	TUM	Weiler	SS
Advanced Statistical Physics	TUM	Knolle	WS
Applied Quantum Mechanics	TUM	Reinhard	WS
Applied Superconductivity	TUM	Gross / Fedorov	SS
Computational Methods in Many-Body Physics	TUM	Knap / Pollmann	SS
Condensed Matter Many-Body Physics and Field Theory I	LMU	Pollet	SS
Condensed Matter Many-Body Physics and Field Theory II	LMU	Punk	WS
Current Topics in the Physics and Technology of 2D Materials	TUM	Finley	SS
Few-Body Quantum Physics: From Quantum Optics to Solids	LMU	Grusdt	SS
Field Theory in Condensed Matter Physics	TUM	Moroz	WS
Groups and Lie-algebras	LMU	Brunner	SS
High Temperature Superconductivity (Seminar)	LMU	Von Delft / Punkt	WS
Introduction to Quantum Gravity	LMU	Oriti	WS
Machine Learning in Fundamental Physics	LMU	Lüst / Krippendorf	SS
Many-Body Physics with Ultracold Quantum Gases	LMU	Fölling	SS
Mathematical Aspects of Quantum Field Theory (block course)	TUM	Keyl	WS
Mathematical Introduction to Quantum Information Processing	TUM	Wolf	SS
Mathematical Quantum Mechanics	LMU	Scrinzi	WS
Mathematical Quantum Mechanics II	LMU	Siedentop	SS
Modern Semiconductors	LMU	Högele	SS
Nano- and Optomechanics	TUM	Poot	WS
Nanoplasmonics	TUM	Finley	WS
Photonics and Ultrafast Physics 1	TUM	Kienberger	WS
Photonic Quantum Technologies	TUM	Müller	SS
QST Experiment: Quantum Hardware	LMU	Aidelsburger	WS
QST Theory: Quantum Information	TUM	Cirac / Wolf	WS
Quantum Communication and Quantum Computing	LMU	Weinfurter	WS
Quantum Field Theory	TUM	Beneke	WS
Quantum Field Theory	LMU	Buchalla / Sachs	SS
Quantum Field Theory in Curved Spaces	LMU	Helling	WS
Quantum Hardware (Seminar)	TUM	Rempe	WS
Quantum Information and Entanglement	LMU	Paredes	WS

Lecture	Institution	Lecturer / Module responsible	Term
Quantum Many-Body Physics	TUM	Knap / Pollmann	WS
Quantum Optics 1	LMU	Bloch/ Fölling/ Aidelsburger	WS
Quantum Optics 1	TUM	Rempe	WS
Quantum Optics 2	LMU	Bloch/ Fölling/ Aidelsburger / Blatt	SS
Quantum Optics 2	TUM	Rempe	SS
Quantum Optoelectronics	LMU	Högele	SS
Quantum Technology	TUM	Reiserer	WS
Scattering Theory	LMU	Scrinzi	SS
Semiconductor Nanofabrication and Nano-analytical Methods	TUM	Koblmüller	WS
Solid State Spectroscopy	TUM	Finley	WS
Statistical Mechanics and Thermodynamics	TUM	Pollmann	WS
Strongly Correlated Quantum Systems in Atomic and Condensed Matter Physics	TUM	Knap	WS
Superconductivity and Low Temperature Physics 1	TUM	Gross / Deppe	WS
Superconductivity and Low Temperature Physics 2	TUM	Gross / Deppe	SS
Tensor Networks	LMU	Von Delft	SS
Theoretical Condensed Matter Physics	LMU	Pollet	WS
Theoretical Solid State Physics	TUM	Knap/ Pollmann	WS
Theory and Applications of Simple Lie-Algebras	TUM	Kaiser	SS
Topological Electronics and Materials	TUM	Holleitner	SS
Topology and New Kinds of Order in Condensed Mat- ter Physics	TUM	Pollmann	SS
Topology in Condensed Matter Physics	LMU	Punk	SS
Two Dimensional Materials	TUM	Holleitner	SS
Ultracold Quantum Gases 1	TUM	Dürr	WS
Ultracold Quantum Gases 1	LMU	Bloch/ Fölling/ Aidelsburger	WS
Ultracold Quantum Gases 2	LMU	Bloch/ Fölling/ Aidelsburger	SS
Ultracold Quantum Gases 2	TUM	Dürr	SS