

Quantum Information Division Fachverband Quanteninformatik (QI)

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Overview of Invited Talks and Sessions

(Lecture halls B302, B305, and F428; Poster Empore Lichthof)

Invited Talks

QI 3.1	Mon	11:00–11:30	B305	Characterising quantum device variability with machine learning — •NATALIA ARES
QI 5.1	Mon	11:00–11:30	F428	Building Superconducting Quantum Hardware towards Error-Corrected Quantum Computing — •CHRISTOPHER EICHLER
QI 10.1	Tue	11:00–11:30	B302	Quantum information in minimal quantum thermal machines — •GÉRALDINE HAACK
QI 11.1	Tue	11:00–11:30	B305	Characterisation of multipartite entanglement beyond the single-copy paradigm — •NICOLAI FRIIS
QI 17.1	Wed	11:00–11:30	B305	Self-testing with dishonest parties and entanglement certification in quantum networks — •GLÁUCIA MURTA, FLAVIO BACCARI
QI 19.1	Wed	11:00–11:30	F428	Experimental quantum error correction with trapped ions — •PHILIPP SCHINDLER
QI 21.1	Wed	14:30–15:00	B305	Qube and Qube-II – Towards Quantum Key Distribution with Small Satellites — •LUKAS KNIPS
QI 26.1	Thu	11:00–11:30	B305	Quantum firmware: optimal control for quantum simulators — •TOMMASO CALARCO
QI 28.1	Thu	11:00–11:30	F428	Conveyor-mode single-electron shuttling in Si/SiGe for a scalable quantum computing architecture — •INGA SEIDLER, TOM STRUCK, RAN XUE, STEFAN TRELLENKAMP, HENDRIK BLUHM, LARS R. SCHREIBER
QI 30.1	Thu	14:30–15:00	B305	Adaptive constant-depth circuits for manipulating non-abelian anyons — SERGEY BRAVYI, ISAAC KIM, ALEXANDER KLIESCH, •ROBERT KÖNIG

Invited Talks of the joint Symposium SAMOP Dissertation Prize 2023

See SYAD for the full program of the symposium.

SYAD 1.1	Mon	14:30–15:00	E415	Quantum gas magnifier for sub-lattice resolved imaging of 3D quantum systems — •LUCA ASTERIA
SYAD 1.2	Mon	15:00–15:30	E415	From femtoseconds to femtometers – controlling quantum dynamics in molecules with ultrafast lasers — •PATRICK RUPPRECHT
SYAD 1.3	Mon	15:30–16:00	E415	Particle Delocalization in Many-Body Localized Phases — •MAXIMILIAN KIEFER-EMMANOULIDIS
SYAD 1.4	Mon	16:00–16:30	E415	Feshbach resonances in a hybrid atom-ion system — •PASCAL WECKESSER

Prize Talks of the joint Awards Symposium

See SYAS for the full program of the symposium.

SYAS 1.1	Tue	14:35–15:05	E415	The Reaction Microscope: A Bubble Chamber for AMOP — •JOACHIM ULLRICH
SYAS 1.2	Tue	15:05–15:35	E415	Quantum Computation and Quantum Simulation with Strings of Trapped Ca⁺ Ions — •RAINER BLATT

SYAS 1.3	Tue	15:35–16:05	E415	Amplitude, Phase and Entanglement in Strong Field Ionization — ●SEBASTIAN ECKART
SYAS 1.4	Tue	16:05–16:35	E415	All-optical Nonlinear Noise Suppression in Mode-locked Lasers and Ultrafast Fiber Amplifiers — ●MARVIN EDELMANN

Invited Talks of the joint Symposium From Molecular Spectroscopy to Collision Control at the Quantum Limit

See SYCC for the full program of the symposium.

SYCC 1.1	Thu	11:00–11:30	E415	The unity of physics: the beauty and power of spectroscopy — ●PAUL JULIENNE
SYCC 1.2	Thu	11:30–12:00	E415	Using high-resolution molecular spectroscopy to explore how chemical reactions work — ●JOHANNES HECKER DENSCHLAG
SYCC 1.3	Thu	12:00–12:30	E415	Monitoring ultracold collisions with laser light — ●OLIVIER DULIEU
SYCC 1.4	Thu	12:30–13:00	E415	The birth of a degenerate Fermi gas of molecules — ●JUN YE

Invited Talks of the joint PhD-Symposium – Many-body Physics in Ultracold Quantum Systems

See SYPD for the full program of the symposium.

SYPD 1.1	Thu	14:30–15:00	E415	Entanglement and quantum metrology with microcavities — ●JAKOB REICHEL
SYPD 1.2	Thu	15:00–15:30	E415	Many-body physics in dipolar quantum gases — ●FRANCESCA FERLAINO
SYPD 1.3	Thu	15:30–16:00	E415	Quantum Simulation: from Dipolar Quantum Gases to Frustrated Quantum Magnets — ●MARKUS GREINER
SYPD 1.4	Thu	16:00–16:30	E415	Quantum gas in a box — ●ZORAN HADZIBABIC

Invited Talks of the joint Symposium Quantum Optics and Quantum Information with Rigid Rotors

See SYQR for the full program of the symposium.

SYQR 1.1	Fri	11:00–11:30	E415	Femtosecond timed imaging of rotation and vibration of alkali dimers on the surface of helium nanodroplets — ●HENRIK STAPELFELDT
SYQR 1.2	Fri	11:30–12:00	E415	Quantum toolbox for molecular state spaces — ERIC KUBISCHTA, SHUBHAM JAIN, IAN TEIXEIRA, ERIC R. HUDSON, WESLEY C. CAMPBELL, MIKHAIL LEMESHKO, ●VICTOR V. ALBERT
SYQR 1.3	Fri	12:00–12:30	E415	Coherent rotational state control of chiral molecules — ●SANDRA EIBENBERGER-ARIAS
SYQR 1.4	Fri	12:30–13:00	E415	Optically levitated rotors: potential control and optimal measurement — ●MARTIN FRIMMER
SYQR 2.1	Fri	14:30–15:00	E415	Rotational optomechanics with levitated nanodumbbells — ●TONGCANG LI
SYQR 2.2	Fri	15:00–15:30	E415	Quantum rotations of nanoparticles — ●BENJAMIN A. STICKLER
SYQR 2.3	Fri	15:30–16:00	E415	Quantum control of trapped molecular ions — ●STEFAN WILLITSCH
SYQR 2.4	Fri	16:00–16:30	E415	Full control over randomly oriented quantum rotors: controllability analysis and application to chiral observables — ●MONIKA LEIBSCHER

Sessions

QI 1.1–1.8	Mon	11:00–13:00	A320	Quantum Technologies I (joint session Q/A/QI)
QI 2.1–2.8	Mon	11:00–13:00	B302	
QI 3.1–3.7	Mon	11:00–13:00	B305	
QI 4.1–4.8	Mon	11:00–13:00	E214	
QI 5.1–5.5	Mon	11:00–12:30	F428	Quantum Foundations
QI 6.1–6.49	Mon	16:30–19:00	Empore Lichthof	Quantum Machine Learning
QI 7.1–7.8	Mon	17:00–19:00	F342	Quantum Computing and Simulation (joint session Q/QI)
				Superconducting Qubits and Hybrid Systems
				Poster I (joint session QI/Q)
				Quantum Technologies: Color Centers I (joint session Q/A/QI)

QI 8.1–8.8	Mon	17:00–19:00	F442	Quantum Communication I (joint session Q/QI)
QI 9.1–9.8	Tue	11:00–13:00	A320	Photonic Quantum Technologies (joint session Q/QI)
QI 10.1–10.7	Tue	11:00–13:00	B302	Quantum Thermodynamics and Open Quantum Systems I
QI 11.1–11.7	Tue	11:00–13:00	B305	Quantum Entanglement I
QI 12.1–12.7	Tue	11:00–13:00	E001	Integrated Photonics I (joint session Q/QI)
QI 13.1–13.8	Tue	11:00–13:00	F428	Quantum Simulation
QI 14.1–14.8	Tue	11:00–13:00	F442	Quantum Technologies: Color Centers II (joint session Q/QI)
QI 15	Tue	13:15–14:00	B305	Members’ Assembly
QI 16.1–16.8	Wed	11:00–13:00	B302	Concepts and Methods I
QI 17.1–17.6	Wed	11:00–12:45	B305	Quantum Networks I (joint session QI/Q)
QI 18.1–18.8	Wed	11:00–13:00	F342	Quantum Technologies: Trapped Ions (joint session Q/QI)
QI 19.1–19.7	Wed	11:00–13:00	F428	Implementations: Ions and Atoms (joint session QI/Q)
QI 20.1–20.8	Wed	14:30–16:30	B302	Concepts and Methods II
QI 21.1–21.7	Wed	14:30–16:30	B305	Quantum Communication II (joint session QI/Q)
QI 22.1–22.7	Wed	14:30–16:30	E214	Quantum Technologies II (joint session Q/MO/QI)
QI 23.1–23.65	Wed	16:30–19:00	Empore Lichthof	Poster II (joint session QI/Q)
QI 24.1–24.8	Wed	17:00–19:00	A320	Integrated Photonics II (joint session Q/QI)
QI 25.1–25.8	Thu	11:00–13:00	B302	Quantum Entanglement II
QI 26.1–26.7	Thu	11:00–13:00	B305	Quantum Control (joint session QI/Q)
QI 27.1–27.7	Thu	11:00–13:00	E001	Precision Measurements with Optical Clocks (joint session Q/QI)
QI 28.1–28.7	Thu	11:00–13:00	F428	Spin Qubits
QI 29.1–29.8	Thu	14:30–16:30	B302	Quantum Thermodynamics and Open Quantum Systems II
QI 30.1–30.7	Thu	14:30–16:30	B305	Quantum Algorithms
QI 31.1–31.7	Thu	14:30–16:30	E214	Single Quantum Emitters (joint session Q/QI)
QI 32.1–32.8	Thu	14:30–16:30	F102	Quantum Optics and Quantum Information with Rigid Rotors (joint session MO/Q/QI)
QI 33.1–33.8	Thu	14:30–16:30	F428	Quantum Networks II (joint session QI/Q)
QI 34.1–34.8	Fri	11:00–13:00	B302	Concepts and Methods III
QI 35.1–35.8	Fri	11:00–13:00	B305	Quantum Computers: Algorithms and Benchmarking
QI 36.1–36.8	Fri	11:00–13:00	F428	Quantum Metrology (joint session QI/Q)
QI 37.1–37.7	Fri	14:30–16:15	F428	Quantum Many Body Systems

Members’ Assembly of the Quantum Information Division

Tuesday, 07/03/2023 13:15–14:00 B305

More information will be sent to the members of the division by e-mail.