

Quantum Information Division Fachverband Quanteninformatik (QI)

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Overview of Invited Talks and Sessions (Lecture halls HS II, HS IV, HS VIII, and HS IX; Posters Tent)

Invited Talks

QI 1.1	Mon	11:00–11:30	HS IX	Sound and Efficient Quantum System Quizzing — •MARIAMI GACHECHILADZE, JAN NÖLLER, MARTIN KLIESCH, NIKOLAI MIKLIN
QI 3.1	Mon	11:00–11:30	HS II	Conveyor-mode shuttling of electron spin qubits in Si/SiGe for scalable architectures — TOM STRUCK, MATS VOLMER, MAX BEER, RAN XUE, ALEX WILLMES, MAX OBERLÄNDER, TILL HUCKEMANN, ARNAU SALA, ŁUKASZ CYWIŃSKI, HENDRIK BLUHM, •LARS R. SCHREIBER
QI 5.1	Mon	17:00–17:30	HS IX	Representation Theory for Quantum Algorithms and Protocols — DMITRY GRINKO, •ADAM BURCHARDT, MARIS OZOLS
QI 6.1	Mon	17:00–17:30	HS VIII	Precision measurement with nanoscale resolution — •JOERG WRACHTRUP
QI 7.1	Mon	17:00–17:30	HS II	Trapped-ion quantum computers based on chip-integrated microwave control — •CHRISTIAN OSPELKAUS
QI 8.1	Mon	17:00–17:30	HS IV	Quantum Informatics - From Quantum Gates to Quantum Software Engineering — •INA SCHAEFER
QI 11.1	Tue	11:00–11:30	HS II	Systematic High-Fidelity Operation and Transfer in Semiconductor Spin-Qubits — •MAXIMILIAN RIMBACH-RUSS
QI 12.1	Tue	11:00–11:30	HS IV	Classical reasoning methods for quantum circuit analysis — •TIM COOPMANS, LIEUWE VINKHUIJZEN, AREND-JAN QUIST, JINGYI MEI, ALFONS LAARMAN
QI 14.1	Tue	14:00–14:30	HS IX	Certification of high-dimensional and multipartite entanglement with imperfect measurements — •SIMON MORELLI, HAYATA YAMASAKI, MARCUS HUBER, ARMIN TAVAKOLI
QI 19.1	Wed	14:30–15:00	HS IX	Wave-Function Expansion with Optically Levitated Nanoparticles — •MARTIN FRIMMER
QI 20.1	Wed	14:30–15:00	HS VIII	Generating entangled states in quantum networks — •NIKOLAI WYDERKA, JUSTUS NEUMANN, TULJA VARUN KONDRA, KIARA HANSENNE, LISA T. WEINBRENNER, HERMANN KAMPERMANN, OTFRIED GÜHNE, DAGMAR BRUSS
QI 21.1	Wed	14:30–15:00	HS II	Mesoscopic physics challenges (in) superconducting quantum devices — •IOAN POP
QI 26.1	Thu	11:00–11:30	HS IX	Device-independent randomness amplification — •RAMONA WOLF
QI 27.1	Thu	11:00–11:30	HS VIII	Fault-tolerant compiling of quantum algorithms — •DOMINIK HANGLEITER
QI 28.1	Thu	11:00–11:30	HS II	Quantum-Classical Hybrid Theories - Feedback Control and Environment Purification — •PATRICK P. POTTS
QI 29.1	Thu	11:00–11:30	HS IV	Measurement-induced entanglement and complexity in shallow 2D quantum circuits — •MAX MCGINLEY, WEN WEI HO, DANIEL MALZ

Invited Talks of the joint Symposium SAMOP Dissertation Prize 2025 (SYAD)

See SYAD for the full program of the symposium.

SYAD 1.1	Mon	14:30–15:00	HS 1+2	A simple method to separate single- from multi-particle dynamics in time-resolved spectroscopy — ●JULIAN LÜTTIG
SYAD 1.2	Mon	15:00–15:30	HS 1+2	Time-resolving quantum dynamics in atoms and molecules with intense x-ray lasers and neural networks — ●ALEXANDER MAGUNIA
SYAD 1.3	Mon	15:30–16:00	HS 1+2	How rotation shapes the decay of diatomic carbon anions — ●VIVIANE C. SCHMIDT
SYAD 1.4	Mon	16:00–16:30	HS 1+2	Interstellar stardust from stellar explosions recorded in a deep-ocean ferromanganese crust within the last 10 million years — ●DOMINIK KOLL

Invited Talks of the joint Symposium Quantum Science and more in Ghana and Germany (SYGG)

See SYGG for the full program of the symposium.

SYGG 1.1	Tue	11:00–11:05	WP-HS	Welcome Adress — ●BIRGIT MÜNCH
SYGG 1.2	Tue	11:05–11:20	WP-HS	Quantum Education in Ghana — ●DORCAS ATTUABEA ADDO
SYGG 1.3	Tue	11:20–11:45	WP-HS	Mathematical and Computational Physics Research In Ghana: To Cultivate a Knowledge-Based and Sustainable Development Economy — ●HENRY MARTIN, HENRY ELORM QUARSHIE, MARK PAAL, FRANCIS KOFI AMPONG, ERIC KWABENA KYEH ABAVARE, MATTEO COLANGELI, ALESSANDRA CONTINENZA, JAIME MARIAN
SYGG 1.4	Tue	11:45–12:10	WP-HS	Forecasting the Economic Health of Ghana Using Quantum-Enhanced Long Short-Term Memory Model — ●PETER NIMBE, HENRY MARTIN, DORCAS ATTUABEA ADDO, NICODEMUS SONGOSE AWARAYI
SYGG 1.5	Tue	12:10–12:40	WP-HS	Quantum Technology with Spins — ●JOERG WRACHTRUP
SYGG 1.6	Tue	12:40–13:00	WP-HS	Renewable Energy Technologies for Rural Ghana: The Role of Appropriate Technology for Tailored solutions — ●MICHAEL KWEKU EDEM DONKOR

Invited Talks of the joint Symposium Foundations of Quantum Theory (SYQT)

See SYQT for the full program of the symposium.

SYQT 1.1	Wed	11:00–11:30	HS 1+2	Against ‘local causality’ — ●GUIDO BACCIAGALUPPI
SYQT 1.2	Wed	11:30–12:00	HS 1+2	Philosophy of Quantum Thermodynamics — ●CARINA PRUNKL
SYQT 1.3	Wed	12:00–12:30	HS 1+2	Can quantum information be the underpinning of quantum physics? — ●PAOLO PERINOTTI
SYQT 1.4	Wed	12:30–13:00	HS 1+2	Spin-bounded correlations: rotation boxes within and beyond quantum theory — ALBERT ALOY, ●THOMAS GALLEY, CAROLINE JONES, STEFAN LUDESCHER, MARKUS MÜLLER

Invited Talks of the joint Symposium Hidden Variables: Contributions of Women to Quantum Physics (SYWQ)

See SYWQ for the full program of the symposium.

SYWQ 1.1	Thu	11:00–11:30	HS 1+2	Reshaping the History of Quantum Physics: Paths to Gender Equality — ●ANDREA REICHENBERGER
SYWQ 1.2	Thu	11:30–12:00	HS 1+2	Lucy Mensing: Forgotten Pioneer of Quantum Mechanics — ●GERNOT MÜNSTER
SYWQ 1.3	Thu	12:00–12:30	HS 1+2	Roller-coasting women scientific trajectories: New frontiers to accelerate (quantum) science — ●MARILÙ CHIOFALO
SYWQ 1.4	Thu	12:30–13:00	HS 1+2	Who decides scientific authority and how? — ●ANNA SANPERA

Prize and Invited Talks of the joint Awards Symposium (SYAS)

See SYAS for the full program of the symposium.

SYAS 1.1	Thu	14:30–15:10	HS 1+2	A journey in mathematical quantum physics — ●REINHARD F. WERNER
SYAS 1.2	Thu	15:10–15:50	HS 1+2	Precision Tests of the Standard Model at Low Energies Using Stored Exotic Ions in Penning Traps — ●KLAUS BLAUM
SYAS 1.3	Thu	15:50–16:30	HS 1+2	Controlling light by atoms and atoms by light: from dark-state polaritons to many-body spin physics — ●MICHAEL FLEISCHHAUER
SYAS 1.4	Thu	16:30–16:35	HS 1+2	Quantum history at your fingertips: Launch of the DPG’s Quantum History Wall — ●ARNE SCHIRRMACHER

Sessions

QI 1.1–1.5	Mon	11:00–12:30	HS IX	Certification and Benchmarking of Quantum Systems
QI 2.1–2.7	Mon	11:00–12:45	HS VIII	Quantum Machine Learning I
QI 3.1–3.5	Mon	11:00–12:30	HS II	Semiconductor Spin Qubits I: Silicon
QI 4.1–4.7	Mon	11:00–13:00	AP-HS	Quantum Networks, Repeaters, and QKD I (joint session Q/QI)
QI 5.1–5.5	Mon	17:00–18:30	HS IX	Quantum Entanglement I
QI 6.1–6.6	Mon	17:00–18:45	HS VIII	Quantum Metrology and Sensing (joint session QI/Q)
QI 7.1–7.6	Mon	17:00–18:45	HS II	Atom and Ion Qubits (joint session QI/Q)
QI 8.1–8.7	Mon	17:00–19:00	HS IV	Quantum Computing Theory I
QI 9.1–9.6	Tue	11:00–12:30	HS IX	Quantum Entanglement II
QI 10.1–10.7	Tue	11:00–12:45	HS VIII	Quantum Machine Learning II
QI 11.1–11.6	Tue	11:00–12:45	HS II	Semiconductor Spin Qubits II: Si, Ge, and Color Centers
QI 12.1–12.6	Tue	11:00–12:45	HS IV	Quantum Computing Theory II
QI 13.1–13.8	Tue	11:00–13:00	AP-HS	Quantum Networks, Repeaters, and QKD II (joint session Q/QI)
QI 14.1–14.5	Tue	14:00–15:30	HS IX	Quantum Entanglement III
QI 15.1–15.6	Tue	14:00–15:30	HS II	Quantum Computing Implementations (joint session QI/Q)
QI 16.1–16.6	Tue	14:00–15:30	HS IV	Quantum Computing Theory III
QI 17.1–17.6	Wed	11:00–12:30	HS V	Quantum Sensing I (joint session Q/QI)
QI 18.1–18.8	Wed	11:00–13:00	AP-HS	Quantum Networks, Repeaters, and QKD III (joint session Q/QI)
QI 19.1–19.6	Wed	14:30–16:15	HS IX	Mechanical, Macroscopic, and Continuous-variable Quantum Systems (joint session QI/Q)
QI 20.1–20.8	Wed	14:30–16:45	HS VIII	Quantum Networks (joint session QI/Q)
QI 21.1–21.6	Wed	14:30–16:15	HS II	Superconducting Qubits
QI 22.1–22.7	Wed	14:30–16:15	HS IV	Quantum Simulation
QI 23.1–23.7	Wed	14:30–16:30	HS Botanik	Quantum Technologies (Color Centers and Ion Traps) I (joint session Q/QI)
QI 24.1–24.6	Wed	14:30–16:15	HS I	Open Quantum Systems I (joint session Q/QI)
QI 25	Wed	17:00–18:30	HS 7	Members’ Assembly
QI 26.1–26.6	Thu	11:00–12:45	HS IX	Quantum Communication I: Theory
QI 27.1–27.5	Thu	11:00–12:30	HS VIII	Quantum Error Correction
QI 28.1–28.6	Thu	11:00–12:45	HS II	Decoherence and Open Quantum Systems (joint session QI/Q)
QI 29.1–29.8	Thu	11:00–13:15	HS IV	Quantum Information: Concepts and Methods I
QI 30.1–30.8	Thu	11:00–13:00	AP-HS	Quantum Computing and Simulation I (joint session Q/QI)
QI 31.1–31.6	Thu	11:00–12:45	HS I PI	Quantum Sensing II (joint session Q/QI)
QI 32.1–32.8	Thu	14:30–16:30	HS IX	Quantum Communication II: Implementations (joint session QI/Q)
QI 33.1–33.8	Thu	14:30–16:30	HS VIII	Quantum Materials and Many-Body Systems
QI 34.1–34.8	Thu	14:30–16:30	HS II	Quantum Control I
QI 35.1–35.9	Thu	14:30–16:45	HS IV	Quantum Information: Concepts and Methods II
QI 36.1–36.69	Thu	17:00–19:00	Tent	Poster – Quantum Information (joint session QI/Q)
QI 37.1–37.45	Thu	17:00–19:00	Tent	Poster – Quantum Information Technologies (joint session Q/QI)
QI 38.1–38.9	Fri	11:00–13:15	HS IX	Quantum Thermodynamics
QI 39.1–39.8	Fri	11:00–13:00	HS VIII	Quantum Foundations

QI 40.1–40.8	Fri	11:00–13:00	HS II	Quantum Control II (joint session QI/Q)
QI 41.1–41.7	Fri	11:00–13:00	AP-HS	Quantum Computing and Simulation II (joint session Q/QI)
QI 42.1–42.7	Fri	11:00–13:00	HS Botanik	Quantum Technologies (Color Centers and Ion Traps) II (joint session Q/QI)
QI 43.1–43.8	Fri	11:00–13:00	HS I	Open Quantum Systems II (joint session Q/QI)
QI 44.1–44.7	Fri	14:30–16:15	AP-HS	Quantum Technologies (Detectors and Photon Sources) (joint session Q/QI)
QI 45.1–45.8	Fri	14:30–16:30	HS I	Quantum Technologies (Solid State Systems) (joint session Q/QI)

Members' Assembly of the Quantum Information Division

Wednesday 17:00–18:30 HS 7

An invitation including the agenda will be sent by email.