

Quantum Optics and Photonics Division Fachverband Quantenoptik und Photonik (Q)

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Overview of Invited Talks and Sessions

(Lecture halls P 2, P 3, P 4, P 5, P 7, P 10, and P 11; Poster Philo 1. OG and 2. OG)

Invited Talks

Q 8.1	Mon	17:00–17:30	P 3	Heterogeneous Quantum Photonics: A Platform for Quantum Sensing, Networking, and Transduction — ●SAMUEL GYGER
Q 11.3	Mon	17:30–18:00	P 7	Quantum radiometry metrology for quantum photonics technologies — ●ANGELA GAMOURAS
Q 12.1	Mon	17:00–17:30	P 10	Topological pumping and quantum information — ●KONRAD VIEBAHN
Q 20.1	Tue	11:00–11:30	P 7	Entangled photons from GaAs quantum dots in tunable circular Bragg resonators — ●ARMANDO RASTELLI
Q 21.1	Tue	11:00–11:30	P 10	Interfacing with Quantum Information Processors—From Readout to Control — ●BENJAMIN LIENHARD
Q 22.1	Tue	11:00–11:30	P 11	Exploring nonlinear optics with x-rays — ●DIETRICH KREBS
Q 30.1	Wed	14:30–15:00	P 1	Shedding light on nuclear spins: from collective states to a quantum memory — ●METE ATATURE
Q 34.1	Wed	14:30–15:00	P 5	Spectral Peaked Optical Frequency Comb for Highly Sensitive Cavity Ring-down Spectroscopy — ●HIDEKI TOMITA
Q 35.1	Wed	14:30–15:00	P 10	Quantum field simulation on bosonic platforms — ●TOBIAS HAAS
Q 45.1	Thu	11:00–11:30	P 3	Quantum geometry in plasmonic metasurfaces and signatures of collective quantum phenomena — ●JAVIER CUERDA
Q 46.1	Thu	11:00–11:30	P 4	Squeezed Light and Optimal Phase Estimation for Quantum Metrology — ●MOJDEH SHIKHALI NAJAFABADI
Q 48.1	Thu	11:00–11:30	P 7	Quantum teleportation with remote quantum dots in a metropolitan hybrid quantum network — ●M. B. ROTA
Q 56.1	Thu	14:30–15:00	P 3	Quantum logic control of transition metal and molecular ions — ●FABIAN WOLF
Q 59.1	Thu	14:30–15:00	P 7	High-Speed Quantum Key Distribution using Single Photons from Defects in Hexagonal Boron Nitride — ●SERKAN ATEŞ
Q 59.6	Thu	16:00–16:30	P 7	Metropolitan Quantum Key Distribution based on Room Temperature Single Photon Source — ●HAORAN ZHANG
Q 60.1	Thu	14:30–15:00	P 10	Towards entangling distributed registers of atoms — ●BEN LANYON
Q 70.1	Fri	11:00–11:30	P 3	Totally destructive many-body interference beyond bosons and fermions — ●GABRIEL DUFOUR
Q 73.1	Fri	11:00–11:30	P 7	Microwave quantum communication with rare-earth spin ensembles — ●NADEZHDA KUKHARCHYK

Invited Talks of the joint Symposium SAMOP Dissertation Prize 2026 (SYAD)

See SYAD for the full program of the symposium.

SYAD 1.1	Mon	14:30–15:00	RW 1	What graphs can tell us about quantum information — ●KIARA HANSENNE
SYAD 1.2	Mon	15:00–15:30	RW 1	Realization of alkaline-earth circular Rydberg qubits in optical tweezer arrays — ●CHRISTIAN HÖLZL
SYAD 1.3	Mon	15:30–16:00	RW 1	Pattern Formation and Supersolid-like Sound Modes in a Driven Superfluid — ●NIKOLAS LIEBSTER

SYAD 1.4 Mon 16:00–16:30 RW 1 **Harnessing time-frequency qudits using integrated nonlinear processes** — •LAURA SERINO

Invited Talks of the joint Symposium Classical and Quantum Structured Light (SYSL)

See SYSL for the full program of the symposium.

SYSL 1.1 Mon 17:00–17:30 P 1 **Structured-light-matter interaction for quantum cryptography and nanoscale modal control** — •EILEEN OTTE, ASMA FALLAH, WILLIAM A. JARRETT, ALEXANDER D. WHITE, GIOVANNI SCURI, SEUNGJUN EUN, NICHOLAS A. GUESKEN, HOSSEIN TAGHINEJAD, JELENA VUCKOVIC, MARK L. BRONGERSMA

SYSL 1.2 Mon 17:30–18:00 P 1 **Attosecond Structured Light Pulses with Topology and Polarization Textures** — •CARLOS HERNANDEZ-GARCIA

SYSL 1.3 Mon 18:00–18:30 P 1 **Structured light for the creation of squeezed multiplets to encode quantum information in trapped ions** — •CORINA RÉVORA, CHRISTIAN TOMÁS SCHMIEGELOW, JUAN PABLO PAZ

SYSL 1.4 Mon 18:30–19:00 P 1 **Atomic Magnetometry Employing Vector Light Beams** — •RIAAN PHILIPP SCHMIDT, RICHARD AGUIAR MADURO, ANTON PESHKOV, SONJA FRANKE-ARNOLD, ANDREY SURZHYKOV

Invited Talks of the joint Symposium Spin-Boson Models (SYSB)

See SYSB for the full program of the symposium.

SYSB 1.1 Tue 11:00–11:30 RW 1 **Tailoring the quantum dynamics of spins with bosonic baths** — •GIOVANNA MORIGI

SYSB 1.2 Tue 11:30–12:00 RW 1 **Spins, Qubits, and Bosons** — •GUIDO BURKARD

SYSB 1.3 Tue 12:00–12:30 RW 1 **Spin-boson models under strong ac-driving** — •MILENA GRIFONI

SYSB 1.4 Tue 12:30–13:00 RW 1 **Kibble-Zurek scenario for melting of discrete time crystals** — •PHATTHAMON KONGKHAMBUT, HANS KESSLER, ROY D. JARA JR., JAYSON G. COSME, ANDREAS HEMMERICH

Invited Talks of the joint Symposium Selected Highlights of AMOP in Austria (SYAU)

See SYAU for the full program of the symposium.

SYAU 1.2 Wed 11:15–11:45 RW 1 **Supersolidity: When Superfluid Flow Meets Crystalline Order** — •FRANCESCA FERLAINO

SYAU 1.3 Wed 11:45–12:15 RW 1 **Charged Helium Nanodroplets: A Cold Laboratory for Molecular Ions** — •ELISABETH GRUBER

SYAU 1.4 Wed 12:15–12:45 RW 1 **Advances in Broadband Saturation Spectroscopy: Towards Probing New Physics in the Mid-Infrared** — •OLIVER HECKL

SYAU 1.5 Wed 12:45–13:15 RW 1 **Precision laser spectroscopy of the Thorium-229 nuclear transition** — •THORSTEN SCHUMM

Invited Talks of the joint Symposium Light and Chirality: From Fundamentals to Applications (SYLC)

See SYLC for the full program of the symposium.

SYLC 1.1 Wed 14:30–15:00 RW 1 **Enantio-sensitive molecular compass** — P. M. FLORES, S. CARLSTROEM, S. PATCHKOVSKII, M. IVANOV, V. MUJICA, A. F. ORDONEZ, •O. SMIRNOVA

SYLC 1.2 Wed 15:00–15:30 RW 1 **Conjugation, chirality and optical activity** — •MATTHEW FUCHTER

SYLC 1.3 Wed 15:30–16:00 RW 1 **Gas-phase spectroscopy of chiral molecules** — •ANNE ZEHNACKER, ETIENNE ROUQUET, VALÉRIA LEPÈRE, GUSTAVO GARCIA, LAURENT NAHON

SYLC 1.4 Wed 16:00–16:30 RW 1 **Toward a low-energy test of the parity symmetry via precise mid-IR spectroscopy of cold chiral molecules** — AGATHE BONIFACIO, SAHIL VIEL, RAPHAËL HAHN, MINH NHUT NGO, MARYLISE SAFFRE, YUHAO LIU, WENLING DONG, ETIENNE CANTIN, OLIVIER LOPEZ, ANNE AMY-KLEIN, MATHIEU MANCEAU, •BENOÎT DARQUIÉ

Invited Talks of the joint Symposium One-Dimensional Quantum Many-Body Systems between Bose and Fermi Statistics (SYMB)

See SYMB for the full program of the symposium.

SYMB 1.1	Thu	14:30–15:00	P 1	Exploring gauge theories for 1D anyons in Raman-coupled Bose gases — ●LETICIA TARRUELL
SYMB 1.2	Thu	15:00–15:30	P 1	Non trivial particle exchange in one dimension: The anyon Hubbard model and beyond — ●ANDRÉ ECKARDT
SYMB 1.3	Thu	15:30–16:00	P 1	Exotic Quantum Statistics in Strongly Interacting 1D Bose Gases — ●HANNS-CHRISTOPH NÄGERL
SYMB 1.4	Thu	16:00–16:30	P 1	Dipolar gases in triangular ladders — ●LUIS SANTOS

Invited Talks of the joint Symposium Tests of Fundamental Physics with AMO Systems (SYFP)

See SYFP for the full program of the symposium.

SYFP 1.1	Fri	11:00–11:30	RW 1	Searches for new bosons with isotope shift spectroscopy and the thorium nuclear transition — ●ELINA FUCHS
SYFP 1.2	Fri	11:30–12:00	RW 1	Precision spectroscopy of muonic atoms — ●RANDOLF POHL
SYFP 1.3	Fri	12:00–12:30	RW 1	Quantum-Controlled Molecules for Fundamental Physics and Quantum Science — ●NICHOLAS HUTZLER
SYFP 1.4	Fri	12:30–13:00	RW 1	Testing Baryon Asymmetry with Antiprotons — ●STEFAN ULMER

Invited Talks of the joint Symposium Laser Driven X-Rays: Generation and Application (SYLX)

See SYLX for the full program of the symposium.

SYLX 1.1	Fri	14:30–15:00	RW 1	Laserstrahlquellen als Treiber für Sekundärstrahlquellen — ●TORSTEN MANS, DOMINIK BAUER, THOMAS METZGER, DOMINIK ERTEL, CLAUS SCHNITZLER, TINO EIDAM
SYLX 1.2	Fri	15:00–15:30	RW 1	Development and Integration of Novel LPP Radiation Sources for Enhanced Characterization and Industrial Application — LION GÜNSTER, LUKA PETERSEN, PHILIP MOSEL, PEER BIESTERFELD, SVEN FRÖHLICH, JOSE MAPA, GRETA PARUSCHKE, PIA KOOPMANN, BIANCA IWAN, UWE MORGNER, ●MILUTIN KOVACEV
SYLX 1.3	Fri	15:30–16:00	RW 1	Near-relativistic ytterbium fiberlaser plasma source for high-flux hard X-ray generation from a liquid-metal jet — ●ROBERT KLAS, MAXIMILIAN BENNER, MOHAMMED ALMASSARANI, MAXIMILIAN KARST, LUCAS EISENBACH, PHILIPP GIERSCHKE, WARUNYA RÖDER, ARNO KLENKE, JAN ROTH-HARDT, JENS LIMPET
SYLX 1.4	Fri	16:00–16:30	RW 1	Laser-driven X-ray generation for industrial applications — ●JOHANNES MAXIMILIAN EBERT, KLAUS BERGMANN, SARAH KLEIN, MARTIN TRAUB, JOCHEN VIEKER, STEPHAN HERMAN WISSENBERG, HANS-DIETER HOFFMANN

Sessions

Q 1.1–1.5	Mon	11:45–13:00	P 2	Ultracold Matter I – Fermions (joint session Q/A)
Q 2.1–2.5	Mon	11:45–13:00	P 3	Nanophotonics and Integrated Photonics I
Q 3.1–3.5	Mon	11:45–13:00	P 5	Quantum Technologies – Enabling Technologies
Q 4.1–4.5	Mon	11:45–13:00	P 10	Quantum Computing and Simulation I
Q 5.1–5.5	Mon	11:45–13:00	P 11	Laser Cooling and Trapping
Q 6.1–6.3	Mon	11:45–12:45	N 1	Ultra-cold Plasmas and Rydberg Systems I (joint session A/Q)
Q 7.1–7.8	Mon	17:00–19:00	P 2	Ultracold Matter II – Bosons (joint session Q/A)
Q 8.1–8.7	Mon	17:00–19:00	P 3	Nanophotonics and Integrated Photonics II
Q 9.1–9.7	Mon	17:00–18:45	P 4	Open Quantum Systems and Spin-Boson Systems I
Q 10.1–10.8	Mon	17:00–19:00	P 5	Quantum Technologies – Photon Detectors and Sources
Q 11.1–11.7	Mon	17:00–19:00	P 7	QuanTour I – Single Photons & Foundations
Q 12.1–12.6	Mon	17:00–18:45	P 10	Quantum Computing and Simulation II
Q 13.1–13.8	Mon	17:00–19:00	P 11	Nuclear Clocks

Q 14.1–14.7	Mon	17:00–19:00	N 3	Precision Spectroscopy of Atoms and Ions I (joint session A/Q)
Q 15.1–15.7	Mon	17:00–19:00	N 6	Precision Mass Spectrometry (joint session MS/Q)
Q 16.1–16.8	Tue	11:00–13:00	P 2	Ultracold Matter III – Fermions (joint session Q/A)
Q 17.1–17.8	Tue	11:00–13:00	P 3	Photonics and Biophotonics I
Q 18.1–18.8	Tue	11:00–13:00	P 4	Photon BEC
Q 19.1–19.8	Tue	11:00–13:00	P 5	Quantum Technologies – Ion Traps
Q 20.1–20.7	Tue	11:00–13:00	P 7	QuanTour II – Multi-photon Effects & Entanglement
Q 21.1–21.7	Tue	11:00–13:00	P 10	Quantum Computing and Simulation III
Q 22.1–22.7	Tue	11:00–13:00	P 11	Nuclear and X-Ray Quantum Optics
Q 23.1–23.8	Tue	11:00–13:15	P 105	Cold Molecules (joint session MO/Q)
Q 24.1–24.8	Tue	11:00–13:00	N 1	Ultra-cold Atoms, Ions and BEC I (joint session A/Q)
Q 25.1–25.7	Tue	11:00–13:00	N 3	Precision Spectroscopy of Atoms and Ions II (joint session A/Q)
Q 26.1–26.19	Tue	17:00–19:00	Philo 1. OG	Poster – Ultrashort Pulses and Strong Fields (joint session K/Q)
Q 27.1–27.29	Tue	17:00–19:00	Philo 1. OG	Poster – Precision Spectroscopy of Atoms and Ions (joint session A/Q)
Q 28.1–28.35	Tue	17:00–19:00	Philo 2. OG	Poster – Quantum Optics
Q 29.1–29.39	Tue	17:00–19:00	Philo 2. OG	Poster – Quantum Technologies I
Q 30.1–30.7	Wed	14:30–16:30	P 1	QuanTour III – Spin Physics & Coherence
Q 31.1–31.8	Wed	14:30–16:30	P 2	Ultracold Matter IV – Bosons, Rydberg Systems, and Others (joint session Q/A)
Q 32.1–32.8	Wed	14:30–16:30	P 3	Photonics and Biophotonics II
Q 33.1–33.8	Wed	14:30–16:30	P 4	Cavity QED, QED, and Spin-Boson Systems I
Q 34.1–34.7	Wed	14:30–16:30	P 5	Quantum Technologies – Sensing I
Q 35.1–35.7	Wed	14:30–16:30	P 10	Quantum Computing and Simulation IV
Q 36.1–36.8	Wed	14:30–16:30	P 11	Matter Wave Interferometry and Metrology I
Q 37.1–37.7	Wed	14:30–16:30	N 1	Ultra-cold Atoms, Ions and BEC II (joint session A/Q)
Q 38.1–38.7	Wed	14:30–16:30	N 3	Precision Spectroscopy of Atoms and Ions III (joint session A/Q)
Q 39.1–39.5	Wed	17:00–19:00	Philo 1. OG	Poster – Cold Molecules (joint session MO/Q)
Q 40.1–40.23	Wed	17:00–19:00	Philo 1. OG	Poster – Photonics
Q 41.1–41.28	Wed	17:00–19:00	Philo 2. OG	Poster – Quantum Technologies II & Laser Technology
Q 42.1–42.32	Wed	17:00–19:00	Philo 2. OG	Poster – Ultracold Matter (joint session Q/A)
Q 43.1–43.16	Wed	17:00–19:00	Philo 2. OG	Poster – Quantum Systems
Q 44.1–44.8	Thu	11:00–13:00	P 2	Laser Technology and Applications
Q 45.1–45.7	Thu	11:00–13:00	P 3	Plasmonics and Metasurfaces
Q 46.1–46.7	Thu	11:00–13:00	P 4	Open Quantum Systems II
Q 47.1–47.8	Thu	11:00–13:00	P 5	Quantum Technologies – Sensing II
Q 48.1–48.7	Thu	11:00–13:00	P 7	QuanTour IV – Building Blocks
Q 49.1–49.8	Thu	11:00–13:00	P 10	Quantum Communication, Networks, Repeaters, & QKD I
Q 50.1–50.8	Thu	11:00–13:00	P 11	Matter Wave Interferometry and Metrology II
Q 51.1–51.7	Thu	11:00–13:00	N 1	Ultra-cold Atoms, Ions and BEC III (joint session A/Q)
Q 52.1–52.6	Thu	11:00–13:00	N 2	Ultra-cold Plasmas and Rydberg Systems II (joint session A/Q)
Q 53.1–53.7	Thu	11:00–13:00	N 3	Precision Spectroscopy of Atoms and Ions IV (joint session A/Q)
Q 54	Thu	13:15–14:15	P 10	Members’ Assembly
Q 55.1–55.8	Thu	14:30–16:30	P 2	Optomechanics
Q 56.1–56.7	Thu	14:30–16:30	P 3	Quantum Optics and Control I
Q 57.1–57.8	Thu	14:30–16:30	P 4	Open Quantum Systems III
Q 58.1–58.8	Thu	14:30–16:30	P 5	Quantum Technologies – Color Centers I
Q 59.1–59.6	Thu	14:30–16:30	P 7	QuanTour V – Protocols
Q 60.1–60.7	Thu	14:30–16:30	P 10	Quantum Communication, Networks, Repeaters, & QKD II
Q 61.1–61.8	Thu	14:30–16:30	P 11	Matter Wave Interferometry and Metrology III
Q 62.1–62.8	Thu	14:30–16:30	N 1	Ultra-cold Atoms, Ions and BEC IV (joint session A/Q)
Q 63.1–63.8	Thu	14:30–16:30	N 3	Precision Spectroscopy of Atoms and Ions V (joint session A/Q)
Q 64.1–64.42	Thu	17:00–19:00	Philo 1. OG	Poster – Ultra-cold atoms, ions and BEC (joint session A/Q)

Q 65.1–65.9	Thu	17:00–19:00	Philo 1. OG	Poster – Ultra-cold plasmas and Rydberg systems (joint session A/Q)
Q 66.1–66.33	Thu	17:00–19:00	Philo 2. OG	Poster – Quantum Technologies III
Q 67.1–67.31	Thu	17:00–19:00	Philo 2. OG	Poster – Quantum Information
Q 68.1–68.15	Thu	17:00–19:00	Philo 2. OG	Poster – Precision Measurement (joint session Q/A)
Q 69.1–69.7	Fri	11:00–12:45	P 2	Collective Effects and Disordered Systems
Q 70.1–70.7	Fri	11:00–13:00	P 3	Quantum Optics and Control II
Q 71.1–71.8	Fri	11:00–13:00	P 4	Cavity QED and QED II
Q 72.1–72.7	Fri	11:00–12:45	P 5	Quantum Technologies – Color Centers II
Q 73.1–73.7	Fri	11:00–13:00	P 7	Quantum Technologies – Solid State Systems
Q 74.1–74.8	Fri	11:00–13:00	P 10	Quantum Information – Concepts and Methods
Q 75.1–75.6	Fri	11:00–12:30	P 11	Quantum Systems between Bose and Fermi Statistics
Q 76.1–76.7	Fri	11:00–13:00	N 1	Ultra-cold Atoms, Ions and BEC V (joint session A/Q)
Q 77.1–77.7	Fri	14:30–16:15	P 2	Photonics – 3D Printing
Q 78.1–78.7	Fri	14:30–16:15	P 3	Quantum Optics and Control III
Q 79.1–79.8	Fri	14:30–16:30	P 4	Cavity QED and QED III
Q 80.1–80.7	Fri	14:30–16:15	P 5	Quantum Technologies – Color Centers III
Q 81.1–81.8	Fri	14:30–16:30	P 10	Quantum Communication, Networks, Repeaters, & QKD III
Q 82.1–82.8	Fri	14:30–16:30	P 11	Matter Wave Interferometry, Metrology, and Fundamental Physics IV
Q 83.1–83.6	Fri	14:30–16:00	N 1	Ultra-cold Atoms, Ions and BEC VI (joint session A/Q)
Q 84.1–84.4	Fri	14:30–15:30	N 3	Precision Spectroscopy of Atoms and Ions VI (joint session A/Q)

Members' Assembly of the Quantum Optics and Photonics Division

Thursday 13:15–14:15 P 10