

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

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Overview of Invited Talks and Sessions

(Lecture halls HS 1015, 1199, 1221, 3118, 3219, and Aula; Poster Tent B, KG I Foyer, and Aula Foyer)

Invited Talks

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| Q 5.1 | Mon | 11:00–11:30 | HS 1221 | Tailoring design of quantum sensor to biomedical applications — •VICTOR LEBEDEV, SIMON NORDENSTROEM, STEFAN HARTWIG, THOMAS MIDDELMANN |
| Q 10.1 | Mon | 17:00–17:30 | HS 1199 | Correlated light-matter states from first principles and their use for chirality, and chemistry — •CHRISTIAN SCHÄFER |
| Q 15.1 | Tue | 11:00–11:30 | HS 1015 | Levitated nanoparticles as testbeds for fundamental aspects of physics — •JULEN S. PEDERNALES |
| Q 18.1 | Tue | 11:00–11:30 | HS 1221 | Continuous lasing and pinning of the dressed cavity resonance with strongly-coupled ^{88}Sr atoms in a ring cavity — •VERA SCHÄFER |
| Q 26.1 | Wed | 11:00–11:30 | HS 1015 | Ultracold interactions between ions and polar molecules — •LEON KARPA |
| Q 26.6 | Wed | 12:30–13:00 | HS 1015 | Quantum Logic Spectroscopy of the Hydrogen Molecular Ion — DAVID HOLZAPFEL, FABIAN SCHMID, NICK SCHWEGLER, OLIVER STADLER, MARTIN STADLER, JONATHAN HOME, •DANIEL KIENZLER |
| Q 27.1 | Wed | 11:00–11:30 | Aula | Engineering of many-body states in a driven-dissipative cavity QED system — RODRIGO ROSA-MEDINA, FABIAN FINGER, NICOLA REITER, JAKOB FRICKE, PANAGIOTIS CHRISTODOULOU, DAVIDE DREON, ALEXAN- DER BAUMGÄRTNER, SIMON HERTLEIN, JUSTYNA STEFANIAK, DAVID BAUR, DALILA RIVERO, GABRIELE NATALE, TILMAN ESSLINGER, •TOBIAS DONNER |
| Q 34.1 | Wed | 14:30–15:00 | HS 1221 | Optically addressable nuclear spin registers with V2 center in 4H-SiC — •VADIM VOROBEV |
| Q 35.1 | Wed | 14:30–15:00 | HS 3118 | Quantum correlations in the phase space — MARTIN BOHMANN, JAN SPERLING, NICOLA BIAGI, ALESSANDRO ZAVATTA, MARCO BELLINI, •ELIZABETH AGUDELO |
| Q 42.1 | Thu | 11:00–11:30 | HS 1015 | Theory of robust quantum many-body scars in long-range interacting systems — •SILVIA PAPPALARDI |
| Q 45.1 | Thu | 11:00–11:30 | HS 1221 | Quantum Sensing in Space for Fundamental Physics and Applications — •NACEUR GAALOUL |
| Q 51.1 | Thu | 14:30–15:00 | HS 1199 | From the origin of antibunching to novel quantum light sources based on two-photon interference — •MARTIN CORDIER, LUKE MASTERS, GABRIELE MARON, XIN-XIN HU, LUCAS PACHE, PHILIPP SCHNEEWEISS, MAX SCHEMMER, JÜRGEN VOLZ, ARNO RAUSCHENBEUTEL |
| Q 52.1 | Thu | 14:30–15:00 | HS 1221 | Structured light and its interaction with matter — •ROBERT FICKLER, RAFAEL BARROS, LEA KOPF, MARCO ORNIGOTTI |
| Q 61.1 | Fri | 11:00–11:30 | HS 1199 | Photonic integration for trapped-ion quantum metrology — •ELENA JORDAN, GUOCHUN DU, CARL-FREDERIK GRIMPE, FATEMEH SALAHSHOORI, MARKUS KROMREY, ATASI CHATTERJEE, ANASTASIIA SOROKINA, STEFFEN SAUER, ANTON PESHKOV, GILLENHAAL BECK, KARAN MEHTA, STEFANIE KROKER, ANDREY SURZHYKOV, TANJA MEHLSTÄUBLER |
| Q 67.1 | Fri | 14:30–15:00 | Aula | Towards an Artificial Muse for new Ideas in Quantum Physics — •MARIO KRENN |

Invited Talks of the joint Symposium SAMOP Dissertation Prize 2024 (SYAD)

See SYAD for the full program of the symposium.

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| SYAD 1.1 | Mon | 14:30–15:00 | Paulussaal | Quantum steering of a Szilárd engine — ●KONSTANTIN BEYER |
| SYAD 1.2 | Mon | 15:00–15:30 | Paulussaal | Does a disordered Heisenberg quantum spin system thermalize? — ●TITUS FRANZ |
| SYAD 1.3 | Mon | 15:30–16:00 | Paulussaal | Quantum optical few-mode models for lossy resonators — ●DOMINIK LENTRODT |
| SYAD 1.4 | Mon | 16:00–16:30 | Paulussaal | Non-Hermitian topology and directional amplification — ●CLARA WANJURA |

Prize Talks of the joint Awards Symposium (SYAS)

See SYAS for the full program of the symposium.

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| SYAS 1.1 | Tue | 15:00–15:30 | Paulussaal | Quantum Simulations with Atoms, Molecules and Photons — ●IMMANUEL BLOCH |
| SYAS 1.2 | Tue | 15:30–16:00 | Paulussaal | Spectroscopy of molecules with large amplitude motions: a journey from molecular structure to astrophysics. — ●ISABELLE KLEINER |
| SYAS 1.3 | Tue | 16:00–16:30 | Paulussaal | Quantum x-ray nuclear optics: progress and prospects — ●OLGA KOCHAROVSKAYA |
| SYAS 1.4 | Tue | 16:30–17:00 | Paulussaal | 3D printed complex microoptics: fundamentals and first benchmark applications — ●HARALD GIESSEN |

Invited Talks of the joint Symposium Controlled Molecular Collisions (SYCC)

See SYCC for the full program of the symposium.

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| SYCC 1.1 | Wed | 11:00–11:30 | Paulussaal | Dynamics of CO₂ activation by transition metal ions - The importance of intersystem crossing — ●JENNIFER MEYER |
| SYCC 1.2 | Wed | 11:30–12:00 | Paulussaal | Angular momentum of small molecules: quasiparticles and topology — ●MIKHAIL LEMESHKO |
| SYCC 1.3 | Wed | 12:00–12:30 | Paulussaal | Manoeuvring chemical reactions one degree of freedom at a time — ●JUTTA TOSCANO |
| SYCC 1.4 | Wed | 12:30–13:00 | Paulussaal | Cold and controlled collisions using tamed molecular beams — ●SEBASTIAAN VAN DE MEERAKKER |

Invited Talks of the joint Symposium Ultrafast Quantum Nano-Optics (SYQO)

See SYQO for the full program of the symposium.

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| SYQO 1.1 | Fri | 11:00–11:30 | Paulussaal | Coherent and incoherent dynamics of colloidal plexcitonic nanohybrids — ●ELISABETTA COLLINI |
| SYQO 1.2 | Fri | 11:30–12:00 | Paulussaal | Dissipative Many-Body Dynamics in Atomic Subwavelength Arrays in Free Space — ●STEFAN OSTERMANN |
| SYQO 1.3 | Fri | 12:00–12:30 | Paulussaal | Quantum dot sources: efficiency, entanglement, and correlations. — ●ANA PREDOJEVIĆ |
| SYQO 1.4 | Fri | 12:30–12:45 | Paulussaal | Compact chirped fiber Bragg gratings for single-photon generation from quantum dots — ●VIKAS REMESH, RIA KRÄMER, RENÉ SCHWARZ, FLORIAN KAPPE, YUSUF KARLI, THOMAS BRACHT, SAIMON COVRE DA SILVA, ARMANDO RASTELLI, DORIS REITER, STEFAN NOLTE, GREGOR WEIHS |
| SYQO 1.5 | Fri | 12:45–13:00 | Paulussaal | Observing Ultrafast Coherent Dynamics following Selective Excitation of a Single Quantum Dot — ●DARIUS HASHEMI KALIBAR, PHILIPP HENZLER, RON TENNE, ALFRED LEITENSTORFER |

Sessions

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| Q 1.1–1.7 | Mon | 11:00–13:00 | HS 1010 | Ultra-cold Atoms, Ions and BEC I (joint session A/Q) |
| Q 2.1–2.8 | Mon | 11:00–13:00 | HS 1015 | QED |
| Q 3.1–3.8 | Mon | 11:00–13:00 | Aula | Bosonic Quantum Gases I (joint session Q/A) |
| Q 4.1–4.8 | Mon | 11:00–13:00 | HS 1199 | Hybrid Quantum Systems |
| Q 5.1–5.7 | Mon | 11:00–13:00 | HS 1221 | Magnetometry |
| Q 6.1–6.8 | Mon | 11:00–13:00 | HS 3118 | Solid State Quantum Optics I |
| Q 7.1–7.8 | Mon | 11:00–13:00 | HS 3219 | Quantum Communication I |
| Q 8.1–8.8 | Mon | 17:00–19:00 | HS 1010 | Ultra-cold Plasmas and Rydberg Systems I (joint session A/Q) |
| Q 9.1–9.8 | Mon | 17:00–19:00 | Aula | Bosonic Quantum Gases II (joint session Q/A) |
| Q 10.1–10.7 | Mon | 17:00–19:00 | HS 1199 | Cavity QED |
| Q 11.1–11.8 | Mon | 17:00–19:00 | HS 1221 | Precision Measurements I (joint session Q/A) |
| Q 12.1–12.8 | Mon | 17:00–19:00 | HS 3118 | Quantum Communication II |
| Q 13.1–13.8 | Mon | 17:00–19:00 | HS 3219 | Quantum Technologies |
| Q 14.1–14.8 | Tue | 11:00–13:00 | HS 1098 | Precision Spectroscopy of Atoms and Ions I (joint session A/Q) |
| Q 15.1–15.7 | Tue | 11:00–13:00 | HS 1015 | Optomechanics |
| Q 16.1–16.8 | Tue | 11:00–13:00 | Aula | Bosonic Quantum Gases III (joint session Q/A) |
| Q 17.1–17.8 | Tue | 11:00–13:00 | HS 1199 | Quantum Information I |
| Q 18.1–18.7 | Tue | 11:00–13:00 | HS 1221 | Trapping and Cooling of Atoms (joint session Q/A) |
| Q 19.1–19.8 | Tue | 11:00–13:00 | HS 3044 | Ultracold Molecules and Precision Spectroscopy (joint session MO/Q) |
| Q 20.1–20.8 | Tue | 11:00–13:00 | HS 3118 | Quantum Many-Body Dynamics |
| Q 21.1–21.8 | Tue | 11:00–13:00 | HS 3219 | Quantum Communication III |
| Q 22 | Tue | 13:15–14:15 | HS 1199 | Members' Assembly |
| Q 23.1–23.50 | Tue | 17:00–19:00 | Tent B | Poster I |
| Q 24.1–24.47 | Tue | 17:00–19:00 | KG I Foyer | Poster II |
| Q 25.1–25.8 | Wed | 11:00–13:00 | HS 1098 | Precision Spectroscopy of Atoms and Ions II (joint session A/Q) |
| Q 26.1–26.6 | Wed | 11:00–13:00 | HS 1015 | Ultracold Molecules (joint session Q/MO) |
| Q 27.1–27.7 | Wed | 11:00–13:00 | Aula | Phase Transitions |
| Q 28.1–28.8 | Wed | 11:00–13:00 | HS 1199 | Fermionic Quantum Gases I (joint session Q/A) |
| Q 29.1–29.8 | Wed | 11:00–13:00 | HS 1221 | Photonics |
| Q 30.1–30.8 | Wed | 11:00–13:00 | HS 3118 | Color Centers I |
| Q 31.1–31.8 | Wed | 11:00–13:00 | HS 3219 | Quantum Communication IV |
| Q 32.1–32.8 | Wed | 14:30–16:30 | Aula | Fermionic Quantum Gases II (joint session Q/A) |
| Q 33.1–33.8 | Wed | 14:30–16:30 | HS 1199 | Open Quantum Systems |
| Q 34.1–34.6 | Wed | 14:30–16:15 | HS 1221 | Color Centers II |
| Q 35.1–35.7 | Wed | 14:30–16:30 | HS 3118 | Quantum States of Light |
| Q 36.1–36.8 | Wed | 14:30–16:30 | HS 3219 | Quantum Metrology and Interference |
| Q 37.1–37.59 | Wed | 17:00–19:00 | Tent B | Poster III |
| Q 38.1–38.48 | Wed | 17:00–19:00 | KG I Foyer | Poster IV |
| Q 39.1–39.16 | Wed | 17:00–19:00 | Aula Foyer | Poster V |
| Q 40.1–40.8 | Thu | 11:00–13:00 | HS 1010 | Precision Spectroscopy of Atoms and Ions III (joint session A/Q) |
| Q 41.1–41.8 | Thu | 11:00–13:00 | HS 1098 | Ultra-cold Atoms, Ions and BEC II (joint session A/Q) |
| Q 42.1–42.7 | Thu | 11:00–13:00 | HS 1015 | Long-range Interactions |
| Q 43.1–43.8 | Thu | 11:00–13:00 | Aula | Color Centers III |
| Q 44.1–44.8 | Thu | 11:00–13:00 | HS 1199 | Quantum Information II |
| Q 45.1–45.7 | Thu | 11:00–13:00 | HS 1221 | Quantum Metrology for Fundamental Physics |
| Q 46.1–46.8 | Thu | 11:00–13:00 | HS 3118 | Lasers I |
| Q 47.1–47.8 | Thu | 11:00–13:00 | HS 3219 | Open Quantum Systems |
| Q 48.1–48.8 | Thu | 14:30–16:30 | HS 1010 | Ultra-cold Atoms, Ions and BEC III (joint session A/Q) |
| Q 49.1–49.7 | Thu | 14:30–16:15 | HS 1098 | Precision Spectroscopy of Atoms and Ions IV (joint session A/Q) |
| Q 50.1–50.8 | Thu | 14:30–16:30 | Aula | Quantum Gases (joint session Q/A) |
| Q 51.1–51.7 | Thu | 14:30–16:30 | HS 1199 | Quantum Optical Correlations |
| Q 52.1–52.7 | Thu | 14:30–16:30 | HS 1221 | Structured Light |
| Q 53.1–53.8 | Thu | 14:30–16:30 | HS 3118 | Quantum Control |
| Q 54.1–54.8 | Thu | 14:30–16:30 | HS 3219 | Quantum Optics in Space |

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| Q 55.1–55.47 | Thu | 17:00–19:00 | Tent B | Poster VI |
| Q 56.1–56.42 | Thu | 17:00–19:00 | KG I Foyer | Poster VII |
| Q 57.1–57.17 | Thu | 17:00–19:00 | Aula Foyer | Poster VIII |
| Q 58.1–58.8 | Fri | 11:00–13:00 | HS 1098 | Ultra-cold Atoms, Ions and BEC IV (joint session A/Q) |
| Q 59.1–59.8 | Fri | 11:00–13:00 | HS 1015 | Lasers II |
| Q 60.1–60.8 | Fri | 11:00–13:00 | Aula | Quantum Computing and Simulation I |
| Q 61.1–61.7 | Fri | 11:00–13:00 | HS 1199 | Trapped Ions (joint session Q/A) |
| Q 62.1–62.8 | Fri | 11:00–13:00 | HS 1221 | Precision Measurements II (joint session Q/A) |
| Q 63.1–63.7 | Fri | 11:00–12:45 | HS 3118 | Strong Light-Matter Interaction |
| Q 64.1–64.8 | Fri | 11:00–13:00 | HS 3219 | Solid State Quantum Optics II |
| Q 65.1–65.8 | Fri | 14:30–16:30 | HS 1010 | Ultra-cold Atoms, Ions and BEC V (joint session A/Q) |
| Q 66.1–66.8 | Fri | 14:30–16:30 | HS 1098 | Precision Spectroscopy of Atoms and Ions V / Ultra-cold Plasmas and Rydberg Systems II (joint session A/Q) |
| Q 67.1–67.7 | Fri | 14:30–16:30 | Aula | Machine Learning |
| Q 68.1–68.8 | Fri | 14:30–16:30 | HS 1199 | Quantum Computing and Simulation II |
| Q 69.1–69.8 | Fri | 14:30–16:30 | HS 1221 | Precision Measurements III (joint session Q/A) |
| Q 70.1–70.7 | Fri | 14:30–16:15 | HS 3118 | Quantum Optics |
| Q 71.1–71.8 | Fri | 14:30–16:30 | HS 3219 | Nano-Optics |

Members' Assembly of the Quantum Optics and Photonics Division

Tuesday 13:15–14:15 HS 1199

- Bericht
- Verschiedenes