Quantum Optics and Photonics Division (Q)

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Overview of Invited Talks and Sessions

(lecture rooms A 001, A 310, A 320, E 001, E 214, E 415, F 128, F 342, and M 11; poster Lichthof)

Prize Talk

Q 9.1	Mo	16:30–17:00	A 320	**Highly excited atoms in cold environments: From antihydro- gen production to ultracold plasmas and Rydberg gases** — •Thomas Pohl

Invited talks of the symposium SYFC

See SYFC for the full program of the symposium.

SYFC 1.1	Mo	14:00–14:30	A 001	**Fundamental constants, gravitation and cosmology** — •Jean-Philippe Uzan
SYFC 1.2	Mo	14:30–15:00	A 001	**Molecular hydrogen in the lab and in the early universe; search for varying mu** — •Wim Ubachs
SYFC 1.3	Mo	15:00–15:30	A 001	**Stability of the proton-to-electron mass ratio tested with molecular spectroscopy using an optical link to frequency reference** — •Anne Amy-Klein, Alexander Shelkovnikov, Robert J. Butcher, Olivier Lopez, Christophe Daussy, Haifeng Jiang, Fabien Kéfélian, Giorgio Santarelli, Christian Chardonnet
SYFC 1.4	Mo	15:30–16:00	A 001	**Optical clocks with trapped ions and the search for variations of fundamental constants** — •Ekkehard Peik
SYFC 2.1	Mo	16:30–17:00	A 001	**Gravitational and cosmological probes of varying fundamental parameters** — •Thomas Dent
SYFC 2.2	Mo	17:00–17:30	A 001	**The astrophysical search for varying fundamental constants** — •Nils Prause
SYFC 2.3	Mo	17:30–17:45	A 001	**Variability of the proton-to-electron mass ratio on cosmological scales - quantification and handling of systematics** — •Martin Wendt
SYFC 2.4	Mo	17:45–18:00	A 001	**Towards Direct Frequency Comb Spectroscopy of Metal Ions** — •Boerge Hemmerling, Daniel Nigg, Ivan V. Sherstov, Piet O. Schmidt

Invited talks of the symposium SYDP

See SYDP for the full program of the symposium.

SYDP 1.1	Mo	16:30–17:00	F 107	**Experimental all-optical one-way quantum computing** — •Robert Prevedel
SYDP 1.2	Mo	17:00–17:30	F 107	**Benchmarks and statistics of entanglement dynamics** — •Markus Tiersch
SYDP 1.3	Mo	17:30–18:00	F 107	**Squeezed Light For Gravitational Wave Astronomy** — •Henning Vahlbruch
SYDP 1.4	Mo	18:00–18:30	F 107	**High-precision mass measurements with Penning traps** — •Sebastian George

Invited talks of the symposium SYDC

See SYDC for the full program of the symposium.

SYDC 1.1	Tu	14:00–14:30	E 415	**Environment-induced Decoherence of Quantum States: An Introduction** — •Heinz-Peter Breuer
SYDC 1.2	Tu	14:30–15:00	E 415	**Fighting Decoherence: Quantum Information Science with Trapped Ca^+ Ions** — T. Monz, K. Kim, A. Villar, P. Schindler, M. Chwalla, M. Riebe, C. F. Roos, H. Häffner, W. Hänsel, M. Hennrich, •R. Blatt
SYDC 1.3	Tu	15:00–15:30	E 415	**Decoherence phenomena in molecular systems: Localization of matter waves & stabilization of chiral configuration states** — •Klaus Hornberger
SYDC 1.4	Tu	15:30–16:00	E 415	**Decoherence of free electron waves and visualization of the transition from quantum- to classical-behaviour** — •Franz Hasselbach
SYDC 2.1	Tu	16:30–17:00	E 415	**Coherence and the loss of it in molecular photoionization** — •Uwe Hergenhahn
SYDC 2.2	Tu	17:00–17:30	E 415	**Decoherence in fermionic interferometers** — •Florian Marquardt
SYDC 2.3	Tu	17:30–18:00	E 415	**Quantum diffusion in gravitational waves backgrounds** — •Serge Reynaud, Brahim Lamine, Rémy Hervé, Astrid Lambrecht
SYDC 2.4	Tu	18:00–18:30	E 415	**Quantum coherence and decoherence in biological systems** — •Martin Plenio

Invited talks of the symposium SYLA

See SYLA for the full program of the symposium.

SYLA 1.1	We	14:00–14:30	E 415	**How the laser happend** — •Herbert Welling
SYLA 1.2	We	14:30–15:00	E 415	**The origin of the quantum theory of lasing** — •Fritz Haake
SYLA 1.3	We	15:00–15:30	E 415	**Lasers for precision measurements** — •Thomas Udem
SYLA 1.4	We	15:30–16:00	E 415	**Short, Ultra Short, Atto Short** — •Dietrich von der Linde
SYLA 2.1	We	16:30–17:00	E 415	**Our Daily Life with Semiconductor Lasers** — •Dieter Bimberg
SYLA 2.2	We	17:00–17:30	E 415	**Power to the Industry - the story of Laser upscaling** — •Reinhart Poprawe
SYLA 2.3	We	17:30–18:00	E 415	**The Outstanding Qualities of Fiber Lasers and Thin Disk Lasers** — •Adolf Giesen
SYLA 2.4	We	18:00–18:30	E 415	**Solid State Lasers:meeting the challenges of the 21st Century** — •Robert L. Byer

Invited talks of the symposium SYQS

See SYQS for the full program of the symposium.

SYQS 1.1	Th	10:30–11:00	E 415	**Theoretical studies on quantum control and spectroscopy of ultrafast photoreactions** — •Regina de Vivie-Riedle, Judith Voll, Artur Nenov, Tiago Buckup, Jürgen Hauer, Marcus Motzkus
SYQS 1.2	Th	11:00–11:30	E 415	**Quantum Control Spectroscopy: Understanding photobiology with coherently controlled matter waves** — •Tiago Buckup, Jürgen Hauer, Judith Voll, Regina Vivie-Riedle, Marcus Motzkus
SYQS 1.3	Th	11:30–12:00	E 415	**Development of strategies for the optimal control in complex systems** — •Roland Mitric
SYQS 1.4	Th	12:00–12:30	E 415	**Mechanistic laser pulse parameterizations** — •Tobias Brixner
SYQS 2.1	Th	14:00–14:30	E 415	**Efficient control of electron dynamics** — •Matthias Wollenhaupt
SYQS 2.2	Th	14:30–15:00	E 415	**Exploring wavepacket dynamics under strong laser fields** — •Leticia Gonzalez
SYQS 2.3	Th	15:00–15:30	E 415	**Quantum Control Spectroscopy in Ultracold Atomic and Molecular Gases** — •Matthias Weidemüller

Invited talks of the symposium SYSA

See SYSA for the full program of the symposium.

SYSA 1.1	Th	10:30–11:00	A 320	**Cavity EIT with single atoms** — •Stephan Ritter, Martin Mücke, Eden Figueroa, Jörg Bochmann, Carolin Hahn, Celso J. Villas-Boas, Gerhard Rempe

SYSA 1.2	Th	11:00–11:30	A 320	**Optical detection of single trapped atoms with less than one spontaneous emission** — Jürgen Volz, Roger Gehr, Guilhem Dubois, Jérôme Estève, •Jakob Reichel
SYSA 1.3	Th	11:30–12:00	A 320	**Substantial interaction between a singe atom and a focused light beam** — •Gleb Maslennikov, Syed Abdullah Aljunid, Brenda Chng, Florian Huber, Meng Khoon Tey, Timothy Liew, Valerio Scarani, Christian Kurtsiefer
SYSA 1.4	Th	12:00–12:30	A 320	**Exploring Quantum Physics with Single Neutral Atoms** — •Artur Widera
SYSA 2.1	Th	14:00–14:30	A 320	**Detecting single ultra cold atoms** — •Jörg Schmiedmayer
SYSA 2.2	Th	14:30–15:00	A 320	**Entanglement of two individual neutral atoms using Rydberg blockade** — •Tatjana Wilk, Alpha Gaëtan, Charles Evellin, Janik Wolters, Yevhen Miroshnychenko, Philippe Grangier, Antoine Browaeys

Sessions

Q 1.1–1.8	Mo	14:00–16:00	A 310	**Quantum Effects: Light Scattering and Propagation I / Interference and Correlations I**
Q 2.1–2.8	Mo	14:00–16:00	A 320	**Ultracold Atoms: Trapping and Cooling (with A)**
Q 3.1–3.8	Mo	14:00–16:00	E 001	**Quantum Gases: Bosons I**
Q 4.1–4.8	Mo	14:00–16:00	E 214	**Quantum Information: Concepts and Methods I**
Q 5.1–5.8	Mo	14:00–16:00	F 128	**Laser Development: Nonlinear Effects I**
Q 6.1–6.8	Mo	14:00–16:00	F 342	**Ultrashort Laser Pulses: Generation I**
Q 7.1–7.7	Mo	14:00–15:45	M 11	**Precision Measurements and Metrology I**
Q 8.1–8.9	Mo	16:30–19:00	A 310	**Quantum Effects: Interference and Correlations II / Entanglement and Decoherence I**
Q 9.1–9.9	Mo	16:30–19:00	A 320	**Ultracold Atoms: Rydberg Gases / Miscellaneous (with A)**
Q 10.1–10.10	Mo	16:30–19:00	E 001	**Quantum Gases: Bosons II**
Q 11.1–11.10	Mo	16:30–19:00	E 214	**Quantum Information: Concepts and Methods II**
Q 12.1–12.10	Mo	16:30–19:00	F 128	**Laser Development: Solid State Lasers I**
Q 13.1–13.10	Mo	16:30–19:00	F 342	**Ultrashort Laser Pulses: Generation II**
Q 14.1–14.8	Tu	14:00–16:15	A 310	**Precision Measurements and Metrology II**
Q 15.1–15.8	Tu	14:00–16:00	A 320	**Ultracold Atoms: Manipulation and Detection (with A)**
Q 16.1–16.8	Tu	14:00–16:15	E 001	**Quantum Gases: Interaction Effects I**
Q 17.1–17.8	Tu	14:00–16:30	E 214	**Quantum Information: Atoms and Ions I**
Q 18.1–18.8	Tu	14:00–16:00	F 128	**Laser Development: Solid State Lasers II**
Q 19.1–19.8	Tu	14:00–16:00	F 342	**Ultrashort Laser Pulses: Generation III**
Q 20.1–20.7	Tu	14:00–16:00	F 303	**Ultra Cold Atoms, Ions and BEC I (with A)**
Q 21.1–21.92	Tu	16:00–19:00	Lichthof	**Poster I**
Q 22.1–22.7	We	10:30–12:15	A 310	**Quantum Effects: Entanglement and Decoherence II**
Q 23.1–23.7	We	10:30–12:30	A 320	**Quantum Effects: Light Scattering and Propagation II / QED I**
Q 24.1–24.8	We	10:30–12:30	E 001	**Quantum Gases: Mixtures and Spinor Gases**
Q 25.1–25.8	We	10:30–12:30	E 214	**Quantum Information: Quantum Communication I**
Q 26.1–26.8	We	10:30–12:30	F 128	**Laser Development: Solid State Lasers III**
Q 27.1–27.8	We	10:30–12:30	F 342	**Ultrashort Laser Pulses: Applications I**
Q 28.1–28.8	We	10:30–12:30	F 303	**Ultra Cold Atoms, Ions and BEC II (with A)**
Q 29.1–29.9	We	14:00–16:15	A 310	**Precision Measurements and Metrology III**
Q 30.1–30.8	We	14:00–16:00	A 320	**Quantum Effects: QED II / Interference and Correlations III**
Q 31.1–31.8	We	14:00–16:00	E 001	**Quantum Gases: Interaction Effects II**
Q 32.1–32.8	We	14:00–16:00	E 214	**Quantum Information: Atoms and Ions II**
Q 33.1–33.8	We	14:00–16:00	F 128	**Laser Development: Semiconductor Lasers / Nonlinear Effects II**
Q 34.1–34.8	We	14:00–16:00	F 342	**Ultrashort Laser Pulses: Applications II**
Q 35.1–35.10	We	16:30–19:00	A 310	**Precision Measurements and Metrology IV**
Q 36.1–36.4	We	16:30–17:45	A 320	**Ultracold Atoms: Single Atoms (with A)**
Q 37.1–37.5	We	17:45–19:00	A 320	**Matterwave Optics I**
Q 38.1–38.10	We	16:30–19:00	E 001	**Quantum Gases: Bosons III / Lattices I**
Q 39.1–39.9	We	16:30–19:00	E 214	**Quantum Information: Atoms and Ions III**
Q 40.1–40.9	We	16:30–18:45	F 128	**Quantum Information: Quantum Computing**
Q 41.1–41.10	We	16:30–19:00	F 342	**Ultrashort Laser Pulses: Applications III**
Q 42.1–42.8	Th	10:30–12:30	A 310	**Precision Measurements and Metrology V**

Q 43.1–43.5	Th	10:30–12:00	E 001	**Ultracold Molecules (with MO)**
Q 44.1–44.8	Th	10:30–12:30	E 214	**Quantum Information: Concepts and Methods III**
Q 45.1–45.8	Th	10:30–12:30	F 303	**Ultra Cold Atoms, Ions and BEC III (with A)**
Q 46.1–46.3	Th	10:30–11:15	F 128	**Laser Development: Nonlinear Effects III**
Q 47.1–47.5	Th	11:15–12:30	F 128	**Photonics I**
Q 48.1–48.8	Th	10:30–12:30	F 342	**Ultrashort Laser Pulses: Miscellaneous**
Q 49.1–49.9	Th	14:00–16:15	A 310	**Precision Measurements and Metrology VI**
Q 50.1–50.4	Th	15:15–16:15	A 320	**Micromechanical Oscillators I**
Q 51.1–51.9	Th	14:00–16:15	E 001	**Quantum Gases: Fermions**
Q 52.1–52.9	Th	14:00–16:15	E 214	**Quantum Information: Concepts and Methods IV / Photons and Nonclassical Light I**
Q 53.1–53.9	Th	14:00–16:15	F 128	**Photonics II**
Q 54.1–54.9	Th	14:00–16:15	F 342	**Laser Applications: Optical Measurement Technology I**
Q 55.1–55.93	Th	16:00–19:00	Lichthof	**Poster II**
Q 56.1–56.7	Fr	10:30–12:15	A 310	**Quantum Information: Quantum Communication II**
Q 57.1–57.8	Fr	10:30–12:30	A 320	**Micromechanical Oscillators II**
Q 58.1–58.8	Fr	10:30–12:30	E 001	**Quantum Gases: Lattices II**
Q 59.1–59.8	Fr	10:30–12:45	E 214	**Quantum Information: Atoms and Ions IV / Photons and Nonclassical Light II**
Q 60.1–60.8	Fr	10:30–12:30	F 128	**Photonics III**
Q 61.1–61.6	Fr	10:30–12:00	F 342	**Ultrashort Laser Pulses: Applications IV**
Q 62.1–62.7	Fr	10:30–12:15	F 102	**Quantum Control (with MO)**
Q 63.1–63.7	Fr	14:00–16:00	A 310	**Quantum Effects: Entanglement and Decoherence III**
Q 64.1–64.8	Fr	14:00–16:00	A 320	**Matterwave Optics II**
Q 65.1–65.7	Fr	14:00–16:00	E 001	**Quantum Gases : Lattices III**
Q 66.1–66.8	Fr	14:00–16:00	E 214	**Quantum Information: Photons and Nonclassical Light III**
Q 67.1–67.7	Fr	14:00–15:45	F 128	**Photonics IV**
Q 68.1–68.6	Fr	14:00–15:30	F 342	**Laser Applications: Optical Measurement Technology II**
Q 69.1–69.7	Fr	14:00–15:45	F 303	**Ultra-Cold Atoms, Ions and BEC IV / Interaction with VUV and X-Ray Light II (with A)**

Mitgliederversammlung Fachverband Quantenoptik und Photonik

Mittwoch 13:30–14:00 A 310

- Bericht
- Wahl des Sprechers
- Verschiedenes

Sitzung des Deutschen Optischen Komitees

Dienstag 12:30 - 14:00 Raum lag bei Drucklegung nicht vor.