

Atomic Physics Division Fachverband Atomphysik (A)

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Overview of Invited Talks and Sessions

(Lecture rooms K 0.011, K 1.011, K 1.016, K 2.016, and K 2.019; Poster Redoutensaal, Orangerie, and Zelt Ost)

Invited Talks

A 2.1	Mon	10:30–11:00	K 1.011	Phase measurement and control with attosecond self-probing spectroscopy — ●MICHAEL KRÜGER
A 2.2	Mon	11:00–11:30	K 1.011	Molecular Orbital Imprint in Laser-Driven Electron Recollision — FELIX SCHELL, TIMM BREDTMANN, CLAUS PETER SCHULZ, SERGUEI PATCHKOVSKII, MARC VRAKING, ●JOCHEN MIKOSCH
A 3.1	Mon	10:30–11:00	K 1.016	Segmented ion traps with integrated solenoids for scalable microwave based QIP — ●MICHAEL JOHANNING, TIMM F. GLOGER, PETER KAUFMANN, HENDRIK SIEBENEICH, CHRISTOF WUNDERLICH
A 8.1	Mon	14:00–14:30	K 1.011	Attosecond timing with spectral resolution near resonances, and new opportunities with high-repetition rate attosecond sources — ●ANNE HARTH
A 8.2	Mon	14:30–15:00	K 1.011	Towards attosecond pump-probe experiments at high repetition rates — ●TOBIAS WITTING, FEDERICO FURCH, FELIX SCHELL, PETER SUSNJAR, CARMEN MENONI, CHIH-HSUAN LU, ANDY KUNG, CLAUS-PETER SCHULZ, MARC J.J. VRAKING
A 9.1	Mon	14:00–14:30	K 1.016	A ppb measurement of the antiproton magnetic moment — ●C. SMORRA, S. SELLNER, M. BORCHERT, J. A. HARRINGTON, T. HIGUCHI, H. NAGAHAMA, A. MOOSER, G. SCHNEIDER, M. BOHMAN, K. BLAUM, Y. MATSUDA, C. OSPELKAUS, W. QUINT, J. WALZ, Y. YAMAZAKI, S. ULMER
A 9.2	Mon	14:30–15:00	K 1.016	Towards laser cooling of atomic anions — ●ALBAN KELLERBAUER
A 13.1	Mon	16:15–16:45	K 1.011	Quantum teleportation via electron-exchange collisions — ●BERND LOHMANN, KARL BLUM, BURKHARD LANGER
A 13.2	Mon	16:45–17:15	K 1.011	Probing the forces of blackbody radiation and dark energy with matter waves — ●PHILIPP HASLINGER, VIKTORIA XU, MATT JAFFE, OSIP SCHWARTZ, PAUL HAMILTON, BENJAMIN ELDER, JUSTIN KHOURY, MATTHIAS SONNLEITNER, MONIKA RITSCH-MARTE, HELMUT RITSCH, HOLGER MÜLLER
A 14.1	Mon	16:15–16:45	K 1.016	Collinear Laser Spectroscopy for High Voltage Metrology at the 1 ppm accuracy level — ●JÖRG KRÄMER, KRISTIAN KÖNIG, CHRISTOPHER GEP- PERT, PHILLIP IMGRAM, BERNHARD MAASS, JOHANN MEISNER, ERNST W. OTTEN, STEPHAN PASSON, TIM RATAJCZYK, JOHANNES ULLMANN, WILFRIED NÖRTERSCHÄUSER
A 16.1	Mon	16:15–16:45	K 2.016	Halo states in helium dimers/trimers — ●REINHARD DOERNER, MAK- SIM KUNITSKI, STEFAN ZELLER, LOTHAR SCHMIDT, TILL JAHNKE, MARKUS SCHÖFFLER, DÖRTE BLUME, JÖRG VOITSBERGER, FLORIAN TRINTER, ANTON KALININ
A 20.1	Tue	14:00–14:30	K 1.011	Attosecond Streaking in Dielectrics — ●L. SEIFFERT, Q. LIU, S. ZHEREBTSOV, A. TRABATTONI, P. RUPP, M. C. CASTROVILLI, M. GALLI, F. SÜSSMANN, K. WINTERSPERGER, J. STIERLE, G. SANSONE, L. POLETTI, F. FRASSETTO, I. HALFPAP, V. MONDES, C. GRAF, E. RÜHL, F. KRAUSZ, M. NISOLI, T. FENNEL, F. CALEGARI, M. KLING
A 20.2	Tue	14:30–15:00	K 1.011	Controlling the refraction of ultrashort XUV pulses — LORENZ DRESCHER, OLEG KORNILOV, TOBIAS WITTING, GEERT REITSMA, JOCHEN MIKOSCH, MARC VRAKING, ●BERND SCHÜTTE

A 21.1	Tue	14:00–14:30	K 1.016	High precision hyperfine measurements in bismuth challenge bound-state strong field QED — ●RODOLFO SÁNCHEZ
A 23.1	Tue	14:00–14:30	K 2.019	Multiphoton Ionization of Chiral Molecules — ●THOMAS BAUMERT
A 31.1	Wed	14:00–14:30	K 2.019	H₂⁺ and HeH⁺: Two fundamentally important molecules in strong laser fields — PHILIPP WUSTELT, MAX MÖLLER, A. MAX SAYLER, ●GERHARD G. PAULUS
A 39.1	Thu	14:00–14:30	K 1.016	News from the "Proton Radius Puzzle" — ●RANDOLF POHL
A 40.1	Thu	14:00–14:30	K 2.019	Electron vortices — DOMINIK PENGEL, STEFANIE KERBSTADT, LARS ENGLERT, TIM BAYER, ●MATTHIAS WOLLENHAUPT
A 40.2	Thu	14:30–15:00	K 2.019	Magnetic Quantum Number in Strong Field Ionization — ●SEBASTIAN ECKART, MAKSIM KUNITSKI, MARTIN RICHTER, ALEXANDER HARTUNG, JONAS RIST, FLORIAN TRINTER, KILIAN FEHRE, NIKOLAI SCHLOTT, KEVIN HENRICH, LOTHAR PH. H. SCHMIDT, TILL JAHNKE, MARKUS SCHÖFFLER, KUNLONG LIU, INGO BARTH, JIVESH KAUSHAL, FELIPE MORALES, MISHA IVANOV, OLGA SMIRNOVA, REINHARD DÖRNER

Invited talks of the joint symposium SYPS

See SYPS for the full program of the symposium.

SYPS 1.1	Mon	14:00–14:30	RW HS	Floquet engineering of interacting quantum gases in optical lattices — ●ANDRÉ ECKARDT
SYPS 1.2	Mon	14:30–15:00	RW HS	Experiments on driven quantum gas and surprises — ●CHENG CHIN
SYPS 1.3	Mon	15:00–15:30	RW HS	Exploring 4D Quantum Hall Physics with a 2D Topological Pumps — ●ODED ZILBERBERG, MICHAEL LOHSE, CHRISTIAN SCHWEIZER, IMMANUEL BLOCH, HANNAH PRICE, YAACOV KRAUS, SHENG HUANG, MOHAN WANG, KEVIN CHEN, JONATHAN GUGLIELMON, MIKAEL RECHTSMAN
SYPS 1.4	Mon	15:30–16:00	RW HS	Floquet Discrete Time Crystals in a Trapped-Ion Quantum Simulator — ●GUIDO PAGANO, JIEHANG ZHANG, PAUL HESS, ANTONIS KYPRIANIDIS, PATRICK BECKER, JACOB SMITH, AARON LEE, NORMAN YAO, TOBIAS GRASS, ALESSIO CELI, MACIEJ LEWENSTEIN, CHRISTOPHER MONROE

Invited talks of the joint symposium SYAD

See SYAD for the full program of the symposium.

SYAD 1.1	Tue	10:30–11:00	RW HS	Integrated photonic quantum walks in complex lattice structures — ●MARKUS GRAEFE
SYAD 1.2	Tue	11:00–11:30	RW HS	Testing the Quantumness of Atom Trajectories — ●CARSTEN ROBENS
SYAD 1.3	Tue	11:30–12:00	RW HS	Engineering and probing topological bands with ultracold atoms — ●NICK FLÄSCHNER
SYAD 1.4	Tue	12:00–12:30	RW HS	Statistical signatures of many-particle interference — ●MATTIA WALSCHAERS

Invited talks of the joint symposium SYQC

See SYQC for the full program of the symposium.

SYQC 1.1	Thu	14:00–14:30	RW HS	The resource theory of quantum coherence — ●MARTIN B PLENIO
SYQC 1.2	Thu	14:30–15:00	RW HS	Interferometric visibility and coherence — ●ANDREAS WINTER
SYQC 1.3	Thu	15:00–15:30	RW HS	Quantum coherence and interference patterns — ●FLORIAN MINTERT
SYQC 1.4	Thu	15:30–16:00	RW HS	Experiments on directly measuring quantum coherence and using it for quantum sensing — ●CHUAN-FENG LI

Invited talks of the joint symposium SYRP

See SYRP for the full program of the symposium.

SYRP 1.1	Fri	10:30–11:00	RW HS	Attosecond seeding of high energy rescattered electrons — ●KENNETH SCHAFER
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SYRP 1.2	Fri	11:00–11:30	RW HS	The molecular selfie - atomic-scale imaging with a single electron — BENJAMIN WOLTER, MICHAEL G. PULLEN, ANH THU LEE, MATTHIAS BAUDISCH, KATHARINA DOBLHOFF-DIER, ARNE SENFTLEBEN, MICHAEL HEMMER, CLAUS DIETER SCHRÖTER, JOACHIM ULLRICH, ROBERT MOSHAMMER, STEFANIE GRÄFE, ORIOL VENDRELL, CHII DONG LIN, ●JENS BIEGERT
SYRP 1.3	Fri	11:30–12:00	RW HS	Multidimensional attosecond spectroscopy — ●NIRIT DUDOVICH
SYRP 1.4	Fri	12:00–12:30	RW HS	Recollision-based high-harmonic generation from solids — ●GIULIO VAMPA

Invited talks of the joint symposium SYMM

See SYMM for the full program of the symposium.

SYMM 1.1	Fri	13:30–14:00	RW HS	Some experimental contributions to the study of thermodynamics in quantum systems. — ●IAN WALMSLEY
SYMM 1.2	Fri	14:00–14:30	RW HS	Levitated Nanoparticle Micromachines — ●NIKOLAI KIESEL
SYMM 1.3	Fri	14:30–15:00	RW HS	Autonomous quantum machines and timekeeping — ●MARCUS HUBER
SYMM 1.4	Fri	15:00–15:30	RW HS	An autonomous thermal machine for amplification of coherence — ●JUAN MR PARRONDO, GONZALO MANZANO, RALPH SILVA

Sessions

A 1.1–1.6	Mon	10:30–12:00	K 0.011	Cold atoms I - Rydbergs (joint session A/Q)
A 2.1–2.6	Mon	10:30–12:30	K 1.011	Attosecond Science I (joint session A/MO)
A 3.1–3.5	Mon	10:30–12:00	K 1.016	Precision Spectroscopy I - trapped ions (joint session A/Q)
A 4.1–4.6	Mon	10:30–12:15	K 2.013	Ultracold Plasmas and Rydberg Systems I (joint session Q/A)
A 5.1–5.6	Mon	10:30–12:00	K 2.019	Cold atoms II - interactions (joint session A/Q)
A 6.1–6.6	Mon	14:00–15:30	K 0.011	Cold atoms III - optical lattices (joint session A/Q)
A 7.1–7.7	Mon	14:00–15:45	K 0.023	Laser Development and Applications (joint session Q/A)
A 8.1–8.5	Mon	14:00–15:45	K 1.011	Attosecond Science II
A 9.1–9.5	Mon	14:00–15:45	K 1.016	Precision Spectroscopy II - trapped ions (joint session A/Q)
A 10.1–10.9	Mon	14:00–16:15	K 2.016	Bose-Einstein Condensation (joint session A/Q)
A 11.1–11.5	Mon	14:00–15:45	PA 2.150	X-Ray and XUV Spectroscopy (joint session MO/A)
A 12.1–12.5	Mon	16:15–17:30	K 0.011	Cold atoms IV - topological systems (joint session A/Q)
A 13.1–13.5	Mon	16:15–18:00	K 1.011	Fundamentals
A 14.1–14.5	Mon	16:15–17:45	K 1.016	Precision Spectroscopy III - trapped ions (joint session A/Q)
A 15.1–15.5	Mon	16:15–17:30	K 2.013	Ultracold Plasmas and Rydberg Systems II (joint session Q/A)
A 16.1–16.5	Mon	16:15–17:45	K 2.016	Atomic Clusters I (joint session A/MO)
A 17.1–17.6	Mon	16:15–17:45	K 2.019	Atoms in external fields
A 18.1–18.5	Mon	16:15–17:45	PA 2.150	Ultrafast Spectroscopy with XUV (joint session MO/A)
A 19.1–19.6	Tue	14:00–15:30	K 0.011	Cold atoms V - optical lattices (joint session A/Q)
A 20.1–20.5	Tue	14:00–15:45	K 1.011	Attosecond Science III
A 21.1–21.6	Tue	14:00–15:45	K 1.016	Precision Spectroscopy IV - highly charged ions (joint session A/Q)
A 22.1–22.8	Tue	14:00–16:00	K 2.016	Atomic Clusters II (joint session A/MO)
A 23.1–23.6	Tue	14:00–15:45	K 2.019	Strong laser fields - I (joint session A/MO)
A 24.1–24.6	Tue	14:00–15:45	PA 2.150	Cold Molecules and Reactions (joint session MO/A)
A 25.1–25.50	Tue	16:15–18:15	Redoutensaal	Poster Session I
A 26.1–26.7	Wed	14:00–15:45	K 0.011	Ultracold Plasmas and Rydberg systems (joint session A/Q)
A 27.1–27.9	Wed	14:00–16:15	K 1.011	XUV/X-ray Science
A 28.1–28.7	Wed	14:00–15:45	K 1.016	Precision Spectroscopy V - highly charged ions (joint session A/Q)
A 29.1–29.5	Wed	14:00–15:30	K 2.013	Precision Measurements and Metrology (Atom Interferometry) (joint session Q/A)
A 30.1–30.6	Wed	14:00–15:30	K 2.016	Atomic Clusters III (joint session A/MO)

A 31.1–31.7	Wed	14:00–16:00	K 2.019	Strong laser fields - II
A 32.1–32.6	Wed	14:00–15:45	PA 2.150	Molecules in Intense Laser Fields (joint session MO/A)
A 33.1–33.44	Wed	16:15–18:15	Redoutensaal	Poster Session II
A 34.1–34.7	Thu	10:30–12:15	K 0.011	Cold atoms VI - traps (joint session A/Q)
A 35.1–35.7	Thu	10:30–12:15	K 1.022	Ultracold Atoms I (joint session Q/A)
A 36.1–36.6	Thu	10:30–12:00	K 2.013	Precision Measurements and Metrology (Gravity and Miscellaneous) (joint session Q/A)
A 37.1–37.6	Thu	10:30–12:15	PA 2.150	Clusters IV (joint session MO/A)
A 38	Thu	12:45–13:45	K 0.011	Annual General Meeting of the Atomic Physics division
A 39.1–39.7	Thu	14:00–16:00	K 1.016	Precision Spectroscopy VI - neutrals and ions (joint session A/Q)
A 40.1–40.6	Thu	14:00–16:00	K 2.019	Strong laser fields - III
A 41.1–41.31	Thu	16:15–18:15	Orangerie	Poster Session IIIa
A 42.1–42.23	Thu	16:15–18:15	Zelt Ost	Poster Session IIIb
A 43.1–43.5	Fri	10:30–11:50	K 0.011	Cold atoms VII - micromachines (joint session A/Q)
A 44.1–44.8	Fri	10:30–12:30	K 1.016	Precision Spectroscopy VII (nuclear systems) (joint session A/Q)
A 45.1–45.8	Fri	10:30–12:30	K 1.022	Ultracold Atoms II (joint session Q/A)
A 46.1–46.7	Fri	10:30–12:15	K 2.013	Precision Measurements and Metrology (Optical Clocks) (joint session Q/A)

Annual General Meeting of the Atomic Physics Division

Thursday 12:45–13:45 K 0.011