

한국물리학회 원자분자물리 분과 워크숍

Atomic and Molecular Physics Division Workshop (AMP2026)

워크숍 홈페이지: <https://indico.kps.or.kr/e/AMP2026>

8월 19일(수) 10:00 – 8월 21일(금) 17:00

무주리조트 카니발컬처 팰리스 (1F, 앙상블홀)

(초록 내용은 워크숍 홈페이지를 이용해주세요)

공동주관(후원)

한국물리학회 원자분자물리분과, 한국표준과학원(원자양자센싱그룹, KPS국가시간그룹, 중성원자양자컴퓨터연구팀), 한국원자력연구원, 기초과학연구원-트랩이온 양자과학연구단, KAIST-다체물성양자광학연구실, KAIST-양자컴퓨터연구실, 서울대학교-극저온양자기체연구실, 전남대학교산학협력단부설-양자기술센터, 포항공과대학교-극저온양자기체연구실, 차세대양자연구거점사업단

8월 20일 목요일

09:30 – 11:30

Session A: Precision Metrology, 좌장: 송윤흥(KRIS)

9:30 – 10:00

김휘동(KRIS) "광시계의 현재와 미래"

10:00 – 10:30

이상범(KRIS) "원자간섭계를 이용한 관성 센서 개발"

10:30 – 11:00

허명선(KRIS) "Optical Clock Comparison using Terrestrial and Non-terrestrial Networks"

11:00 – 13:00

이재훈(KRIS) "Frequency Measurement of the $\text{Sr } ^1S_0 \rightarrow ^1P_1$ Transition via Cross-Correlated Experimental Methods"

13:00 – 15:00

Session: B Quantum Optics & Info., 좌장: 최재윤(KAIST)

13:00 – 13:30

문한섭(KAIST) "Quantum science with atomic ensemble"

13:30 – 14:00

박지용(한밭대) "Quantum Information in a Few Bins: From Nonclassicality Certification to Quantum-Enhanced Metrology"

14:00 – 14:30

김유신(POSTECH) "Quantum Optics via Stationary Light Puls"

14:40 – 15:00

이창협(한양대) "Quantum state tomography with generative diffusion model"

15:30 – 17:30

Special Session, 좌장: 권덕희(원자력연구원)

15:30 – 16:00

제원호(서울대)

16:00 – 16:30

안경원(서울대)

16:30 – 17:00

조동현(고려대)

17:00 – 17:30

김중복(한국교원대)

17:30 – 19:00

Poster Session

8월 21일 금요일

09:30 – 11:30

Session C: Light-Atom Interaction, 좌장: 문걸(전남대학교)

09:30 – 10:00

김준기(성균관대) "Quantum computing and simulation with trapped ions"

10:00 – 10:30

이문주(POSTECH) "Nonlinear and non-Hermitian dynamics with trapped ions and cavity QED"

10:30 – 11:00

이동현(고려대) "Quantum Sensing with Spin Defects: Diamond Quantum Magnetometry"

11:00 – 11:30

조범석(UNIST) "Manipulating molecules using partial optical standing waves"

13:00 – 15:00

Session D: Instruments, 좌장: 조범석(UNIST)

13:00 – 13:30

김용희(원자력연구원) "Laser based Carbon Isotope Separation Project in KAERI"

13:30 – 14:00

문걸(전남대) "Atom-based Quantum Sensors"

14:00 – 14:30

김재완(명지대) "라만 전이 기반 양자 제어를 위한 고성능 레이저 안정화 기술"

14:30 – 15:00

유훈(공군사관학교) "Atomic Physics at an Accelerator Facility: Spectroscopy and Precision Measurements"

15:30 – 17:30

Session E: Cold Atoms and Molecules, 좌장: 권혁준(KIAS)

15:30 – 16:00

안재욱(KAIST) "Neutral-Atom Quantum Optimization"

16:00 – 16:30

박지우(POSTECH) "Quantum science with ultracold polar molecules"

16:30 – 17:00

신용일(서울대) "Spin turbulence in quantum fluids: from chaotic spin dynamics to turbulent transport"

17:00 – 17:30

송윤흥(KRISS) "Toward Yb quantum processors over 1000 qubits"

무주리조트 지도:



Poster Session: Presenter & Title list

이민환(전남대) "Development of a High-Repetition-Rate Single-Zone ^{87}Rb Atom Interferometer"

임신혁(ADD) "Performance characterization of an atom spin gyroscope"

Hyeonjae Kim(ADD) "All-optical pulsed rubidium atomic magnetometer for magnetic anomaly mapping of subsurface transportation infrastructure"

Jihwan Kim(ADD) "Miniaturization of Atomic Vapor Cells via Silicon-Glass Anodic Bonding"

임동규(고려대) "Hyperfine structure characterization and optical cycling enhancement in fermionic ^{25}MgF molecules"

강지용(서울대) "Hybrid Oscillator–Qubit Metrology in a Trapped Ion"

조영주(고려대) "Progress Toward Longitudinal Laser Slowing of a Cryogenic MgF Beam"

박주영(KAIST) "Characterization and mitigation of pairwise-correlated errors on ^{87}Rb neutral atom analog computing platform"

곽민재(전남대) "Design of a Continuous Atomic Beam Source Combining 2D MOT and 3D PGC for Quantum Inertial Sensors"

이용웅(고려대) "Toward Laser Cooling of Carbon"

이현경(KRISS) "Development of Ytterbium Optical Lattice Clocks at KRISS: System Overview, Ongoing Projects, and Applications"

박성남(KRISS) "Highly Charged Ion Spectroscopy: Observation of Third-Harmonic Generation in X-ray Free Electron Laser at Pohang Accelerator Laboratory"

CHOI Soyeon(KRISS) "Implementation and Performance Evaluation of a Rack-Mounted Testbed for a Field-Deployable Rubidium Atomic Clock"

배재익(KAIST/KRISS) "Mitigating Measurement Noise in Fast Neutral Atom Quantum Experiments"

Junhee Cho(IBS) "Design and Construction of a Quantum Processor with Two-Dimensional Ion Crystals"

유재훈(서울대) "Toward Experimental Validation of a $^{137}\text{Ba}^+ 5D_{3/2}$ Metastable-State Qubit"

김상우(ADD) "Heading Error Correction using IMU in Drone-based Magnetic Survery with Optically Pumped Atomic Magnetometer"

이재환(KAIST) "Photonic grating chip assisted measurement of the ^{88}Sr 461-nm transition"

이정훈(서울대) "Observation of Scaling Behavior of Spin Turbulence in Spinor Bose-Einstein Condensates"

황선화(KAIST) "Internal-Motional Coupling in Flying Rydberg Atom Collisions"

이대범(고려대) "Quantum Control of a Single ^{87}Rb Atom in an Optical Tweezer via D1 Electromagnetically Induced Transparency"

박준영(서울대) "Creation of a dual species BEC of Rb and Yb"

유은식(고려대) "Progress toward a dual-species Ytterbium quantum processor: From narrow-line cooling to bichromatic triple-magic trapping"

강광휘(KAIST) "Progress toward Spin-Resolved Detection of $\text{SU}(N)$ Fermions"

이헌식((주)오에이큐) "Now I am become Atom, the destroyer of hidden threats: $A < 25\text{g}$ ^{87}Rb Free-Induction-Decay Scalar Magnetometer Enabling Unshielded Outdoor Magnetic Anomaly Detection"

이현빈((주)오에이큐) "Development of Drone-Deployable ^{87}Rb Atomic Magnetometer Prototypes for Industrial Applications"

김준영((주)오에이큐) "Fabrication of Alkali Vapor Cells and Estimation of Buffer-Gas Pressure from Calibrated Absorption Spectra"

이덕영((주)오에이큐) "경로를 재탐색합니다, 위성 없이. 양자센서 기반 지구물리 지도 제작과 무(無)-GPS 항법"

Donghyun Kwon/Shinwoo Lee(POSTECH) "Quantum many-body simulation and computing with ultracold polar molecules"

박경빈(KAIST) "Chip-cell-based ^{87}Rb two-photon spectroscopy module with T-shaped geometry for long-term operational stability"

최민석((주)오에이큐) "AESPA — Atomic-magnetometer Era: Sensing, Positioning & Anomaly-detection"

Eunkang Kim(UNIST) "Molecular dynamics in an optical partial standing wave"

EunKang Kim(JGU) "Laser Resonance Chromatography on Lu^+ ions"

김효기(전남대) "Chip-Scale Polarization Detector for Compact SERF Magnetometers"

조현성(서울대) "Three-Body Loss in a ^{23}Na - ^6Li - ^6Li Bose-Fermi-Fermi mixture"

임태균(KAIST) " ^{174}Yb Tweezer Machine"