

JUNWOO JUNG

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Mapo-gu, Seoul, Republic of Korea

[Personal Site](#)

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST), Korea B.S. in Physics	2023–Present
Korea Science Academy of KAIST (KSA), Korea KAIST-affiliated Secondary School	2020–2023

EXCHANGES & SHORT PROGRAMS

Technical University of Denmark (DTU) · Scientific Computing in Quantum Information Science (<i>5 ECTS</i>).	Summer 2025
Nanyang Technological University (NTU), Singapore · Coursework (<i>9 credits</i>); research internship with Prof. N. Ng.	Fall 2024

RESEARCH EXPERIENCE

Research Intern @ KAIST, Prof. G. Y. Cho · Analyzing leading-error corrections to <i>chiral central charge</i> from deviations to a strict entanglement-area law.	Mar 2025 – Present
Research Intern @ NTU, Prof. Nelly Ng · Investigated the gap between <i>Gibbs-preserving covariant channels</i> and <i>thermal operations</i> within quantum thermodynamics.	Aug 2024 – Dec 2024
Research Intern @ KAIST, Prof. J. Ahn · Developed a method for constructing Rydberg-atom graphs for QUBO instances (basis for subsequent publication).	Jun 2023 – Sep 2023
Quantum Information Study Group · Founded and run a 15-member KAIST/SNU reading group; weekly seminars on quantum information and thermodynamics.	Apr 2024 – Present

PUBLICATIONS

Andrew Byun, **Junwoo Jung**, K. Kim, M. Kim, S. Jeong, H. Jeong, J. Ahn, *Rydberg-atom graphs for quadratic unconstrained binary optimization problems*. [Advanced Quantum Technologies](#) (2024).

SELECTED COURSEWORK

Physics

- Quantum Information I & II; Quantum Mechanics I & II; Mathematical Physics I & II; Thermodynamics; Electromagnetism I & II; Classical Mechanics I & II

Mathematics

- Geometrical Methods in Mathematical Physics (NTU)

SKILLS

Programming Languages

Python, MATLAB, Mathematica
Korean (Native), English (Fluent), Spanish/Chinese (Elementary)