JUNWOO JUNG

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Personal Site

EDUCATION

Korea Advanced Institute of Science and Technology, Korea **2023–Present**
B.S. in Physics

Nanyang Technological University, Singapore **Fall 2024**
Exchange Program

Korea Science Academy of KAIST **2020–2023**
KAIST affiliated High School

EXPERIENCE

Research Intern @ KAIST, Prof. G. Cho **Mar. 2025 – Present**

· Researched and analyzed the leading error terms of chiral Central charge of the system when Entanglement area law has error terms.

Research Intern @ NTU, Prof. Nelly Ng **Aug. 2024 – Dec. 2024**

· Researched and analyzed the gap between *Gibbs-preserving Covariant channel* and *Thermal operation*.

Research Intern @ KAIST, Prof. H. Jung **Mar. 2024 – Jul. 2024**

· Numerically investigated the quantum catalysis of LOCC.

Research Intern @ KAIST, Prof. J. Choi **Sep. 2023 – Feb. 2024**

· Developed a user-friendly GUI to visualize laboratory data, improving operational efficiency.
· Conducted simulations including the Zeeman Slower model. (link).

Research Intern @ KAIST, Prof. J. Ahn **Jun. 2023 – Sep. 2023**

· Developed a novel method for constructing Rydberg atom graphs for solving QUBO problems.

Quantum Information Study Group **Apr. 2024 – Present**

· Founded and managed a quantum information study group with 15 undergraduate and graduate students from KAIST and SNU.

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).

COURSES

Physics

· Condensed Matter Physics 1, Quantum Mechanics 1&2, Mathematical Physics 1&2
· Thermodynamics, Electromagnetism 1&2, Classical Mechanics 1&2
· Modern Physics (Experimental)

Mathematics

- Geometrical Methods in Mathematical Physics

SKILLS

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