

Rintaro Masaoka

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Research interests

I am interested in exploring universal properties of quantum phases of matter and quantum phase transitions. My current research focuses on frustration-free quantum systems, which exhibit distinctive properties in both gapped and gapless phases. Main research directions include:

- Proof of universal inequality on dynamical exponents for frustration-free quantum critical points.
- Formulating and characterizing frustration-free free-fermion systems.

Education

Mar. 2026 (expected), Master of Engineering, Department of Applied Physics, Graduate School of Engineering, University of Tokyo

Mar. 2024, Bachelor of Physics, Department of Physics, Faculty of Science, University of Tokyo

Grant

Excellent Research Assistant Fellowship, The Forefront Physics and Mathematics Program to Drive Transformation, US\$19k, (2024-2026)

Award

Excellent Presenter, Parallel Session (Statistical Physics Section), 69th Condensed Matter Physics Summer School