

Koichiro Takahashi

University of New Hampshire (UNH)
Department of Physics and Astronomy

Phone: +16037503575
Email: koichiro.takahashi@unh.edu
[LinkedIn](#) [Google Scholar](#)
[GitHub](#) [Personal Website](#)

Project and Publication:

1. Yibo Zhang, Suman Itani, Kamal Khanal, Emmanuel Okyere, Gavin Smith, Koichiro Takahashi, Jiadong Zang, “GPTArticleExtractor: An automated workflow for magnetic material database construction”, Journal of Magnetism and Magnetic Materials, 2024, 172001, ISSN 0304-8853, <https://doi.org/10.1016/j.jmmm.2024.172001> .
2. The on-going project;
“Nonlinear dynamics of skyrmion confined in one dimension”
Supervisor: Sergey Pershoguba, Jiadong Zang
Partially funded by Summer Undergraduate Research Fellowships (SURF)
Presented preliminary results at Undergraduate Research Conference (URC) at UNH
3. The on-going project; “Tight-binding Calculation of MnTe, Altermagnet”
Supervisor: Jiadong Zang

Research and Experience:

05/2023-Present	Research Assistant in the Theoretical Condensed Matter Physics Group at UNH Supervisor: Jiadong Zang, Sergey Pershoguba
-----------------	--

Research Interests:

Condensed Matter Theory, Quantum Field Theory, Topological Quantum Matter, Strongly Correlated Electrons System, Quantum Hall Effects, Superconductivity, Magnetism, Skyrmionics, Quantum Information, Machine Learning, Complexity, Information Theory, Non-Equilibrium Dynamics, AdS/CFT

Computational Skills:

Languages:	Python, Mathematica
Platforms:	macOS

Independent Seminars:

01/2024-04/2024	UNH Graduate Theoretical Physics Seminar Spring 2024 Presentation, Title: “Dynamics of Magnetic Skyrmion”
-----------------	--

01/2024-03/2024	Group Theory and Algebraic Geometry Seminar with Michael Lathwood, PhD student at UNH Weekly Seminar of Group Theory and Algebraic Geometry
-----------------	---

Education:

08/2023-Present	Transfer Undergraduate Physics Student (4th-year), Class of 2025 Department of Physics, University of New Hampshire, USA GPA: 4.0
08/2022-05/2023	Exchange Student in Physics at UNH Located in Durham, New Hampshire, USA Stayed for 2 semesters, GPA: 4.0
04/2021-08/2022	BSc in Physics at Saitama University (SU) (Transferred to UNH) Located in Sakura-ku, Saitama, Japan Class of 2025, Earned 73 Credits GPA: 3.71 (Top of my class)
04/2018-03/2021	High School Diploma in General Course at Shinjuku High School Located in Shinjuku, Tokyo, Japan

Scholarships:

05/2024-08/2024	Summer Undergraduate Research Fellowships (SURF) Received: \$4,000 For 10 weeks of summer research on campus at UNH
05/2024	Karsten Pohl Scholarship Received: \$4,660 From the College of Engineering & Physical Sciences at UNH “For academic excellence and for advancing the University’s goal of enhancing the educational experience through enrollment of a diverse student body”
08/2023-Present	Transfer Excellence Scholarship Received: \$2,500 (per semester) × 4 semesters From the Admission Committee of UNH
08/2022-05/2023	Gyomu Super Japan Dream Foundation Scholarship Received: ¥1,200,000 (9 months) During study exchange at UNH
10/2022-08/2023	Exemption of Tuition Fee at Saitama University

Applies for students who has outstanding academic performance

04/2022-08/2023

Japan Student Services Organization (JASSO) Scholarship

Awards:

Dean's list in Highest Honors at UNH for outstanding academic performance
Received Semesters: 2022 Fall, 2023 Spring, 2023 Fall, 2024 Spring

Outstanding Grade Award from the Physics Department of Saitama University
Received Years: 2021, 2022; the award given to the top of my class

Extracurricular Activities:

08/2022-Present

UNH Men's Volleyball Club; Position: Outside Hitter/Libero
Played in tournaments at Boston College, UMass Lowell etc.

Personal Information:

Date and Place of Birth: January 10, 2003; Tokyo, Japan

Citizenship: Japan

Language Skills: Japanese (Native), English (Fluent)