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1 Background

1.1 Education

PhD in Theoretical Physics 2016-2021, The University of Alabama - USA, Tuscaloosa
Study Abroad in JYPE 2014-2015, Tohoku University - Japan, Sendai
BS in Engineering Physics 2012-2016, The Colorado School of Mines - USA, Golden

1.2 Appointments/Employments

Assistant Professor April 2025 - Present

National Institute of Technology Oyama College (Department of General Education)

JSPS Postdoc August 2023 - August 2024

Yamagata University

Technical Consultant January 2023 - May 2023

Quantum Data Center

Technical Consultant August 2022 - May 2023

quantumz.io

Postdoc January 2022 - June 2023

Henan University

Contract Tutor 2017 - 2021

Appliedtutoring.com

PhD Student 2016 - 2021

The University of Alabama

Graduate Teaching Assistant 2016 - 2021

The University of Alabama

2 Research

2.1 Publications (Including Preprints)

2026 - **Holographic QCD Matter: Chiral Soliton Lattices in Strong Magnetic Field**
[10.1007/JHEP02\(2026\)240](https://doi.org/10.1007/JHEP02(2026)240) - arXiv:[2507.16897](https://arxiv.org/abs/2507.16897)

2024 - **Holographic Global Vortices with Novel Boundary Conditions**
arXiv:[2404.03212](https://arxiv.org/abs/2404.03212)

2024 - **Relativistic hydrodynamics under rotation: Prospects and limitations from a holographic perspective**
[10.1016/j.ppnp.2024.104135](https://doi.org/10.1016/j.ppnp.2024.104135) - arXiv:[2308.11686](https://arxiv.org/abs/2308.11686)

2023 - Modes of the Sakai-Sugimoto soliton
[10.1088/1751-8121/ad742c](https://arxiv.org/abs/1751-8121/ad742c) - arXiv:[2306.00677](https://arxiv.org/abs/2306.00677)
 2023 - Convergence of hydrodynamics in rapidly spinning strongly coupled plasma
[10.1103/PhysRevD.108.046014](https://doi.org/10.1103/PhysRevD.108.046014) - arXiv:[2112.10781](https://arxiv.org/abs/2112.10781)
 2022 - Chaos and pole-skipping in a simply spinning plasma
[10.1007/JHEP02\(2023\)253](https://doi.org/10.1007/JHEP02(2023)253) - arXiv:[2211.00016](https://arxiv.org/abs/2211.00016)
 2020 - Hydrodynamics of simply spinning black holes & hydrodynamics for spinning quantum fluids
[10.1007/JHEP12\(2020\)112](https://doi.org/10.1007/JHEP12(2020)112) - arXiv:[2007.04345](https://arxiv.org/abs/2007.04345)
 2020 - Resonating AdS soliton
[10.1007/JHEP08\(2020\)136](https://doi.org/10.1007/JHEP08(2020)136) - arXiv:[2006.12783](https://arxiv.org/abs/2006.12783)
 2019 - Dispersion relations in non-relativistic two-dimensional materials from quasinormal modes in Hōrava Gravity
[10.1007/JHEP10\(2019\)087](https://doi.org/10.1007/JHEP10(2019)087) - arXiv:[1905.11993](https://arxiv.org/abs/1905.11993)

2.2 Given Talks

2025 CDIO Asian Regional Meeting	August, 2025
<i>Politeknik Negeri Batam</i>	
Strings and Fields	July, 2025
<i>Kyoto University</i>	
Solitons at Work (INVITED)	November, 2024
<i>Online</i>	
Research Seminar	May, 2024
<i>Tokyo Institute of Technology</i>	
Research Seminar	May, 2024
<i>Keio University</i>	
Research Seminar	May, 2024
<i>Chuo University</i>	
Rising Researchers Seminar (INVITED)	April, 2024
<i>Online</i>	
International Workshop on Noncommutative Integrable Systems	March, 2024
<i>Online</i>	
Holotube (INVITED)	December, 2023
<i>Online</i>	
Online Workshop on Topological Solitons	September, 2023
<i>Online</i>	
Research Seminar	February, 2020
<i>Tokyo University</i>	
Research Seminar	February, 2020
<i>Ochanomizu University</i>	
Research Seminar	February, 2020
<i>Chuo University</i>	
Research Seminar	July, 2019
<i>Würzburg University</i>	
Frankfurt Institute for Advanced Studies	July, 2019
<i>Würzburg University</i>	
3rd Karl Schwarzschild Conference	July, 2017
<i>Würzburg University</i>	

3 Teaching Experience

Environmental Science - Spring 2025 - Present
 National Institute of Technology Oyama College - *once per semester lecture on environmental science in English*
Special Lectures on Special Relativity - Spring 2024
 Yamagata University - *informal lectures taught in Japanese*
PH 255: Modern Physics Laboratory - Spring 2021
 The University of Alabama - *as a graduate teaching assistant*
PH 255: Modern Physics Laboratory - Fall 2020
 The University of Alabama - *as a graduate teaching assistant*
PH 102: General Physics II - Summer 2020

The University of Alabama - *two classes were taught*

PH 125: Honors General Physics with Calculus I - Fall 2019

The University of Alabama - *as a graduate teaching assistant*

PH 255: Modern Physics Laboratory - Fall 2018

The University of Alabama - *as a graduate teaching assistant*

Tutoring Session (College Math and Physics) - Fall 2018 - Spring 2021

Applied Tutoring - *taught privately for around 5hrs a week at the University of Alabama*

PH 125: Honors General Physics with Calculus I - Fall 2016

The University of Alabama - *as a graduate teaching assistant*

PH 105: General Physics with Calculus I - Fall 2016 - Spring 2021

The University of Alabama - *as a graduate teaching assistant for 0-2 classes per year*

PH 106: General Physics with Calculus II - Fall 2016 - Spring 2021

The University of Alabama - *as a graduate teaching assistant for 0-2 classes per year*

4 Recognition and Honors

4.1 Awards

Japanese-Language Proficiency Test (JLPT) N2 2023
Level Certification

Japan Society for the Promotion of Science Fellowship 2023

Yamagata University

Outstanding Research by a Master's Student 2020

The University of Alabama

JASSO Scholarship 2014

Tohoku University

Private Scholarship 2008

Pagosa Springs High School

4.2 Memberships

Global Center Member April 2025 - present

NIT Oyama College Golbal Center

President

Physics and Astronomy Graduate Physics Association of the University of Alabama

Secretary

Japanese American Cultural Exchange Club of the University of Alabama

2017 - 2020

2017 - 2021

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