

## Contents

<b>1</b>	<b>Background</b>	<b>1</b>
1.1	Education	1
1.2	Appointments/Employments	1
<b>2</b>	<b>Research</b>	<b>1</b>
2.1	Publications (Including Preprints)	1
2.2	Given Talks	2
<b>3</b>	<b>Teaching Experience</b>	<b>2</b>
<b>4</b>	<b>Recognition and Honors</b>	<b>3</b>
4.1	Awards	3
4.2	Memberships	3

## 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)

**2025 - Holographic QCD Matter: Chiral Soliton Lattices in Strong Magnetic Field**  
arXiv:[2507.16897](#)

**2024 - Holographic Global Vortices with Novel Boundary Conditions**  
arXiv:[2404.03212](#)

**2024 - Relativistic hydrodynamics under rotation: Prospects and limitations from a holographic perspective**  
[10.1016/j.ppnp.2024.104135](#) - arXiv:[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

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

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