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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** 2025 - Present

National Institute of Technology Oyama College

**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** 2022 - 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](#) - [arXiv:2306.00677](#)

2023 - Convergence of hydrodynamics in rapidly spinning strongly coupled plasma

[10.1103/PhysRevD.108.046014](#) - [arXiv:2112.10781](#)

2022 - Chaos and pole-skipping in a simply spinning plasma

[10.1007/JHEP02\(2023\)253](#) - [arXiv:2211.00016](#)

2020 - Hydrodynamics of simply spinning black holes & hydrodynamics for spinning quantum fluids

[10.1007/JHEP12\(2020\)112](#) - [arXiv:2007.04345](#)

2020 - Resonating AdS soliton

[10.1007/JHEP08\(2020\)136](#) - [arXiv:2006.12783](#)

2019 - Dispersion relations in non-relativistic two-dimensional materials from quasinormal modes in H $\ddot{o}$ rava Gravity

[10.1007/JHEP10\(2019\)087](#) - [arXiv:1905.11993](#)

## 2.2 Given Talks

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

## 3 Teaching Experience

**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

<b>Japanese-Language Proficiency Test (JLPT) N2</b> Level Certification	2023
<b>Japan Society for the Promotion of Science</b> Fellowship <i>Yamagata University</i>	2023
<b>Outstanding Research by a Master's Student</b> <i>The University of Alabama</i>	2020
<b>JASSO Scholarship</b> <i>Tohoku University</i>	2014
<b>Private Scholarship</b> <i>Pagosa Springs High School</i>	2008

### 4.2 Memberships

<b>CDIO Implementation Overseer</b> <i>CDIO Implementation Team of NIT Oyama</i>	2025 - present
<b>President</b> <i>Physics and Astronomy Graduate Physics Association</i> <i>of the University of Alabama</i>	2017 - 2021
<b>Secretary</b> <i>Japanese American Cultural Exchange Club of the</i> <i>University of Alabama</i>	2017 - 2020