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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

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)

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

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

2.1.1 Given Talks

Research Seminar

May, 2024

Tokyo Institute of Technology

Research Seminar

May, 2024

Keio University

Research Seminar

May, 2024

Chuo University

Rising Researchers Seminar (Invited)

April, 2024

Online

International Workshop on Noncommutative

March, 2024

Integrable Systems

Online

Holotube (Invited)

December, 2023

Online

Online Workshop on Topological Solitons

September, 2023

Online

Research Seminar

February, 2020

Tokyo University

Research Seminar

February, 2020

Ochanomizu University

Research Seminar

February, 2020

Chuo University

Research Seminar

July, 2019

Würzburg University

Frankfurt Institute for Advanced Studies

July, 2019

Würzburg University

3rd Karl Schwarzschild Conference

July, 2017

Würzburg University

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

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

Japan Society for the Promotion of Science 2023
Fellowship

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

President 2017 - 2021

*Physics and Astronomy Graduate Physics Association
of the University of Alabama*

Secretary 2017 - 2020

*Japanese American Cultural Exchange Club of the
University of Alabama*

5 Miscellaneous

5.1 Skills

- Known Languages
 - English (Native)
 - Japanese (Conversational/N2)
- Programming Languages
 - Python (+5 years)
 - Julia (+5 years)
 - Mathematica (+10 years)
 - Go (1 year)
 - C (1 year)
- Mathematical Knowledge
 - Smooth Optimization (+5 years)
 - Dynamical Systems (+5 years)
 - Linear and Non-linear Programming (+5 years)
 - Model Building (+5 years)
 - Differential Geometry and Topology (+5 years)
- Familiar Technologies
 - Git, SVN, Github, and version control

- Word and word processors
- Inkscape and graphic editing applications
- Sheets and spreadsheet applications
- LaTeX
- make and build systems
- LLM model

5.2 Detailed Experiences

I have experience...

- working on programming projects remotely as part of a team. (Quantum Data Center, quantumz.io)
- collaborating on research projects with a team of researchers. (Colorado School of Mines, The University of Alabama, Henan University, Yamagata University)
- leading a classroom of university students as lecturer. (for either formal and informal lecture series) (The University of Alabama, Yamagata University)
- teaching university level physics and mathematics. (Colorado School of Mines, The University of Alabama, Henan University, Yamagata University)

5.3 References

Minoru Eto (Yamagata University, Professor) *was my Postdoc Advisor*
 meto@sci.kj.yamagata-u.ac.jp

Sven Bjarke Gudnason (Henan University, Distinguished Professor) *was my Postdoc Advisor*
 gudnason@henu.edu.cn

Matthias Kaminski (The University of Alabama, Associate Professor) *was my PhD Advisor*
 mski@ua.edu