

Markus A.G. Amano

CV

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iNSPIREHEP

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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 2026 - Present
National Institute of Technology Oyama College (Department of Electrical and Electronic Engineering)
Assistant Professor April 2025 - April 2026
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.pnpp.2024.104135](https://doi.org/10.1016/j.pnpp.2024.104135) - arXiv:[2308.11686](https://arxiv.org/abs/2308.11686)

2023 - Modes of the Sakai-Sugimoto soliton
[10.1088/1751-8121/ad742c](https://doi.org/10.1088/1751-8121/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 <i>Politeknik Negeri Batam</i>	August, 2025
Strings and Fields <i>Kyoto University</i>	July, 2025
Solitons at Work (INVITED) <i>Online</i>	November, 2024
Research Seminar <i>Tokyo Institute of Technology</i>	May, 2024
Research Seminar <i>Keio University</i>	May, 2024
Research Seminar <i>Chuo University</i>	May, 2024
Rising Researchers Seminar (INVITED) <i>Online</i>	April, 2024
International Workshop on Noncommutative Integrable Systems <i>Online</i>	March, 2024
Holotube (INVITED) <i>Online</i>	December, 2023
Online Workshop on Topological Solitons <i>Online</i>	September, 2023
Research Seminar <i>Tokyo University</i>	February, 2020
Research Seminar <i>Ochanomizu University</i>	February, 2020
Research Seminar <i>Chuo University</i>	February, 2020
Research Seminar <i>Würzburg University</i>	July, 2019
Frankfurt Institute for Advanced Studies <i>Würzburg University</i>	July, 2019
3rd Karl Schwarzschild Conference <i>Würzburg University</i>	July, 2017

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 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