

Naoki Matsumoto

M2 Graduate Student
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Education

- **Ph.D. in Astronomy**, Astronomical Institute, Tohoku University
Graduate Program on Physics for the Universe (GP-PU), Tohoku University
Advisor: Prof. Masayuki Akiyama
Expected Graduation: March, 2028
- **M.Sc. in Astronomy**, Astronomical Institute, Tohoku University
Graduate Program on Physics for the Universe (GP-PU), Tohoku University
Advisor: Prof. Masayuki Akiyama
Expected Graduation: March, 2025
- **B.Sc. in Astronomy**, Astronomical Institute, Tohoku University
Advisor: Prof. Masayuki Akiyama
Graduation: March, 2023

Research Interests

- The formation histories of Super Massive BlackHoles (SMBHs) existing at the center of massive galaxies
- The connection between the formation and growth phase of SMBHs and the host galaxies (co-evolution)

Research Experience

- **Researcher**, Tohoku University
Conducting observations and data analysis of optical-NIR and sub-mm telescopes (e.g., Subaru, ALMA)
- Participated in the Tohoku University's International Joint Graduate Program in Physics for the Universe.

Skills

- Data analysis
- Observational proposals
- Programming languages: Python, IDL, etc.

Publications

Co-author Publications

3. **Ongoing and Fossil Large-scale Outflows Detected in a High-redshift Radio Galaxy:** [CII] Observations of TN J0924-2201 at $z = 5.174$
Lee, K., Akiyama, M., Kohno, K., (incl. Matsumoto, N., 14th), et al. 2024, *ApJ*, **972**, 111.
2. **Observational properties of active galactic nucleus obscuration during the peak of accretion growth**
Vijarnwannaluk, B., Akiyama, M., Schramm, M., (incl. Matsumoto, N., 7th), et al. 2024, *MNRAS*, **529**, 3610.
1. **Supermassive black hole feeding and feedback observed on sub-parsec scales**
Izumi, T., Wada, K., Imanishi, M., (incl. Matsumoto, N., 9th), et al. 2023, *Science*, **382**, 554.

Conferences and Workshops

International Conferences (All non-peer reviewed, in English)

Contributed Talks

3. **Unveiling Heavily Obscured SMBH Growth in the Early Universe**
10th Galaxy Evolution Workshop, ASIAA, Taipei, Taiwan, August 6th-9th, 2024. B-Con Plaza, Beppu, Oita, Japan, July 23rd-26th, 2024.
2. **Unveiling Heavily Obscured SMBH Growth in the Early Universe**
The Second SUPER-IRNET Workshop: Sparkling Our Collaboration at the Cosmic Gate, B-Con Plaza, Beppu, Oita, Japan, July 23rd-26th, 2024.
1. **Unveiling $z > 3$ Heavily Obscured AGN Missed in X-ray Surveys with MIPS: The Contribution to the Cosmic Accretion Density at Cosmic Dawn**
HSC-AGN f2f meeting, Ehime University, Japan, November 14-16, 2023.

Poster Presentations

3. **MIR Search of Heavily Obscured $z > 3$ AGN Missed in X-ray Surveys**
The First SUPER-IRNET Workshop, NAOJ (Mitaka), March 23, 2023.
2. **MIR Search of Heavily Obscured $z > 3$ AGN Missed in X-ray Surveys**
9th Galaxy Evolution Workshop, Kyoto University, February 20-23, 2023.
1. **MIR Search of Heavily Obscured $z > 3$ AGN Missed in X-ray Surveys**
HSC-AGN f2f meeting, Kagoshima University, November 30-December 2, 2022.

Domestic Conferences and Symposia (All non-peer reviewed, in Japanese)

Contributed Talks

1. **MIR Search of Heavily Obscured $z > 3$ AGN Missed in X-ray Surveys**
53rd Summer School on Astronomy and Astrophysics (第 53 回天文・天体物理若手夏の学校), University of Tokyo, August 1-4, 2023.

Poster Presentations

1. **MIR Search of Heavily Obscured $z > 3$ AGN Missed in X-ray Surveys**
ASJ Spring Annual Meeting 2023 (2023 年度日本天文学会春季年会), Rikkyo University, March 13-16, 2023.

Telescope Time Awarded as a PI

1. **Subaru Telescope, S24A-113, 1 night,**
Project Title: **Spectroscopic Follow-up Observations of $z>3$ Heavily Obscured AGN**

Awards and Honors

2. Selected for Tohoku University's International Joint Graduate Program (**Graduate Program on Physics for the Universe, GP-PU**), April 2024 - March 2028
1. 2nd Prize for Oral Presentation in the Galaxy and Galaxy Cluster Session, 53rd Summer School on Astronomy and Astrophysics, August 2023

Outreach Activities

- Student Learning Assistant, もしも君が杜の都で天文学者になったら, 2021-2023

Teaching Assistant Experience

3. **Principles of Optical and Infrared Signal Measurements in Astronomy / Making an Optical Astronomical Observation Instrument and Measurements**

Instructor: Prof. Akiyama, M.

Tohoku University, Semester 4, 2023

2. **Seminar in Scholarly Discourse**

Instructor: Prof. Akiyama, M., Asst. Prof. Ita, Y., Asst. Prof. Kimura, S., Asst. Prof. Kubo, M.

Tohoku University, Semester 2, 2023

1. **Fundamental Mathematics for Physics**

Instructor: Assoc. prof. Ishikawa, H.

Tohoku University, Semester 1, 2023

References

- **Masayuki Akiyama**

Professor, Astronomical Institute

Tohoku University

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