

Dr. Jin BENIYAMA

(Last updated on Sep. 28, 2025)

✉ jinbeniyama@gmail.com

🐙 GitHub

🌐 <https://jinbeniyama.github.io/website/index.html>



Personal Statement

- ◇ A dedicated postdoctoral researcher in astronomy and planetary science. Experienced in the discovery and characterization of near-Earth asteroids (NEAs) through photometry, spectroscopy, and polarimetry using medium-sized telescopes such as the 1.05 m Kiso Schmidt telescope and the 3.8 m Seimei telescope. In addition, has observational experience using large facilities such as Subaru Telescope and the Very Large Telescope (VLT). Actively involved in campaign observations of the peculiar NEA (3200) Phaethon, the target of the DESTINY+ mission, as well as the Hayabusa2 extended mission targets (2001 CC₂₁ and 1998 KY₂₆). Discovered more than 50 small NEAs (mean diameter ~ 20 m) with the Tomo-e Gozen camera and characterized over 100 NEAs. Recent research interests also include minimoons and interstellar objects. Familiar with Python and machine learning.

Employment

- Feb. 2025 – Jan. 2027 ◇ **Observatoire de la Côte d'Azur, Laboratoire Lagrange, Excellence Fellowships for Young Researchers**
- Apr. 2024 – Jan. 2025 ◇ **Observatoire de la Côte d'Azur, Laboratoire Lagrange, Visiting Researcher**
- Apr. 2023 – Jan. 2025 ◇ **The Japan Society for the Promotion of Science (JSPS) fellowship.**
- Oct. 2021 – Mar. 2023 ◇ **Doctoral Fellowship of The University of Tokyo.**

Education

- Apr. 2021 – Mar. 2024 ◇ **Ph.D. course in Astronomy**, The University of Tokyo, Japan.
Thesis title:
Photometric Observations of Tiny Near-Earth Asteroids during the Close Approaches.

Education (continued)

- Apr. 2019 – Mar. 2021 ◇ **Master in Astronomy**, The University of Tokyo, Japan.
Thesis title:
Development of the moving object processing system and follow-up observations of tiny near-Earth objects with the Kiso Schmidt telescope and the Tomo-e Gozen camera.
- Apr. 2015 – Mar. 2019 ◇ **Bachelor in Astronomy and Geophysics**, Tohoku University, Japan.
Graduation research title:
Probing grain radii in the disk around IM Lup by near-infrared scattered light observations.

Publications and Selected Talks

Refereed Articles (First author)

- 1 J. Beniyama, “Simultaneous visible spectrophotometry of interstellar object 3I/ATLAS with Seimei/TriCCS,” *arXiv e-prints*, arXiv:2508.08829, arXiv:2508.08829, Aug. 2025. [DOI](#): 10.48550/arXiv.2508.08829. arXiv: 2508.08829 [astro-ph.EP].
- 2 J. Beniyama et al., “Multi-epoch spectrophotometric characterization of the mini-moon 2024 PT₅ in the visible and near-infrared,” *A&A*, vol. 700, A183, A183, Aug. 2025. [DOI](#): 10.1051/0004-6361/202555633. arXiv: 2507.10527 [astro-ph.EP].
- 3 J. Beniyama et al., “Size Constraint on Hayabusaz Extended Mission Rendezvous Target 1998 KY₂₆ via VLT/VISIR Nondetection,” *Astronomical Journal*, vol. 169, no. 5, 264, p. 264, May 2025. [DOI](#): 10.3847/1538-3881/adc682. arXiv: 2503.20891 [astro-ph.EP].
- 4 J. Beniyama, A. V. Sergeyev, D. J. Tholen, and M. Micheli, “Rotation state, colors, and albedo of the mission-accessible tiny near-Earth asteroid 2001 QJ₁₄₂,” *A&A*, vol. 690, A180, A180, Oct. 2024. [DOI](#): 10.1051/0004-6361/202451414.
- 5 J. Beniyama et al., “Multicolor Photometry of Tiny Near-Earth Asteroid 2015 RN₃₅ across a Wide Range of Phase Angles: Possible Mission-accessible A-type Asteroid,” *Astronomical Journal*, vol. 166, no. 6, 229–241, Dec. 2023. [DOI](#): 10.3847/1538-3881/ad0151. arXiv: 2310.05740 [astro-ph.EP].
- 6 J. Beniyama et al., “Photometry and Polarimetry of 2010 XC₁₅: Observational Confirmation of E-type Near-Earth Asteroid Pair,” *Astrophysical Journal*, vol. 955, no. 2, 143–158, Oct. 2023. [DOI](#): 10.3847/1538-4357/ace88f. arXiv: 2306.15506 [astro-ph.EP].

- 7 J. Beniyama et al., “Simultaneous multicolor photometry of the DESTINY⁺ target asteroid (3200) Phaethon,” *Publication of the Astronomical Society of Japan*, vol. 75, no. 2, pp. 297–310, Apr. 2023. [DOI: 10.1093/pasj/psac109](#). arXiv: 2212.09323 [astro-ph.EP].
- 8 J. Beniyama et al., “Observational study of near-Earth objects with Tomo-e Gozen,” *Yu-Sei-Jin*, vol. 31, no. 4, 272–285, Dec. 2022.
- 9 J. Beniyama et al., “Video observations of tiny near-Earth objects with Tomo-e Gozen,” *Publication of the Astronomical Society of Japan*, vol. 74, no. 4, pp. 877–903, Aug. 2022. [DOI: 10.1093/pasj/psac043](#). arXiv: 2207.07071 [astro-ph.EP].

Refereed Articles (N-th author)

- 1 B. T. Bolin et al., “Keck and Gemini Characterization of Hayabusa2# Rendezvous Target 1998 KY₂₆,” *Astronomical Journal*, vol. 169, no. 6, 303, p. 303, Jun. 2025. [DOI: 10.3847/1538-3881/adccbe](#). arXiv: 2501.17156 [astro-ph.EP].
- 2 J. Geem et al., “(3200) Phaethon polarimetry in the negative branch: new evidence for the anhydrous nature of the DESTINY⁺ target asteroid,” *MNRAS*, vol. 516, no. 1, pp. L53–L57, Oct. 2022. [DOI: 10.1093/mnrasl/slac072](#). arXiv: 2208.11912 [astro-ph.EP].
- 3 Y. Nishino et al., “Detection of highly correlated optical and X-ray variations in SS Cygni with Tomo-e Gozen and NICER,” *Publication of the Astronomical Society of Japan*, vol. 74, no. 3, pp. L17–L22, Jun. 2022. [DOI: 10.1093/pasj/psac027](#). arXiv: 2205.08721 [astro-ph.CO].
- 4 J. Jiang et al., “Discovery of the Fastest Early Optical Emission from Overluminous SN Ia 2020hvf: A Thermonuclear Explosion within a Dense Circumstellar Environment,” *Astrophysical Journal Letters*, vol. 923, no. 1, L8, p. L8, Dec. 2021. [DOI: 10.3847/2041-8213/ac375f](#). arXiv: 2111.09470 [astro-ph.HE].

Conference Proceedings

- 1 J. Beniyama, “Photometric Observations of Tiny Near-Earth Asteroids during the Close Approaches,” in *European Planetary Science Congress*, Sep. 2024, EPSC2024-166, EPSC2024-166. [DOI: 10.5194/epsc2024-166](#).
- 2 J. Beniyama et al., “Polarimetric Observations of Small Near-Earth Asteroid 2010 XC₁₅ at Large Phase Angles,” in *LPI Contributions*, ser. LPI Contributions, vol. 2851, Aug. 2023, 2104, p. 2104.
- 3 J. Beniyama et al., “Subsecond Time-Resolved Photometry of Tiny Near-Earth Objects with Tomo-e Gozen,” in *53rd Lunar and Planetary Science Conference*, ser. LPI Contributions, vol. 2678, Mar. 2022, 1853, p. 1853.

- 4 S. Marshall et al., “The changing rotation period of 3200 Phaethon,” in *AAS/Division for Planetary Sciences Meeting Abstracts*, ser. AAS/Division for Planetary Sciences Meeting Abstracts, vol. 54, Dec. 2022, 514.07, p. 514.07.

Skills

- Languages ◇ Japanese – native, English – proficient, Spanish – beginner, French – beginner.
- Coding ◇ Python, SQL, \LaTeX .
- Databases ◇ SQLite, PostgreSQL.
- Web Dev ◇ HTML, CSS, JavaScript.
- Misc. ◇ Class 1 driver’s license (invalid since currently not based in Japan) .

Miscellaneous Experience

Awards

- Jan. 2025 ◇ **Inoue Research Award for Young Scientists (award for the dissertation))** , Inoue Foundation for Science
- Mar. 2024 ◇ **The School of Science Encouragement Award (Doctoral program, graduate with honors)** , School of Science, The University of Tokyo.
- Mar. 2023 ◇ **Oral presentation award**, The 13th OISTER (the Optical and Near-Infrared Astronomy Inter-University Cooperation Program) Workshop (2 people/yr).
- Sep. 2022 ◇ **Best presentation award**, The Japanese Society for Planetary Sciences (1 person/yr).
- May 2022 ◇ **Outstanding Student Presentation Award**, Japan Geoscience Union (10% of candidates).
- Aug. 2020 ◇ **Best oral presentation award**, 50th Summer School on Astronomy and Astrophysics.

Achievements

- Apr. 2024 – Mar. 2025 ◇ **The Japan Society for the Promotion of Science (JSPS) fellowship**, \$2,400/month.
- Aug. 2023 ◇ **Repayment Exemption for Students with Excellent Grades**, Japan Student Services Organization (JASSO) Type I (interest-free) scholarship, \$20,000.

Miscellaneous Experience (continued)

- Jun. 2023 ◇ **Travel Stipend for the Asteroids, Comets, Meteors Conference 2023**, Hayakawa fund of The Astronomical Society of Japan, \$2,700.
- Apr. 2023 – Mar. 2024 ◇ **The Japan Society for the Promotion of Science (JSPS) fellowship**, \$1,300/month.
- ◇ **Mitsubishi Corporation Scholarship**, \$800/month.
- ◇ **Iue Memorial Foundation scholarship**, \$400/month.
- Aug. 2022 ◇ **Travel Stipend for the XXXIst International Astronomical Union General Assembly, Focus Meeting 8, Planetary Astronomy via Telescopic and Microscopic**, Hayakawa fund of The Astronomical Society of Japan, \$2,500.
- Mar. 2022 ◇ **Travel Stipend for the 53rd Lunar Planetary and Space Science**, Hayakawa fund of The Astronomical Society of Japan, \$4,700.
- Oct. 2021 – Mar. 2023 ◇ **Doctoral Fellowship of The University of Tokyo**, \$1,200/month.
- Apr. 2021 – Mar. 2023 ◇ **Public Trust Iwai Hisao Memorial Tokyo Scholarship Fund**, \$800/month.
- Apr. 2019 – Mar. 2020 ◇ **Iwadare Scholarship Foundation**, \$300/month.

Teaching

- Apr. 2020 – Mar. 2023 ◇ **Teaching assistant**, The University of Tokyo.
- Apr. 2021 – Sep. 2021 ◇ **Research assistant**, The University of Tokyo.

Referee

- 2024 ◇ Icarus

Memberships

- 2024 – ◇ Europlanet society.
- ◇ Hayabusa2# Interdisciplinary Science (IDS) subteam.
- 2022 – ◇ DESTINY⁺ Science Working Team.
- 2021 – ◇ Japan Geoscience Union.
- 2020 – ◇ Astronomical Society of Japan.
- ◇ The Japanese Society for Planetary Sciences.