

# Jin Beniyama

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Observatoire de la Côte d'Azur, Université Côte d'Azur

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## Education

- 2024 Mar. Ph.D., Department of Astronomy, The University of Tokyo, Japan  
Supervisor: Dr. Shigeyuki Sako  
Date of defense: January 11, 2024
- 2021 Mar. Master, Department of Astronomy, The University of Tokyo, Japan
- 2019 Mar. Bachelor, Department of Astronomy and Geophysics, Tohoku University, Japan

## Academic Appointments

- 2025 Feb.–Present Young Researcher Excellence Fellowships, Université Côte d'Azur, France
- 2025 Feb.–Present Visiting Researcher, The University of Tokyo, Japan
- 2024 Apr.–2025 Jan. The Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellow, The University of Tokyo, Japan
- 2024 Apr.–2025 Jan. Visiting Researcher, Laboratoire Lagrange, Observatoire de la Côte d'Azur, France

## Publications

### Refereed Articles (First author)

1. **Jin Beniyama**, Thomas Müller, Marco Delbo, Eric Pantin, et al., “Size Constraint on Hayabusa2 Extended Mission Rendezvous Target 1998 KY<sub>26</sub> via VLT/VISIR Nondetection”, *Astronomical Journal*, 169, 264, (2025), [doi: 10.3847/1538-3881/adc682](#).
2. **Jin Beniyama**, Bryce Bolin, Alexey Sergeyev, Marco Delbo, et al., “Multi-epoch spectrophotometric characterization of the mini-moon 2024 PT<sub>5</sub> in the visible and near-infrared”, *Astronomy & Astrophysics*, 700, A183, (2025), [doi: 10.1051/0004-6361/202555633](#).
3. **Jin Beniyama**, “Simultaneous visible spectrophotometry of interstellar object 3I/ATLAS with Seimei/TriCCS”, *Publications of the Astronomical Society of Japan*, 77, L71-L76, (2025), [doi: 10.1093/pasj/psaf097](#).
4. **Jin Beniyama**, Alexey Sergeyev, David Tholen, Marco Micheli, “Rotation state, colors, and albedo of the mission-accessible tiny near-Earth asteroid 2001 QJ<sub>142</sub>”, *Astronomy & Astrophysics*, 690, A180, (2024), [doi: 10.1051/0004-6361/202451414](#).

5. **Jin Beniyama**, Tomohiko Sekiguchi, Daisuke Kuroda, Tomoko Arai, et al., “Simultaneous multicolor photometry of the DESTINY<sup>+</sup> target asteroid (3200) Phaethon”, Publications of the Astronomical Society of Japan, 75, 297-310, (2023), doi: [10.1093/pasj/psac109](https://doi.org/10.1093/pasj/psac109).
6. **Jin Beniyama**, Shigeyuki Sako, Katsuhito Ohtsuka, Tomohiko Sekiguchi, et al., “Photometry and Polarimetry of 2010 XC<sub>15</sub>: Observational Confirmation of E-type Near-Earth Asteroid Pair”, Astrophysical Journal, 955, 143, (2023), doi: [10.3847/1538-4357/ace88f](https://doi.org/10.3847/1538-4357/ace88f).
7. **Jin Beniyama**, Ryou Ohsawa, Chrysa Avdellidou, Shigeyuki Sako, et al., “Multicolor Photometry of Tiny Near-Earth Asteroid 2015 RN<sub>35</sub> across a Wide Range of Phase Angles: Possible Mission-accessible A-type Asteroid”, Astronomical Journal, 166, 229, (2023), doi: [10.3847/1538-3881/ad0151](https://doi.org/10.3847/1538-3881/ad0151).
8. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, et al., “Video observations of tiny near-Earth objects with Tomo-e Gozen”, Publications of the Astronomical Society of Japan, 74, 877-903, (2022), doi: [10.1093/pasj/psac043](https://doi.org/10.1093/pasj/psac043).
9. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, et al., “Observational study of near-Earth objects with Tomo-e Gozen”, Yu-Sei-Jin, 31, 272–285, (2022), doi: [10.14909/yuseijin.31.4.272](https://doi.org/10.14909/yuseijin.31.4.272).

#### Refereed Articles (N-th author)

1. Bryce Bolin, Christoffer Fremling, Matthew Belyakov, **Jin Beniyama**, et al., “Keck and Gemini Characterization of Hayabusa2# Rendezvous Target 1998 KY<sub>26</sub>”, Astronomical Journal, 169, 303, (2025), doi: [10.3847/1538-3881/adccbe](https://doi.org/10.3847/1538-3881/adccbe).
2. Jooyeon Geem, Masateru Ishiguro, Jun Takahashi, Hiroshi Akitaya, et al., “(3200) Phaethon polarimetry in the negative branch: new evidence for the anhydrous nature of the DESTINY<sup>+</sup> target asteroid”, Monthly Notices of the Royal Astronomical Society, 516, L53-L57, (2022), doi: [10.1093/mnras/slac072](https://doi.org/10.1093/mnras/slac072).
3. Yohei Nishino, Mariko Kimura, Shigeyuki Sako, **Jin Beniyama**, et al., “Detection of highly correlated optical and X-ray variations in SS Cygni with Tomo-e Gozen and NICER”, Publications of the Astronomical Society of Japan, 74, L17-L22, (2022), doi: [10.1093/pasj/psac027](https://doi.org/10.1093/pasj/psac027).
4. Ji-an Jiang, Keiichi Maeda, Miho Kawabata, Mamoru Doi, 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, 923, L8, (2021), doi: [10.3847/2041-8213/ac375f](https://doi.org/10.3847/2041-8213/ac375f).

#### Presentations (“\*”: Invited talk)

1. **Jin Beniyama**, Eri Tatsumi, Keigo Enya, Sunao Hasegawa, Moe Matsuoka, Takafumi Ootsubo, Fumihiko Usui, “Near-Earth Asteroid observations with Ariel”, [Ariel Consortium Meeting 2025](#), Madrid, Spain, 2025-09-30; 2025-10-03, Oral,
2. **Jin Beniyama**, Marco DELBO, Thomas Müller, Luca Conversi, Margherita Maria Revellino, Paolo Tanga, Karri Muinonen, Javier Licandro, “On the detection and characterization of potential Earth-impacting asteroids from space in the thermal infrared”, [EPSC-DPS Joint Meeting 2025](#), Finlandia Hall Helsinki, Finland, 2025-09-07; 2025-09-12, Oral,
- \*3. **Jin Beniyama**, “OISTER Colloquium”, On-line, Online, 2025-08-22, Oral, **Invited**

- \*4. **Jin Beniyama**, “Telescopic Observations of Near-Earth Asteroids During Close Approaches: Contributions to Planetary Defense”, [FY2024 Planetary Defense Symposium \(16th Spaceguard Symposium\)](#), Online, 2025-02-27; 2025-02-28, Oral, **Invited**
- \*5. **Jin Beniyama & Marco Delbo**, “Thermal infrared observations of near-Earth asteroids with the TAO 6.5-m telescope”, EU-ESA Workshop on Size Determination of Potentially Hazardous Near-Earth Objects, Darmstadt, 2024-11-11; 2024-11-13, Oral, **Invited**
6. **Jin Beniyama**, “Photometric Observations of Tiny Near-Earth Asteroids during the Close Approaches”, Europlanet Science Congress 2024, Berlin + Online, 2024-09-09; 2024-09-12, Oral,
7. **Jin Beniyama**, “Observational Study of Tiny Near-Earth Asteroids during Close Approaches”, 2024 Group of Optical and Infrared Astronomers Symposium, National Astronomical Observatory + Online, 2024-09-07; 2024-09-09, Oral,
- \*8. **Jin Beniyama**, “Photometric Observations of Tiny Near-Earth Asteroids during Close Approaches”, [25th Symposium on Planetary Sciences \(SPS2024\)](#), Tohoku University, 2024-02-20; 2024-02-22, Oral, **Invited**
9. **Jin Beniyama**, “Observation proposals of the Hayabusa2# target asteroid 1998 KY26 with ground-based telescopes in 2024”, 2nd Hayabusa2# Joint Science Team (H#JST) Meeting, Tokyo, Japan, 2023-11-18, Oral,
10. **Jin Beniyama**, Shigeyuki Sakou, Katsuhito Otsuka, ... (19 authors), “Photometric and Polarimetric Observations of 2010 XC15 — Discovery of an E-type Near-Earth Asteroid Pair”, 2023 Annual Meeting of the Japanese Society for Planetary Science, Hiroshima, 2023-10-11; 2023-10-13, Oral,
11. **Jin Beniyama**, “Photometric and Polarimetric Observations of Tiny Asteroid 2010 XC15”, 2023 Seimei Users Meeting, Kyoto University + Online, 2023-09-12; 2023-09-13, Oral,
- \*12. **Jin Beniyama**, “Recent Telescopic Observations of Near-Earth Asteroids: Asteroids of Interests for Future Missions”, ISAS Planetary Exploration Workshop 2023, Tokyo, Japan, 2023-08-28; 2023-08-30, Oral, **Invited**
13. **Jin Beniyama**, Sako Shigeyuki, Katsuhito Ohtsuka, ..., (19 co-authors), “Polarimetric Observations of Small Near-Earth Asteroid 2010 XC15 at Large Phase Angles”, Asteroids, Comets, Meteors Conference 2023, USA, Arizona, 2023-06-18; 2023-06-23, Oral,
14. **Jin Beniyama and 13 co-authors**, “Multicolor Simultaneous Photometry of (3200) Phaethon with Seimei/TriCCS in 2021”, The 3rd DESTINY+ Science Working Team (SWT) meeting, Online, 2023-03-02; 2023-03-03, Oral,
15. **Jin Beniyama**, “Polarimetric Observations of Tiny Asteroid 2010 XC15 by OISTER”, 13th OISTER workshop, Aichi + Online, 2023-02-28; 2023-03-01, Oral, **Student Presentation Award**
16. **Jin Beniyama**, “Quick Follow-up Observations of Near-Earth Asteroids”, The 4th Japan-Chile Academic Forum 2022, Republic of Chile, 2022-11-29; 2022-11-30, Oral,
17. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, “Near-Earth Asteroid Search and Immediate Follow-up Observations for Planetary Defense”, 66th Space Sciences and Technology Conference, Kumamoto, 2022-11-01; 2022-11-04, Oral,

18. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, Hiroyuki Maehara, “Immediate Monitoring Observations of Tiny Near-Earth Asteroid 2022 JL”, 2022 Annual Meeting of the Japanese Society for Planetary Science, Mito + Online, 2022-09-20; 2022-09-23, Oral,
19. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, “Immediate Monitoring Observations of Tiny Fast-Rotating Asteroid 2022 JL”, 2022 Annual Fall Meeting of the Astronomical Society of Japan, Niigata, 2022-09-13; 2022-09-15, Oral,
- \*20. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, Naoto Kobayashi, Shin-ichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, “Subsecond Photometry of Tiny Near-Earth Objects with Tomo-e Gozen”, IAU General Assembly, Focus Meeting 8, Planetary Astronomy via Telescopic and Microscopic Approaches, Busan, 2022-08-02; 2022-08-03, Oral, **Invited**
- \*21. **Jin Beniyama**, “Observations of Near-Earth Asteroids with Seimei Telescope and TriCCS”, 2022 Seimei Users Meeting, Online, 2022-07-26; 2022-07-27, Oral, **Invited**
22. **Jin Beniyama**, “Immediate Monitoring Observations of Tiny Fast-Rotating Asteroid 2022 JL with Tomo-e and TriCCS”, Kiso Schmidt Symposium 2022, Nagano + Online, 2022-07-05; 2022-07-06, Oral,
23. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, Naoto Kobayashi, Shin-ichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, “Subsecond Time-Resolved Photometry of Tiny Near-Earth Objects with Tomo-e Gozen”, The 53rd Lunar and Planetary Science Conference (LPSC2022), The Woodlands, Texas + Online, 2022-03-07; 2022-03-11, Poster,
24. **Jin Beniyama**, Tomohiko Sekiguchi, “Multicolor Simultaneous Photometry of (3200) Phaethon with Seimei/TriCCS”, The 2nd DESTINY+ Science Working Team (SWT) Meeting, Online, 2022-02-24; 2022-02-25, Oral,
25. **Jin Beniyama**, Tomohiko Sekiguchi, Daisuke Kuroda, Tomoko Arai, Ko Ishibashi, Masateru Ishiguro, Ryou Ohsawa, Takafumi Ootsubo, Shigeyuki Sako, Hiroki Senshu, Satoshi Takita, Fumi Yoshida, “Multicolor Simultaneous Photometry of (3200) Phaethon with Seimei/TriCCS”, PERC Int’l Symposium on Dust & Parent Bodies 2022, Online, 2022-02-21; 2022-02-22, Oral,
- \*26. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, “Science with Kiso Tomo-e Gozen: Near-Earth Asteroid Search and Immediate Follow-up Observations”, 2021 Planetary Defense Symposium (13th Spaceguard Workshop), Online, 2022-02-14–15, Oral, **Invited**
- \*27. **Jin Beniyama**, “Comparative Asteroid Science: Near-Earth Asteroids and Main Belt Asteroids”, 23rd Symposium on Planetary Sciences (SPS2022), Online, 2022-02-08; 2022-02-10, Oral, **Invited**
28. **Jin Beniyama**, “Exploration of Near-Earth Asteroids Using Wide-Field CMOS Camera Tomo-e Gozen: Achievements and Challenges from Two Years of Full Operations”, 10th Workshop on Visible and Infrared Observation Instrumentation 2021, National Astronomical Observatory of Japan, Mitaka, Development Experiment Building #3 + Online, 2021-12-09; 2021-12-13, Oral,
29. **Jin Beniyama**, “Immediate Multicolor Simultaneous Imaging Observations of Tiny Near-Earth Asteroids by OISTER”, 12th OISTER workshop, Online, 2021-11-24; 2021-11-26, Oral,

30. **Jin Beniyama**, “Characterization of Tiny Near-Earth Asteroids via Immediate Multicolor Simultaneous Imaging”, Solar System Bodies Workshop (SSBW2021), Online, 2021-11-11; 2021-11-12, Oral,
31. **Jin Beniyama**, “High Time-Resolution Imaging of Tiny NEOs with Kiso Tomo-e Gozen”, Kiso Schmidt Symposium 2021, Nagano + Online, 2021-10-04; 2021-10-06, Oral,
32. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, “High Time-Resolution Imaging of Near-Earth Asteroids with Kiso 105 cm Schmidt Telescope Tomo-e Gozen”, 2021 Annual Meeting of the Japanese Society for Planetary Science, Online, 2021-09-16; 2021-09-18, Oral + Poster, **Best Presentation Award**
33. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, Tomo-e Gozen Collaboration, “High Time-Resolution Imaging of Tiny Near-Earth Asteroids with Kiso Tomo-e Gozen”, 2021 Annual Fall Meeting of the Astronomical Society of Japan, Online, 2021-09-13; 2021-09-15, Oral,
34. **Jin Beniyama**, “Simultaneous Fast-Color Visible Observations of Near-Earth Asteroids with Seimei Telescope TriCCS”, 2021 Seimei Users Meeting, Online, 2021-08-11; 2021-08-12, Oral,
35. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, Naoto Kobayashi, Shin-ichiro Okumura, Seitaro Urakawa, Fumihiko Usui, Fumi Yoshida, Makoto Yoshikawa, “Highly Time-Resolved Photometric Observation of Tiny Near Earth Objects with the Tomo-e Gozen Camera”, Japan Geoscience Union Meeting 2021, Online, 2021-05-30; 2021-06-06, Oral, **Outstanding Student Presentation Award**
36. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Tomoki Morokuma, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Shunji Yanagisawa, Hidetaka Sato, “Exploration of Near-Earth Asteroids Using Wide-Field CMOS Camera Tomo-e Gozen”, 2020 Annual Meeting of the Japanese Society for Planetary Science, Online, 2020-11-12; 2020-11-14, Oral,
37. **Jin Beniyama**, “Immediate Video/Multicolor Photometric Observations of Tiny Near-Earth Asteroids”, 11th OISTER workshop, Online, 2020-11-10; 2020-11-12, Oral,
38. **Jin Beniyama**, “Development of a Moving Object Detection System Using Random Forest on Tomo-e Gozen Survey Data”, 50th Summer School for Young Astronomers and Astrophysicists 2020, Online, 2020-08-24; 2020-08-27, Oral, **Presentation Award**
39. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Shunji Yanagisawa, Hidetaka Sato, “Exploration of Near-Earth Asteroids Using Wide-Field Fast Camera Tomo-e Gozen”, 2020 Annual Spring Meeting of the Astronomical Society of Japan, Online, 2020-03-16; 2020-03-19, Oral,
40. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Tomoki Morokuma, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Shunji Yanagisawa, Hidetaka Sato, “Wide-Field Survey of Near-Earth Asteroids with Tomo-e Gozen”, 10th OISTER workshop, Okayama Prefecture, 2019-12-02; 2019-12-03, Oral,
41. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, “Asteroid Exploration Using Tomo-e Gozen”, 49th Summer School for Young Astronomers and Astrophysicists 2019, Aichi Prefecture, 2019-07-30; 2019-08-02, Poster,

42. **Jin Beniyama**, “Minimoon Exploration Using Tomo-e Gozen”, Kiso Schmidt Symposium 2019, Nagano Prefecture, 2019-07-09; 2019-07-10, Oral,

## Research Funding

- 2025 Co-Investigator, Grants-in-Aid for Scientific Research (KAKENHI) Category A, Japan Society for the Promotion of Science (JSPS), Japan, *JPY 2,800,000*
- 2025 Research funding for Young Researcher Excellence Fellowships, France, *JPY 900,000*
- 2024 Research funding for JSPS Postdoctoral fellowship, Japan, *JPY 1,000,000*
- 2023 Research funding for JSPS Doctoral Course fellowship, Japan, *JPY 1,000,000*
- 2023 Travel Stipend for the Asteroids, Comets, Meteors Conference 2023, Hayakawa fund of The Astronomical Society of Japan, Japan, *JPY 300,000*
- 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, Japan, *JPY 250,000*
- 2022 Travel Stipend for the 53rd Lunar Planetary and Space Science, Hayakawa fund of The Astronomical Society of Japan, Japan, *JPY 500,000*

## Significant honors

### Awards

- 2025 Inoue Research Award for Young Scientists, Inoue Foundation for Science, Japan
- 2025 Young Researcher Excellence Fellowships, Université Côte d’Azur, France
- 2024 The School of Science Encouragement Award (graduate with honors), The University of Tokyo, Japan
- 2023 Oral presentation award, The 13th OISTER (the Optical and Near-Infrared Astronomy Inter-University Cooperation Program) Workshop, Japan
- 2023 Repayment Exemption for Students with Excellent Grades, Japan Student Services Organization (JASSO) Type I (interest-free) scholarship, Japan
- 2022 Best presentation award, The Japanese Society for Planetary Sciences, Japan
- 2022 Outstanding Student Presentation Award, Japan Geoscience Union, Japan
- 2020 Best oral presentation award, 50th Summer School on Astronomy and Astrophysics, Japan

### Scholarships

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|-----------|--|
| 2023–2024 | Mitsubishi Corporation Scholarship, Japan                      |
| 2023–2024 | Iue Memorial Foundation scholarship, Japan                     |
| 2021–2023 | Doctral Fellowship of The University of Tokyo, Japan           |
| 2021–2023 | Public Trust Iwai Hisao Memorial Tokyo Scholarship Fund, Japan |
| 2019–2020 | Iwadare Scholarship Foundation, Japan                          |

## Teaching Activities

2022–2023	Co-advisor of 1 master student, Department of Astronomy, The University of Tokyo
2020–2023	Teaching assistant (Observation Experiment), The University of Tokyo
2021	Research assistant – Development of moving object detection pipeline, Department of Astronomy, The University of Tokyo, Japan

## Organization of Meetings

2020–2023	Facilitator of <a href="#">Asteroid Seminar</a> (Online seminar)
2021	Facilitator of <a href="#">Solar System Bodies Workshop for Youngers</a> (Online workshop)

## Memberships

2024–	Europlanet Society
2021–	Japan Geoscience Union
2020–	Astronomical Society of Japan
2020–	Japanese Society for Planetary Sciences

## Major Collaborations

2024–	ESA <a href="#">Ariel mission</a> science team
2024–	ESA <a href="#">Hera mission</a> science team
2024–	JAXA <a href="#">Hayabusa2 Extended Mission</a>
2023–	<a href="#">NGSR Mission</a> science team
2021–	JAXA <a href="#">DESTINY+ mission</a> science team