

Riasat Sheikh

PhD Researcher in Particle Physics

Theory of Elementary Particle, Kyushu University, Fukuoka, Japan

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Education

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| Oct 2024 - Present | PhD in Physics
Kyushu University, Fukuoka | Japan |
| | <ul style="list-style-type: none">• Research focus: dark matter model building and phenomenology to understand its nature.• <u>Funding</u>: Ministry of Education, Culture, Sports, Science and Technology (MEXT) Scholarship, 2024-present. | |
| Jun 2020 - Jul 2022 | Master of Science in Physics
Banaras Hindu University, Varanasi | India |
| | <ul style="list-style-type: none">• <u>Specialization</u>: Nuclear and Particle Physics.• Graduated first in class with distinction; received the Prof. Ashwani Kumar Nigam Memorial Gold Medal.• <u>MSc thesis</u>: studied generalized-uncertainty-principle effects in quantum systems and derived bounds on the GUP parameter. | |
| Jun 2016 - Jul 2019 | Bachelor of Science in Physics
Cotton University, Guwahati | India |
| | <ul style="list-style-type: none">• Major in Physics; minors in Mathematics and Chemistry.• Graduated with First Division. | |

Experience

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| 2024 - 2026 | Research Assistant
Kyushu University, Fukuoka | Japan |
| | <ul style="list-style-type: none">• Appointed for two research assistant terms (Oct 2024 - Mar 2025 and Oct 2025 - Mar 2026) supporting research on pseudo-Nambu-Goldstone-boson dark matter and related phenomenology. | |
| 2025 - 2026 | Teaching Assistant
Kyushu University, Fukuoka | Japan |
| | <ul style="list-style-type: none">• Supported physics instruction (Oct 2025 - Jan 2026).• Supported english language instruction at Kyushu University (May - Jul 2025) | |
| Aug 2022 - Mar 2023 | Research Assistant
Banaras Hindu University, Varanasi | India |
| | <ul style="list-style-type: none">• Investigated minimal-length and quantum-gravity-motivated corrections to quantum systems. | |

Publications

Journal articles

- [1] Riasat Sheikh, Takashi Toma, Koji Tsumura: **Pseudo-Nambu-Goldstone-boson dark matter from three complex scalars**. Journal of High Energy Physics **2025**(8), 18 (2025). doi:10.1007/JHEP08(2025)018
- [2] Sheikh Riasat, Bhabani Prasad Mandal: **Effect of quantum gravity on specific heat of solid**. The European Physical Journal Plus **138**(10), 943 (2023). doi:10.1140/epjp/s13360-023-04585-y

Preprints

- [1] Riasat Sheikh, Takashi Toma, Koji Tsumura: **Two component pseudo-Nambu-Goldstone-boson dark matter**. (arXiv: 2604.12435 (hep-ph)), (2026) doi:10.48550/arXiv.2604.12435

Talks & Posters

Dec 2025	131st JPS Kyushu Branch Meeting Sojo University, Kumamoto Contributed talk in Japanese on phenomenological probes of pseudo-Nambu-Goldstone dark matter.	Japan
Aug 2025	29th International Summer Institute on Phenomenology of Elementary Particle Physics and Cosmology (SI 2025) UTOP Marina Resort & Hotel, Yeosu Contributed talk on phenomenological probes of pseudo-Nambu-Goldstone dark matter.	Korea
Feb 2025	7th International Workshop on "Higgs as a Probe of New Physics 2025" (HPNP2025) The University of Osaka, Osaka Poster presentation on pseudo-Nambu-Goldstone dark matter as a viable dark matter candidate.	Japan
Feb 2025	KEK Theory Meeting on Particle Physics Phenomenology High Energy Accelerator Research Organization, KEK, Tsukuba Contributed talk on pseudo-Nambu-Goldstone dark matter in particle-physics phenomenology.	Japan

Honors & Awards

Apr 2026	Fujukai research encouragement grant Fujukai Public Interest Incorporated Foundation	Japan
Jun 2025	Best Poster – Honorable Mention Recognized at HPNP2025 for poster presentation	Japan
Apr 2024	MEXT Scholarship Government of Japan scholarship supporting PhD study at Kyushu University	Japan
Nov 2022	Prof. Ashwani Kumar Nigam Memorial Gold Medal Awarded for highest marks in MSc Physics (Nuclear and Particle Physics)	India

Grants & Fellowships

Apr 2026	2026 Sasakawa Scientific Research Grant The Japan Science Society	Japan
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Training

Apr 2024 - Jul 2024	Japanese Training for Advanced Studies (JTAS) Kyushu University, Fukuoka	Japan
May 2021 - Jun 2021	Introductory Summer School in Astronomy and Astrophysics Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune	India
Jun 2017 - Jul 2017	Cotton University Astronomy & Astrophysics Summer School 2017 Department of Physics, Cotton University, Guwahati	India
Jul 2019 - Jul 2020	Post Graduate Diploma in Computer Application (PGDCA) NECEP Institute of Management & Technology, Assam	India

Skills & Languages

Programming	Python, Fortran, C/C++
Scientific Tools	Mathematica, micrOMEGAs, FeynRules, FeynArts, CalcHEP, LanHEP
Workflow	LaTeX, Git/GitHub, Bash/Zsh, Linux, macOS
Languages	Assamese (native), English (fluent), Hindi (fluent), Japanese (intermediate)