

Yu Fujiwara

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in LinkedIn

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Education

- 04/2023 – 03/2026 (Expected) 📖 **Ph.D., Osaka University**, Quantum Reaction Engineering.
(Supervisor: Prof. Isao Murata)
Thesis title: *Advancing Low-Energy Neutron Spectrometry: Development of Broad-Spectrum Measurement Systems (to be submitted)*.
Sub-Major: Cross-Boundary Innovation Program, Project Based Learning Course.
Collaboration with local community members to identify key insights and develop innovative solutions.
- 09/2023 – 12/2023 📖 **Visiting Scholar, Texas A&M University**
Department of Nuclear Engineering.
(Supervisor: Prof. John Ford)
Research theme: *Microdosimetric Investigation of Biological Effects Induced by Medical Implants in Radiotherapy*
- 04/2021 – 03/2023 📖 **Master of Engineering, Osaka University**
Quantum Reaction Engineering.
- 04/2017 – 03/2021 📖 **Bachelor of Engineering, Osaka University**,
Quantum Reaction Engineering.

Research Achievements

Journal Articles

- 1 **Y. Fujiwara**, Y. Osawa, S. Tamaki, S. Kusaka, F. Sato, and I. Murata, “Experimental investigation of a neutron energy spectrometer in low-energy range using a position-sensitive proportional counter,” *Journal of Instrumentation*., 2025 (Accepted).
- 2 **Y. Fujiwara**, S. Tamaki, S. Kusaka, F. Sato, and I. Murata, “Development of a measurement method for neutron energy spectrum in the low-energy range by combining activation foils and position-sensitive proportional counter-numerical study-,” *Appl. Radiat. Isot.*, 2025. [DOI: 10.1016/j.apradiso.2025.111719](#)
- 3 **Y. Fujiwara**, S. Tamaki, F. Sato, and I. Murata, “Development of a new low-energy neutron spectrometer using a position-sensitive proportional counter: Examination of the response function considering the spectrometer shield,” *J Radiat Prot Res*, 2025. [DOI: 10.14407/jrpr.2023.00325](#)

Conference Proceedings

- 1 **Y. Fujiwara**, S. Tamaki, S. Kusaka, S. Fuminobu, and I. Murata, “Validation of a spectrometer to measure epi-thermal neutrons using a position sensitive proportional counter. development of pencil-beam epi-thermal neutron source with a dt neutron source,” in *Ther Radiol Oncol. "The Young BNCT Meeting Abstract Book"*, n.d. in press.
- 2 **Y. Fujiwara**, Z. N. Ndum, and J. Ford, “”investigation of the influence of medical implants on radiation quality and biological effectiveness using microdosimetry”,” International Youth Nuclear Congress 2024 (IYNC 2024), Abu Dhabi, UAE, 2025.
- 3 **Y. Fujiwara**, S. Tamaki, S. Kusaka, S. Fuminobu, and I. Murata, “Validation of low-energy neutron spectrometer using a position-sensitive proportional counter. design and fabrication of beam-neutron source,” in *Proceedings of the 37th Workshop on Radiation Detectors and Their Use*, 2024, 158–168, Japanese.  URL:
<https://lib-extopc.kek.jp/preprints/PDF/2023/2325/2325001.pdf>

Employment History

07/2025	 Brookhaven National Laboratory - Collider-Accelerator Department As a visiting student, I performed the configuration of the nuclear data for the inverse kinetic reaction for simulations in PHITS.
01/2025 – 07/2025	 ITER Organization – Diagnostics Team, R&D Internship Trainee ITER is the international institution to realize the nuclear fusion. Conducted neutronic modeling of the ITER plasma environment using CAD-based geometry tools; developed Monte Carlo simulation input files and evaluated neutron behavior by calculating activation rates within the ITER diagnostic systems. Research Theme: <i>Neutronic Modelling of the ITER Neutron Activation System (NAS) using OpenMC</i>
2024 –	 JSPS Research Fellow (DC2). A research fellowship given by the Japan Society for the Promotion of Science (JSPS). Research Theme: <i>Development of an Energy Spectrum Measurement Method Using Position-Sensitive Proportional Counters for Boron Neutron Capture Therapy</i>

Skills

Languages	 Japanese: Fluent, English: Intermediate, French: Beginner.
Coding	 Python, R, C, C++, LATEX
Communication	 Public relations, Communication, and Content Creation.
Physics Simulation	 MCNP, PHITS, FLUKA, and OpenMC.
CAD	 Ansys Spaceclaim.
Misc.	 Academic research, teaching, training, and publishing.

Miscellaneous Experience

Awards and Achievements

- 22/07/2024 – 02/08/2024  **Nuclear Innovation Bootcamp (NIB2024).**
Selected as a cohort for this training program aimed at fostering innovation in nuclear energy, organized by the Nuclear Innovation Alliance in collaboration with the University of Wyoming.
Here, I developed a business pitch focused on waste management and radioisotope recycling for applications in medical and daily necessities.
- 09/2023 – 12/2023  **Studying Abroad for Nuclear Innovation (SANI 2023).**
A scholarship for the Exchange Program to Texas A&M University, funded by Nuclear Innovator Cultivation Program (NICP).
- 27/03/2024  **Poster award.** Awarded as 'Research Association Encouragement Award' at the Annual Meeting of the Spring 2024, held at Kindai University, Japan.
- 27/01/2023  **Poster award.** Research Association Encouragement Award at Workshop Radiation Detectors and Their Applications, held at Tsukuba University, Japan.

Certification

- 08/2023  **TOEIC 865**

Volunteer Works

- 2024 –  **Atomic Energy Society of Japan (AESJ), Student Network.**
AESJ is the only organization in Japan that aims to contribute towards progress in the development of atomic energy.
In the student network, I organized events to share knowledge in young researchers, such as to held a symposium, or site tours to the Japanese nuclear facilities.

References

Dr. Isao Murata

Professor

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Dr. Michael Walsh

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