Career Paths in the Nuclear Industry

My Vision for Nuclear Energy

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1) Self-Introduction



Moe Ishiwaki

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Nuclear Safety Engineering Course, Second-Year Master's Student

From Nara City, Nara Prefecture

Activities:

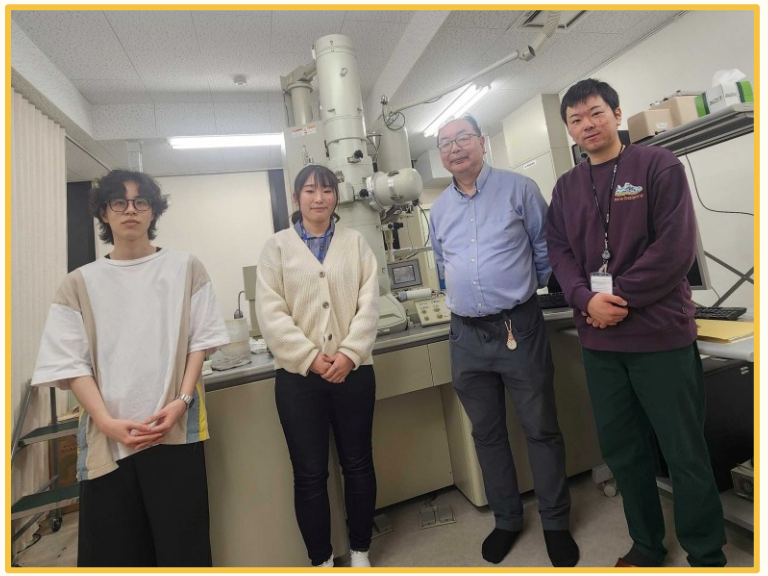
Steering Committee Member, Student Liaison Committee, Atomic Energy Society of Japan

Research Topic:

Neutron irradiation embrittlement of reactor pressure vessels

A phenomenon in which a material becomes harder and more brittle due to neutron irradiation.

For more details, visit the panel exhibition!



Laboratory members and experimental equipment

2) What Attracted Me to Nuclear Energy
—First Encounter with Nuclear Energy

In my second year of high school, I participated, out of curiosity, in "the Kansai Science Workshop for Junior and Senior High School Girls," where I performed elemental analysis using radiation.



Kansai Science Workshop for Junior and Senior High School Girls Website[1]

Me in High School



I was impressed that radiation could be used to investigate the properties of materials without destroying them.

This experience sparked my desire to learn more about radiation and nuclear energy.

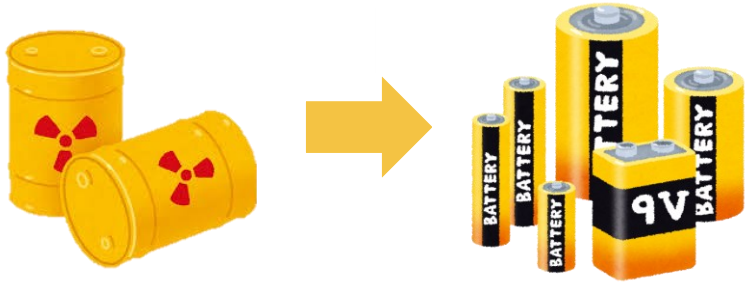
This chance encounter motivated me to study nuclear energy.

[1][Official Website] https://www.kansai-kj.org/index.html

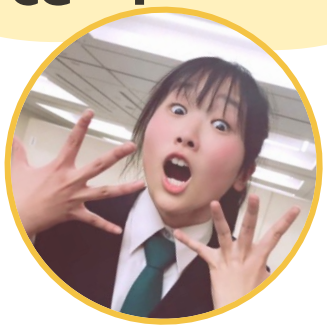
2) What Attracted Me to Nuclear Energy
—Growing Expectations

A Book I Read in High School

Introduction to semi-permanent batteries (RI batteries) that harness decay heat



What if we could use this technology in everyday life…? Could spent nuclear fuel be used as a resource…?



I decided to enroll at the University of Fukui to study nuclear engineering

The potential of nuclear technology + The possibility of gaining public acceptance

My expectations grew immensely

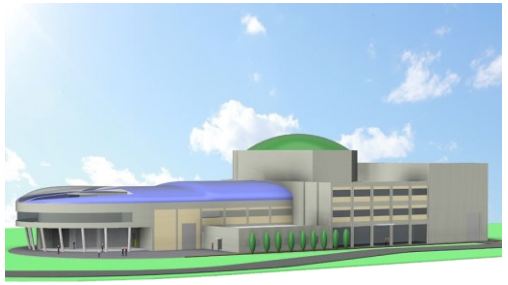
3) Challenges Ahead

My future goal is...

To build a new research and test reactor that inspires people to think, "I want to conduct research here."

What is a research and test reactor?

A nuclear reactor that supports neutron-based research, fundamental nuclear research, and the development of human resources



Design of a new research and test reactor[2]

A vision for the future cultivated through my university studies

- **Creating an environment for future generations to study nuclear energy**
- **Passing on nuclear science and technology**
- **Promoting the coexistence of nuclear energy and society**

To build a research and test reactor that nurtures people, sustains technology, and grows along with the local community and society

[2] JAEA/ https://www.jaea.go.jp/04/nrr/jp/

4) My Vision for the Future of Nuclear Energy

I was captivated by nuclear energy, inspired by its future potential, and found a dream to pursue.

I want to pass on to the next generation **“the sense of wonder and hope”** that I felt toward nuclear energy as a high school student.

Thank you for your attention.