

2025 Nuclear Global Internship Job Description

1. Basic Information

- Expected Internship duration: *six months to a year.*
- Internship Area/Topic: *nuclear robotics for waste management.*
- Division/Department Placement: *FIU's Applied Research Center.*
- Supervisor's contact information: *Professor Leonel Lagos.*

2. Responsibilities

1) Main Purpose

We seek a motivated Robotics Research Assistant to join our innovative research team in several ongoing applied robotics and AI projects. In this role, the candidate will support robotics research projects from conception to implementation and testing.

Our ideal candidate will assist with designing, developing, and testing robotic systems and prototypes while implementing and optimizing robotic algorithms and software. The candidate will be responsible for helping control manipulators and aerial and ground robotics platforms and applying AI concepts to them. Maintaining detailed documentation of research procedures, results, and conclusions is essential, contributing to technical reports, research papers, and presentations. The research assistant will support applied and field robotics operations, sensor and AI integration, and potentially collaborate with interdisciplinary researchers and engineers.

The candidate will contribute to innovative research and robotics technology development applied to nuclear waste management while developing valuable skills for a future career. This position offers an excellent opportunity to work on robotics research while building professional expertise in a collaborative and supportive environment.

2) Tasks/ Key Results Expected

In robotic systems development, we expect the candidate to contribute to several ongoing projects, assisting and improving functional prototypes of manipulator systems guided by lidar feature detection with demonstrated improvements in precision, efficiency, or novel capabilities. For our aerial and ground robotics initiatives, the research assistant should collaborate with other team members to deliver field-tested integration of sensor and AI components that enhance autonomy, decision-making, or perception capabilities.

The researcher will produce the foundation for peer-reviewed publications, technical reports, and potential patent applications. For our applied robotics operations, we expect contributions to practical field deployments with sensor and AI integration solutions that demonstrate improved sensing capabilities and environment perception.

The candidate's collaborative efforts should yield evidence of effective teamwork through joint project deliverables, interdisciplinary solution development, and potential contributions to grant applications or research proposals.

3) Knowledge, Skills, and Abilities

Ideal candidates will have expertise in mechatronics design, control systems engineering, ROS2, and robotics implementation. While robotics proficiency is highly valued, we welcome candidates from diverse science, technology, engineering, and mathematics (STEM) backgrounds. Candidates should demonstrate skills in data analytics and applied AI techniques. We particularly value experience integrating these multidisciplinary fields in practical, real-world applications.

3. Qualifications (Education)

- ☒ (1) Bachelor degree (3rd year ☐, 4th year ☒)
- ☒ (2) Master's degree (or candidate)
- ☒ (3) Ph. D. degree (or candidate)
- ☐ (4) Does NOT matter

4. Required documents

- ☒ Resume / Curriculum Vitae
- ☐ Cover letter
- ☒ Academic transcript
- ☒ Recommendation letter written by academic supervisor
- ☐ English Test score (TOEFL, TOEIC, IELTS, etc.)
- ☐ Others ()

5. Is the host organization providing any additional financial support in addition to the funding from KONICOF?

- ☐ Yes
 - The amount of stipend: USD/EUR/CHF _____ per month /week
 - Purpose of the stipend: *ex) assist housing, required minimum wage, etc.*
- ☒ No



KOREA NUCLEAR INTERNATIONAL
COOPERATION FOUNDATION