

2025 Nuclear Global Internship Job Description

1. Basic Information

- Expected Internship duration: September 2025 – February 2026
- Internship Area/Topic: Microreactors and SMRs; Nuclear-based Integrated Energy System; Multiphase flow experiments and modeling
- Division/Department Placement: Department of Mechanical, Aerospace, and Nuclear Engineering, Rensselaer Polytechnic Institute (RPI)
- Supervisor's contact information: Shanbin Shi, shis3@rpi.edu, <https://www.thl-rpi.com/research>

2. Responsibilities

1) Main Purpose

The Thermal Hydraulics Laboratory (THL), led by Professor Shi at RPI, is seeking intern students to assist with experimental and computational analysis aimed at supporting the safe and economical long-term operation of existing nuclear power plants, as well as the deployment of advanced nuclear systems and technologies. The selected candidates will primarily focus on investigating innovative passive safety system designs, optimizing key components, and developing instrumentation related to advanced nuclear energy systems.

2) Tasks/ Key Results Expected

- Collaborate with Dr. Shi and his team to work on research projects in nuclear thermal-hydraulics and advanced energy systems.
- Conduct literature reviews on relevant research topics.
- Design and construct test facilities to meet experimental requirements of research projects.
- Explore advanced numerical methods to inform both test facility designs and determination of test conditions.
- Analyze experimental and numerical data using a variety of scientific methods.
- Present research findings at local, national, and international conferences.

3) Knowledge, Skills and Abilities

- Undergraduate (senior level preferred) or graduate students currently enrolled in nuclear, mechanical, or chemical engineering major.
- Excellent analytical, problem-solving, and critical-thinking skills.
- Familiarity with experimental techniques, instrumentation, and data acquisition systems.
- Familiarity with computational simulation tools and methods is a plus.

3. Qualifications (Education)

- ☒ (1) Bachelor degree (3rd year ☐, 4th year ☒)
- ☒ (2) Master 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



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