

2025 Nuclear Global Internship Job Description

1. Basic Information

- Expected Internship duration:
Sept. 2025 – Febr. 2026 (6 months, but flexible according to the planning of the intern)
- Internship Area/Topic:
 - a) Materials science & nuclear safety: ATF cladding behavior at high temperatures
 - b) Long-term dry storage: Behavior of hydrogen in Zry cladding during storage
- Division/Department Placement:
Karlsruhe Institute of Technology (KIT)
Institute for Applied Materials
Applied Materials Physics (IAM-AWP)
- Supervisor's contact information:
Dr. Martin Steinbrück (group leader High-Temperature Materials Chemistry)
martin.steinbrueck@kit.edu
(Potentially transition to my successor)
- <https://www.iam.kit.edu/awp/english/161.php>
<https://quench.forschung.kit.edu/>
<https://www.iam.kit.edu/awp/english/163.php> (Dr. Stuckert's Nuclear Safety Group, with whom we work closely)

2. Responsibilities

1) Main Purpose

Performing experiments on one of the two topics mentioned above

2) Tasks/ Key Results Expected

The internship will be in one of the Material Research Institutes at KIT in the framework of the Nuclear Safety Program. The research focus of our group is on high-temperature oxidation and interactions of materials applied in nuclear reactors (except fuel). We are working in the high-temperature behavior of ATF (accident tolerant fuel) materials as well as on hydrogen behavior in Zry cladding during long-term dry storage of nuclear fuel. The main methods used are thermo-gravimetry and several high-temperature furnaces as well as various methods for post-test analyses. The intern will self-dependently work on a research topic related to the group's current research including conduct and analyses of the experiments after an introduction by the supervisors. The special topic will be defined 4 weeks in advance of the internship.

3) Knowledge, Skills and Abilities

The candidate should have at least advanced knowledge on materials science. He/she should be interested in the topic, open-minded and dedicated. Good English (or alternatively German) knowledge is prerequisite for communication.

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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