



Internship project: Automation of the safety analysis of waste package types

Your tasks

Nagra is offering an internship in the safety analysis of radioactive waste package types. The operational and long-term safety of waste package types needs to be routinely verified in the assessment of the suitability for final disposal. The safety analysis focuses on aspects such as the dose rate release in several incident scenarios and the gas generation due to corrosion processes. The input data for this analysis consists of the full geometry, material composition and radionuclide content of waste package types and several factors describing corrosion and radioactivity release processes in different conditions. It is in the interest of Nagra to automate the safety analysis in order to quickly evaluate the effects of variations to the properties of waste package types.

The main steps of this project are:

- To familiarize yourself with the scope and methodology for the safety analysis
- To understand how to extract waste package data from the internal database and to structure the input for the automation
- To develop a tool that automatically derives the safety consequences of waste package types

Your profile

- Ability to solve problems independently using a structured approach and critical thinking skills
- Motivation and willingness to learn
- Good reading comprehension of German
- Good scientific writing skills (in English, German is considered a plus)
- Programming skills (e.g. Python, Matlab, etc.) and experience with SQL and Git are considered a plus

We offer

Our ongoing projects at the interface between industry and fundamental research offer the unique opportunity to explore the most fascinating aspects of these two worlds. You will be working along experts on key scientific, technical and implementation topics related to the deep geological disposal of radioactive waste, under realistic conditions. You will also have the opportunity to develop your programming and data management skills.

Contingent upon availability and the outcome of the internship project, an MSc. thesis topic could be proposed after completion of the internship.

Your application should include:

- Your CV
- A record of all available exam grades from the BSc. and/or MSc. programme (e.g. first semester grades)
- A cover letter not exceeding 300 words

Applications will be reviewed and processed on the following dates:

17 – 21 February '25

14 – 18 April '25

10 – 17 June '25



11 – 15 August '25

13 – 17 October '25

15 – 19 December '25

If you would like to work with us on the disposal of radioactive waste, please send your complete application documents by e-mail to bewerbungen@nagra.ch