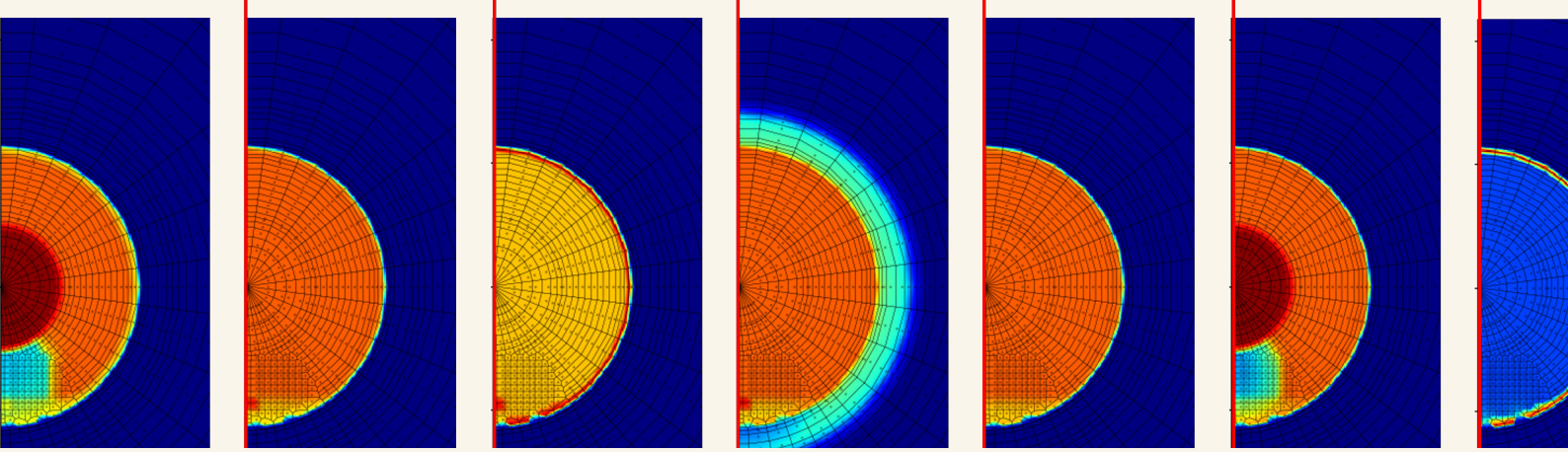

# Numerical Modelling in radioactive waste disposal with focus on experiments and performance assessment

## 27.10.2025 – 29.10.2025 @ Nagra, Wettingen

GTC Grimsel Training Centre

Numerical modelling is an essential tool in all phases of radioactive waste disposal research and implementation. It supports the design of experiments, field tests, monitoring systems, and site characterisation campaigns, and helps analyse and interpret the collected data. Moreover, it is the main tool to assess the long-term performance of the repository system and to examine various aspects of reference and alternative what-if scenarios.

In this course, the participants will gain practical insights into the development of a conceptual model and its implementation into a numerical simulation model.

Required input data and their integration into the model will be discussed. The important topics of model calibration, validation, sensitivity analyses, and uncertainty quantification will be presented within the specific context of performance assessment modelling. Each element of the modelling workflow will be illustrated using examples from simulation studies that are related to radioactive waste isolation.

This 3-day course does not provide instructions about the use of a specific simulation software; however, an overview of available toolsets and required simulation capabilities will be given. A participant's basic understanding of the principles of numerical modelling would be beneficial.

### Programme

General lecture hours from 09:00 am to 5:00 pm

**Day 1**
**Monday, 27.10.2025**

- Welcome and overview of the course
- Linking the design of experiments, field tests, monitoring systems to analysis and data collection
- Development of a conceptual model and its implementation into a numerical simulation model
- Data and their integration into models

**Day 2**
**Tuesday, 28.10.2025**

- Model calibration, validation, sensitivity analyses, and uncertainty quantification with example
- Assessing the long-term performance of the repository systems with models

**Day 3**
**Wednesday, 29.10.2025**

- Codes and Inter-Comparison
- Data Worth Analysis
- Wrap up and Q&A, summary and closure of the course

**Date:**
Monday, 27 October 2025 until
Wednesday, 29 October 2025

**Location:**
Nagra's Headquarters, Wettingen, CH

**Costs:**
**CHF 3500.–** (incl. Coffee & Lunch, lecturers, courseware, 1 course dinner)
(excl. travel, accommodation, further dinners)

**Accommodation:**
We are happy to support you to organise appropriate accommodation or local transportation if desired. Hotels in Baden

**Requirements:**
Participants shall bring their own laptop.

Participants are welcome to formulate questions they want to be developed in the workshop.

**Registration:**
The expected number of participants is between 8 and 10. Please note that in the case of not reaching the minimum number of participants the course will not take place. **Deadline for registration is 31 July 2025.** For your registration go to GTC Training Centre (grimsel.com) and use the online registration form.

**Our other Training Courses in 2025**

Site selection for deep Geological Repository and Optimisation of a drilling campaign processes and lessons learned
13.10.2025 – 17.10.2025 (5 days) @ Nagra office in Wettingen

From RD&D requirements to in-situ URL experiments
20.10.2025 - 21.10.25 (2 days) @ Grimsel Test Site near Guttannen

Bentonites in radioactive waste disposal
22.10.2025 – 24.10.2025 (3 days) @ Grimsel Test Site near Guttannen

For detailed information please check out our Grimsel-Webpage: **GTC Training Centre**

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