



WORKSHOP - Modelling geothermal systems with FEFLOW

12th UK Geothermal Symposium

Delivered by DHI -
Dr. Carlos Andres Rivera Villarreyes

This in person instructor-lead, hands-on workshop provides you with comprehensive training in geothermal modelling using FEFLOW. The training program focuses on the modelling of shallow (near-surface) geothermal reservoirs.

The course covers the necessary information and examples to model geothermal systems (e.g. open- and closed-loop systems), investigate the feasibility of a geothermal system and understand the impact on the subsurface. The workshop offers the right balance between the mathematical background and modelling workflows for near-surface systems.

FEFLOW is widely recognised as a comprehensive software package for subsurface flow and transport simulation. FEFLOW's unique meshing capabilities (structured and unstructured) allow for the highest degree of flexibility to account in detail for the most simple to complex geometrical configurations. The software is used by leading research institutes, universities, consulting firms and government organisations all over the world.

FEFLOW's scope of application ranges from simple local-scale to complex large-scale modelling. Application areas include geothermal energy, water management, mine water, saltwater intrusion, and variably saturated media.

TOPICS

- Introduction to FEFLOW and its graphical user interface
- Physical processes related to the heat transport
- Modelling geothermal systems: boundary conditions and parameters
- Implementation of geothermal doublets
- Modelling Borehole Heat Exchanger (BHEs)
- Creating 2D and 3D mesh geometries (structured and layered meshes)
- Advective- and convective-dominant transport
- Best practice on modelling
- Feasibility analysis of the geothermal system
- The role of groundwater flow on the geothermal systems
- Understanding the competition of neighbouring geothermal installations
- Evaluation of modelling results, including visualisation and animation
- Discussion on the modelling of ATEs (if requested by participants)

LOGISTICS

Location: Burlington House

Date and Time:

1PM-4PM,

10th November 2025

(In person Attendance only)

REGISTRATION

Registration is via the website and is on a first-come-first-served basis with limited availability. The requirement is to be fully registered for the symposium.

WHAT'S INCLUDED

- Full access to FEFLOW software during course
- Workshop materials (digital version)



The
Geological
Society

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