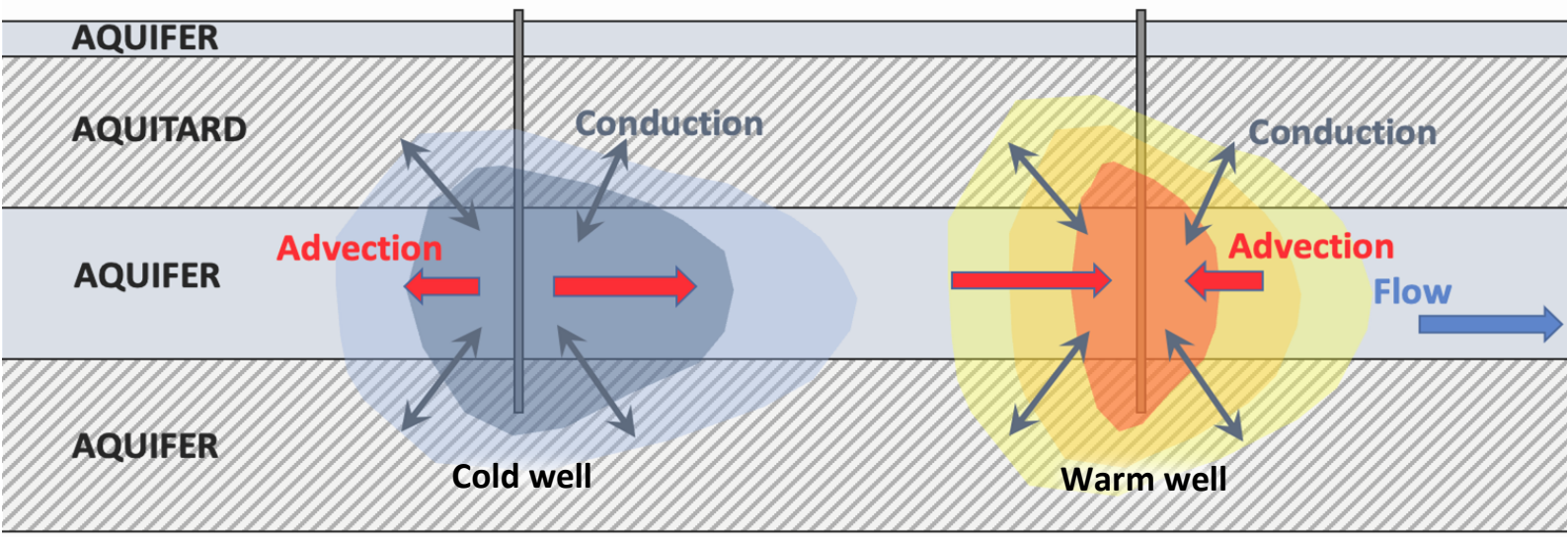
Field Hydrogeology Course

The first "run" of a numerical model
is actually a walk... in the field!

Onsite in Bordeaux, June 10th-12th, 2026



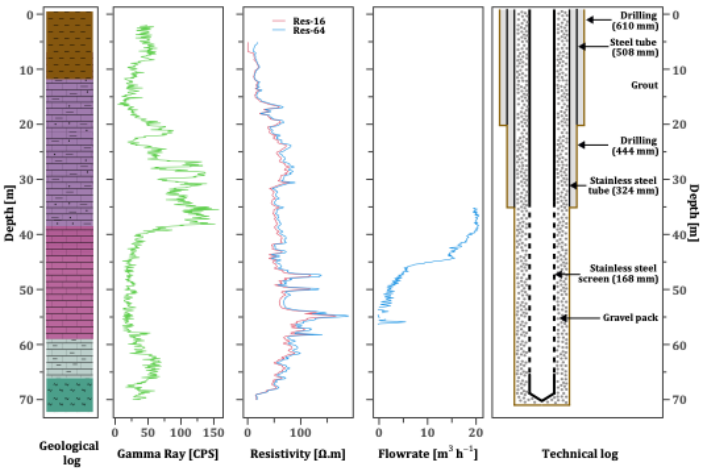
Course Objective

SYMPLE and ENSEGID–Bordeaux INP offer an applied course focused on aquifer characterization and field data acquisition. The study site is a fully-instrumented confined aquifer, hosting an ***Aquifer Thermal Energy Storage*** **(ATES) system**.

Hydrogeological field methods are essential in the training of hydrogeologists and groundwater modellers. Groundwater projects are inherently data-driven, and understanding of how field data are collected is necessary.

This course aims to develop the critical skills and concepts required to recognize measurement uncertainties, conceptual model limitations, and potential pitfalls embedded in field measurements. Each individual observation must be interpreted within its broader hydrogeological context. Monitoring strategies should be designed to capture the information necessary to address the problem at hand, with a focus on how the collected data will constrain parameter values in numerical models or analytical calculations at the appropriate spatial scale. If a measurement is inaccurate or not representative at the scale of interest, the entire "**information flow**" becomes distorted, leading to inconsistencies and misleading results.

The complete workflow, from field data acquisition to interpretation, will be applied to the ATES study case, forming the basis for the development of a conceptual hydrogeological model.



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Study Site and Materials

The investigation site is a highly instrumented experimental site, with 10 wells in a confined Oligocene aquifer locally subject to karstification. Bordeaux INP – ENSEGID will provide all the instrumentations for the monitoring and acquisition of hydrogeological data: differential GPS, water level meters, pumps, high-frequency pressure transducers, CTD-probes for well logging, well inspection camera. Multi-parameter water quality probes (pH, T, conductivity, O_2).

Trainers

Alexandre Pryet and **François Larroque** (ENSEGID-Bordeaux INP) are assistant professors in Groundwater Hydrology. Their teaching and research activities at Bordeaux INP are dedicated to quantitative hydrogeology with a focus on field observations and groundwater modeling. **Michel Franceschi** is assistant professor in Hydrochemistry, he has been involved in numerous projects dedicated on regional flows in sedimentary basins using analytical tools, chemistry and environmental isotopes. **Francesca Lotti** is the founder of SYMPLE, School of Hydrogelogical Modelling, covering training activities from field courses up to advanced modelling tools.

Programme

		Activity	
Online Meeting	June 3 3-5 pm	• *Attendees presentations* • *Study site and ATES system presentations*	
Day 1	June 10 9 am – 6 pm	• Introduction to local geology with geological log analysis • Camera inspection of well equipment	• TD probes programming and deployment • Aquifer test setup and start • Water levels and discharge monitoring
Day 2	June 11 9 am – 6 pm	• Tracer test design and setup • Fluoresceine injection and monitoring	• Well temperature-depth profiles • Aquifer test ends • Data retrieving
Day 3	June 12 9 am – 6 pm	• Slug tests • Aquifer test data processing and analysis (classroom)	• Data integration (classroom) • Group presentation and conclusion (classroom)
Recorded Material		• *Self-learning video lessons on GIS, geostatistics, well construction, and pumping test interpretation*	

Fill the Registration form preferably before April 15

The course will be held in English, French and Italian, with study material provided in English. The location is the **ENSEGID Campus**, 1 allée Fernand Daguin, 33607 Pessac (Tél. +33 (0)5.56.84.69.00), France.
Seats are limited to a **max of 15 attendees**. Registration to the course includes:

- Lunches & coffee breaks, didactic material and direct use of field instruments
- Access to the e-learning platform with didactic material, field forms, recordings of main operations, participants forum/chat
- Extra video-lessons for self-learning
- Certificate of Attendance and Completion