

**TECHNICAL MEETING TM-43  
&  
30 years anniversary Mont Terri**

29 & 30 April 2026

Lycée cantonal  
Place Blarer-de-Wartensee 2  
2900 Porrentruy (Switzerland)

**Draft programme**

## Wednesday, 29 April 2026, Porrentruy

09:00	Welcome address, aims and organisation of the meeting	<i>Christophe Nussbaum (swisstopo)</i>
09:10	<b>Keynote:</b> Nuclear transmutation: alternative to waste disposal?	<i>Andreas Pautz (PSI)</i>
<b>Geochemistry and microbiology (1/2)</b> Chairperson: Nele Bleyen		<i>Speakers</i> <i>Experiment partners</i>
10:00	Main lessons learned from 30 years of geochemical experiments at Mont Terri	<i>Pierre de Cannière (FANC, retired)</i>
10:15	30 years of porewater chemistry at Mont Terri: methods, results and modelling	<i>Paul Wersin (UniBE, retired)</i>
10:30	Microbial hydrogen consumption in deep geological repositories - 16 years of the MA-A experiment	<i>Ashley Brown (Nagra)</i> <i>BGE, Nagra</i>
<b>10:45</b>	<b>Coffee break</b>	
<b>Geochemistry and microbiology (2/2)</b> Chairperson: Urs Mäder		<i>Speakers</i> <i>Experiment partners</i>
11:15	Fifteen years of BN Experiment at Mont Terri: fate of nitrate and selenium from bituminized radioactive waste in a clay host rock	<i>Nele Bleyen (SCK CEN)</i> <i>ANDRA, ASNR, BASE, FANC, SCK CEN</i>
11:30	How does cement affect the swelling pressure of bentonite? A modelling approach (CI)	<i>Andreas Jenni (Uni BE)</i> <i>ANDRA, CRIEPI, FANC, Nagra, NWS, OBAYASHI</i>
11:45	DR-C: diffusion in a thermal gradient experiment at Mont Terri	<i>Guillaume Pochet (FANC)</i> <i>ANDRA, BASE, ENSI, FANC, Helmholtz, NWS, SCK CEN, swisstopo</i>
12:00	Constraining transport parameters for performance and safety assessments: Bridging 30 years of Mont Terri in situ diffusion experiments with laboratory-scale data of rock samples from other sites	<i>Raphael Wuest (Nagra)</i>
<b>12:15</b>	<b>Lunch</b>	

<b>CO<sub>2</sub> and gas experiments</b> Chairperson: Michael Kühn		<i>Speakers</i> <i>Experiment partners</i>
13:30	Hydro-mechanical-chemical processes in Opalinus Clay during CO <sub>2</sub> injection in CL experiment	<i>Roman Makhnenko (Univ Illinois)</i>
13:45	Testing caprock integrity of Opalinus Clay by means of a novel experimental setup (CO <sub>2</sub> LPIE experiment)	<i>David Jaeggi (swisstopo)</i> <i>BGR, CHEVRON, ETH, swisstopo</i> <i>(cofunded by BFE, cemsuisse and VBSA)</i>
14:00	THM processes of clay-rich fault zones: Lessons learned and perspectives from the Mont Terri fault activation experiments	<i>Yves Guglielmi (US DOE)</i> <i>ASNR, BGR, CHEVRON, DOE, ENSI,</i> <i>Nagra, SHELL, swisstopo, TotalEnergies</i>
14:15	The second gas injection test of the GT experiment: what it tells us about the first test and self-sealing.	<i>Robert Cuss (BGS)</i> <i>BASE, BGR, ENSI, ETH, FANC, SCK CEN</i>
<b>Technology and management</b> Chairperson: Martin Ziegler		<i>Speakers</i> <i>Experiment partners</i>
14:30	BIM Mont Terri	<i>Stefan Volken (swisstopo)</i>
14:45	Integrating geometric and semantic information using extended reality: a case study on BIM Mont Terri	<i>Pascal Mosler (TU Darmstadt)</i>
15:00	Lessons on research, regulation, reputation ... and longevity from the Mont Terri URL history	<i>Thomas Flüeler (ETHZ)</i>
<b>15:15</b>	<b><i>Madrigals of different epochs</i></b>	<i>David Zehnder and ensemble</i>
<b>15:45</b>	<b><i>Coffee break</i></b>	
<b>Poster session</b>		
15:45 - 17:45	Poster session	<i>David Jaeggi</i> <i>Martin Ziegler</i> <i>Senecio Schefer (swisstopo)</i>
<b>17:45</b>	<b><i>Apéro</i></b>	
<b>18:45</b>	<b><i>Invited dinner (sponsored by swisstopo)</i></b>	

## List of posters

<i>List of posters</i>	<i>Authors</i>
1. Microbial hydrogen consumption in the crushed Opalinus Clay backfill of a deep geological repository.	<i>C. Rolland (EPFL) et al.</i>
2. The LT-A experiment and the need for long-term laboratory tests	<i>S. Schumacher (BGR) et al.</i>
3. Rock mass response in the vicinity of the Sandwich experiment	<i>J. Hesser (BGR) et al.</i>
4. Comparing results of ERT and TDR measurements in Sandwich SW-A project	<i>M. Furche (BGR) et al.</i>
5. Simulating Sandwich Shaft 1: An insight into the DECOVALEX Sandwich Task	<i>L. Friedenberg (GRS) et al.</i>
6. Laboratory work in the frame of the Sandwich project	<i>K. Emmerich (KIT) et al.</i>
7. Semi-technical scale experiment HTV-9	<i>K. Emmerich (KIT) et al.</i>
8. Wireless System and In-Situ Performance Results at the Sandwich Shaft	<i>S. Tunon Valladares (Amphos21) et al.</i>
9. Solute transport across an aged concrete/claystone interface (CI-D): tracking of diffusion after 4.4 years of tracer circulation	<i>U. Mäder (Rockwaterconsulting) et al.</i>
10. Evolution of a concrete / claystone interface during 17 years of an in situ experiment (CI): characterisation by high-resolution chemical and mineralogical analysis	<i>U. Mäder (Rockwaterconsulting) et al.</i>
11. Experimental and numerical analysis of hydraulic-mechanical interactions in claystone: insights from in-situ measurements and modeling of the twin niches (CD-A experiment)	<i>G. Ziefle (BGR) et al.</i>
12. Anisotropy and seismic velocities of Opalinus Clay and surrounding rock formations	<i>S. Lueth (GFZ) et al.</i>
13. Attention to detail: Insights on thermo-osmosis and the relevance of heterogeneity from back analysis of the Mt. Terri Deep Borehole experiment	<i>F. Kizskurno (TU Freiberg) et al.</i>
14. Modelling uranium migration in Opalinus Clay – the value of data, knowledge and experience from 30 years Mont Terri	<i>T. Schöne (GFZ) et al.</i>
15. Design and experimental characterization of potential claystone-based backfill and sealing materials	<i>M. Middelhoff (GRS) et al.</i>
16. Sorption and diffusion studies on Opalinus Clay from the sandy facies for the DR-C and DR-D experiments	<i>S. Ratnayake (KIT) et al.</i>
17. Mineralogical and geochemical OPA characterization constraints for OPA pore water chemical modelling	<i>C. Lerouge (BRGM) et al.</i>

18. Over 20 years of GRS pore pressure investigations at MT-Lab - an overview	<i>K. Jantschik (GRS) et al.</i>
19. Comparison of modelling approaches for the DR-C and DR-D experiments	<i>T. Hennig (GFZ) et al.</i>
20. Machine-learning approaches for mineralogy prediction from drill core images in clay-rich formations	<i>R. Boiger (PSI) et al.</i>
21. Understanding time-dependent deformation in Opalinus Clay: insights and implications	<i>L. Gotzen (RWTH Aachen) et al.</i>
22. Comparison of different fibre-optic strain sensing methods in tunnel linings (TS Experiment)	<i>T. Vogt (Nagra) et al.</i>
23. Studying CO <sub>2</sub> leakage on faults: summarising 7 years of activities at the CSD/CSE experiments	<i>A. P. Rinaldi (ETH) et al.</i>
24. Pore water chemistry characterization by the squeezing technique in the context of the Mont Terri Project	<i>A.M. Fernandez Diaz (CIEMAT) et al.</i>
25. Modelling bentonite re-saturation at limited water supply from the rock with the advanced COMSOL-VIPER code	<i>M. Kröhn (GRS) et al.</i>
26. Gases and organic compounds released during heating of Opalinus Clay from the Mont Terri subsurface lab	<i>C. Ostertag-Henning (BGR) et al.</i>
27. Heat storage in fractured and karstified rock masses	<i>B. Valley et al. (CHYN)</i>
28.	
29.	

## Thursday, 30 April 2026, Porrentruy

08:50	Warm up and info about organization of the second day	<i>Christophe Nussbaum (swisstopo)</i>
<b>Rock mechanics and THM</b> Chairperson: Oliver Czaikowski		<i>Speakers</i> <i>Experiment partners</i>
09:00	The HE-E experiment: Comparative evaluation of monitoring and laboratory data from in situ buffer analysis after 12 years of operation and implications for engineered barriers	<i>Florian Kober (Nagra)</i> <i>BGE, BGR, ENRESA, GRS, Nagra, Obayashi</i>
09:15	Heating bentonite and Opalinus Clay for over a decade: insights from the FE Experiment	<i>Raphael Schneeberger (Nagra)</i> <i>ANDRA, BGE, BGR, DOE, ETH, FANC, GRS, Nagra, NWS</i>
09:30	Laboratory characterisation of the GBM bentonite of the FE experiment: insights into the thermo-hydro-mechanical behaviour and implications for the field experiment	<i>Eleonora Crisci (NESOL)</i> <i>ANDRA, BGE, BGR, DOE, ETH, FANC, GRS, Nagra, NWS</i>
09:45	Overview and recent results of the Sandwich (SW-A) project	<i>Matthias Hinze (GRS)</i> <i>BGR, ENRESA, ENSI, GRS, NWMO, swisstopo</i>
10:00	The PF-A Experiment: In situ progressive failure of faulted Opalinus Clay — Insights from underground excavation, laboratory tests, and numerical simulations	<i>Martin Ziegler (swisstopo)</i> <i>BGR, CHEVRON, ENSI, ETH, swisstopo</i>
10:15	Numerical simulation of damage evolution around the PF/PF-A experimental borehole in faulted Opalinus Clay	<i>Qinghua Lei (Univ Uppsala)</i> <i>BGR, CHEVRON, ENSI, ETH, swisstopo</i>
<b>10:30</b>	<b>Coffee break</b>	
<b>Rock mass characterization</b> Chairperson: Raphael Schneeberger		<i>Speakers</i> <i>Experiment partners</i>
11:00	<b>Keynote:</b> State of stress in the brittle crust and implications for geoennergies	<i>Benoit Valley (CHYN)</i>
11:30	Deciphering the hydrogeological system of the Mont Terri anticline - shake it, weigh it, puncture it	<i>Felix Kästner (Helmholtz)</i> <i>BGR, Helmholtz, NWS, swisstopo</i>
11:45	What do ultrasonic borehole measurements tell us about differentiation, heterogeneity, anisotropy, dispersion, attenuation and even about a possible alternated stratification of the Opalinus Clay?	<i>Kristof Schuster (BGR, retired)</i>
12:00	Electrical and acoustic behavior of Opalinus clayrock subjected to partially saturated conditions	<i>Damien Jougnot (Sorbonne Univ)</i> <i>BGE, Nagra, swisstopo</i>

12:15	Multi-scale identification of geological discontinuities using machine learning	<i>Rushan Wang (ETH WSL)</i> <i>ANDRA, BGE, ENSI, NWS, swisstopo</i>
<b>12:30</b>	<b>Lunch</b>	
<b>Visit of the rock laboratory (bus transfer to Mont Terri rock laboratory)</b>		
13:30 - 15:30	Laboratory visit in three groups: <ul style="list-style-type: none"> <li>• Group 1: Martin Ziegler (swisstopo)</li> <li>• Group 2: David Jaeggi (swisstopo)</li> <li>• Group 3: Senecio Schefer (swisstopo)</li> </ul>	<i>Jonas Windisch (swisstopo)</i>
15:45	Closure of TM-43 in St-Ursanne, if needed, bus transfer back to Porrentruy	

# ENCLOSURE 1

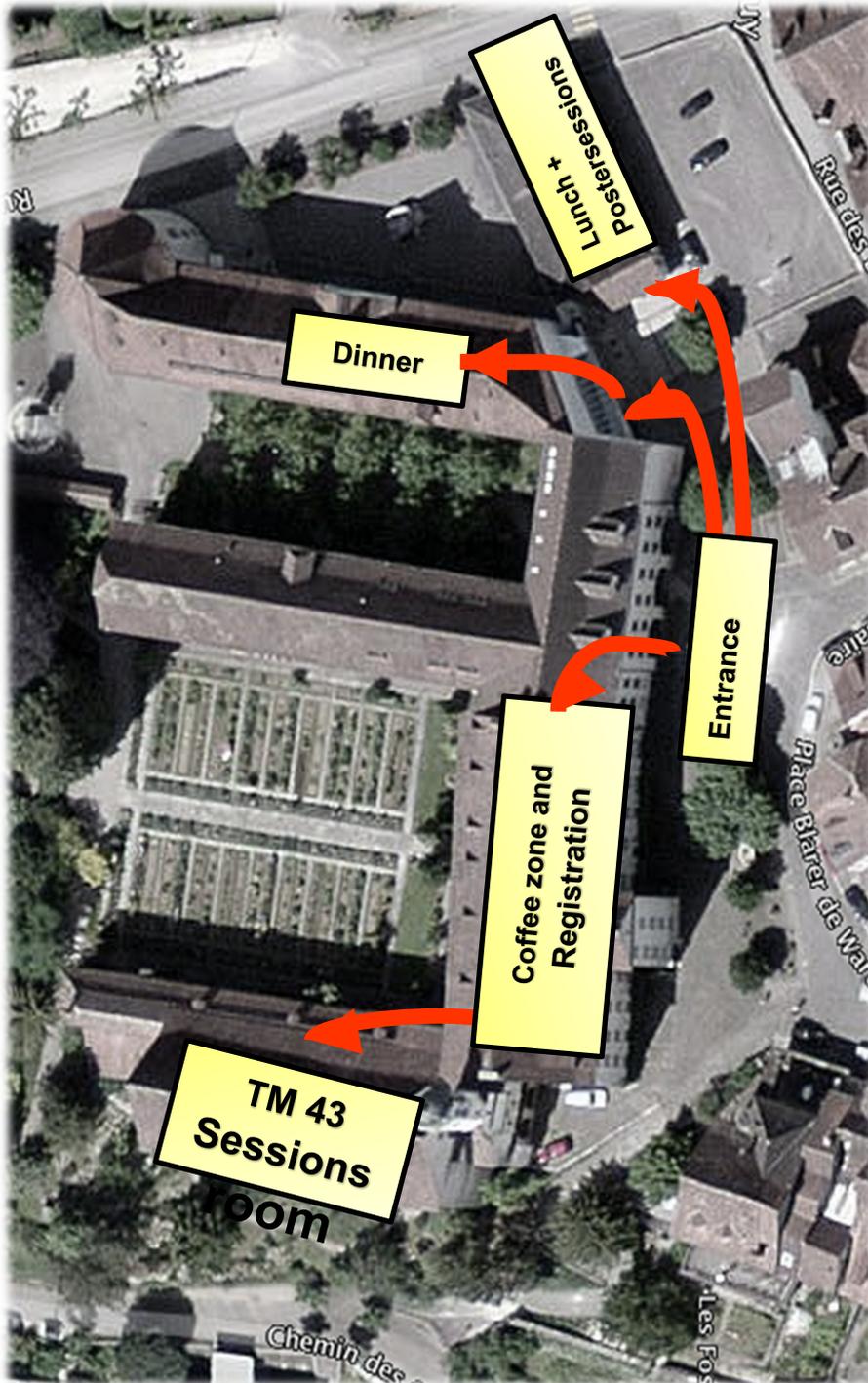
## Leaflet TM-43, Porrentruy

- Please upload your PowerPoint presentations via the [Submission of contributions | Mont Terri Project](#) web page **by Tuesday 28 April at the latest**. Large files can be uploaded without any problems and more easily than sending them by email.
- There is the possibility to visit the rock laboratory on 30 April. We kindly ask the PI's for understanding that there is no possibility during the visits to work in the laboratory on their experiment. The number of participants in the rock laboratory is limited to 50 persons for safety reasons.
- Accommodation in Canton of Jura: in general, hotels are not open 24h/7d. Most of them close in the early evening. Please make sure to organize and get the key in advance in case of late arrival. Exception: Hotel Ibis in Delémont is open 24h/7d. Recommended hotels are listed in the enclosures of the invitation. In case you need help please contact [Romain.Nicol@swisstopo.ch](mailto:Romain.Nicol@swisstopo.ch) (phone +41 79 593 92 07).
- In general transportation from your hotel to Porrentruy and back has to be organised by yourself, either by car or public transport. There is a good public train network between Delémont-St-Ursanne and Porrentruy. Exception: There will be a **bus-shuttle in the morning on Wednesday, 29 April 2026 from COOP supermarket in St-Ursanne at 08:15 and from Porrentruy train station at 08:30 to the conference venue**. As every year we organise a **bus-shuttle after the dinner (29 April 2026) to your hotels in Porrentruy or St-Ursanne**.
- **On the second day, Thursday, 30 April, 2026, there will be a bus transport from St-Ursanne COOP supermarket at 08:15 and from Porrentruy train station at 08:30 to the conference venue**
- Every presenter finds the number of his poster in the adapted meeting program. The position of your board is given by the number of the poster.
- The posters must be installed on the numbered boards by the presenters before the meeting, during the coffee break or during the business lunch before 13:30 on Wednesday April 29, 2026. There is no service provided by the Mont Terri staff.
- Pins for poster installation are available.
- There is no printing service provided at the Technical Meeting.
- If you don't intend spending all poster session standing next to your poster, "post-its" will be made available to you by the Mont Terri staff to write next to your poster the time when you will be present for discussion during the poster session or coffee break.
- **The posters should be removed at the end of the meeting on Thursday 30 April by 13:30 at the latest.**

## ENCLOSURE 2

Venue: How to get there

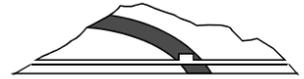
Welcome to the Technical Meeting TM-43



# ENCLOSURE 3

## Map of Porrentruy

### TM-43 (Technical Meeting) – Site Map

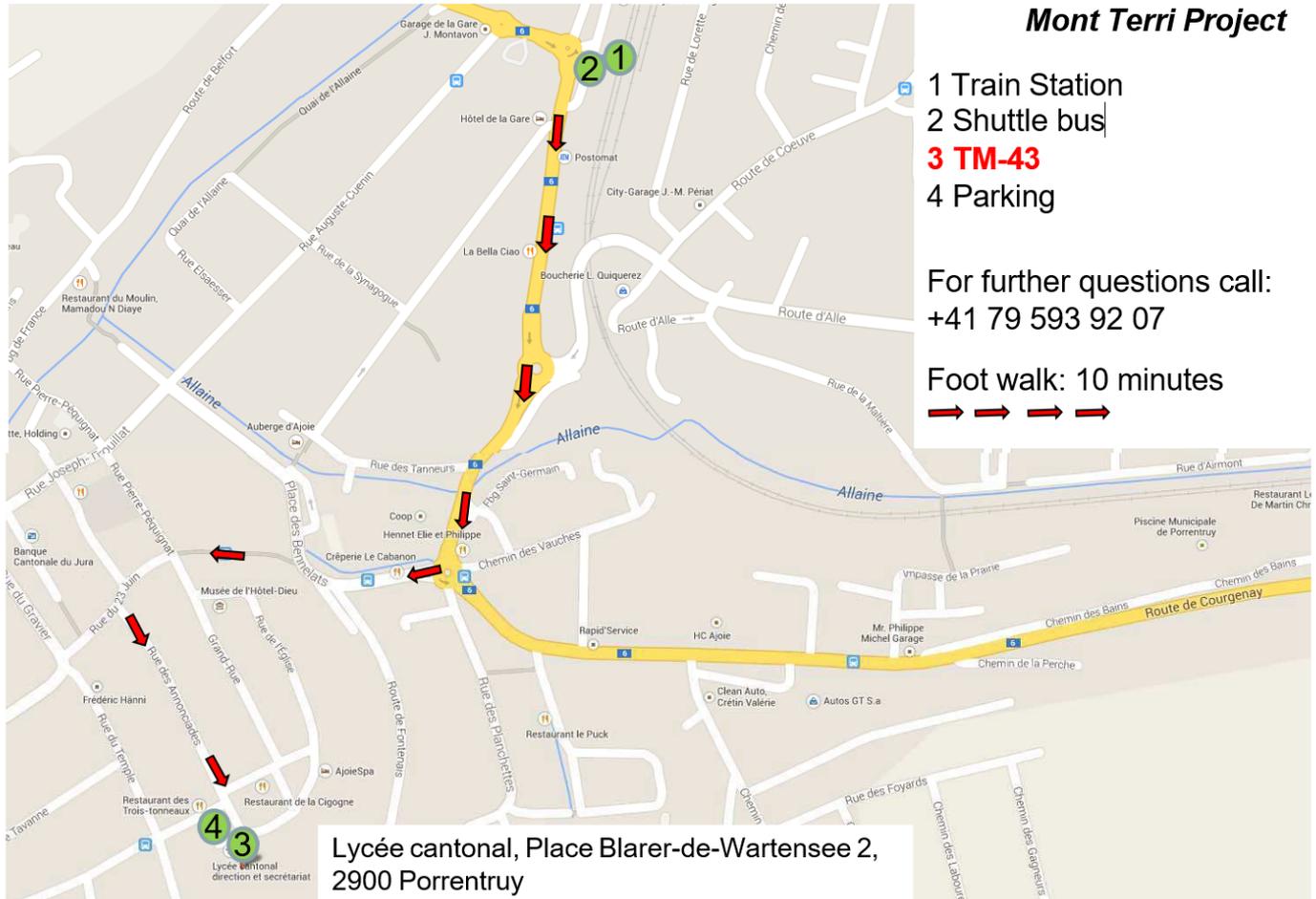


**Mont Terri Project**

- 1 Train Station
- 2 Shuttle bus
- 3 TM-43**
- 4 Parking

For further questions call:  
**+41 79 593 92 07**

Foot walk: 10 minutes



Lycée cantonal, Place Blarer-de-Wartensee 2,  
2900 Porrentruy