



Conference programme

FEFLOW International User Conference 2026

Montreal, Canada | 29 Sep - 2 Oct 2026



Pre-conference training workshops

29 September 2026

Morning session

Option 1

3D geological modelling in FEFLOW

Dr. Carlos Rivera, Dr. Francois Bonneau

[Learn more](#)

Morning session

Option 2

Getting the most out of the FEFLOW – Python interface

Dr. Francesca De Gaspari, Sophie Gruschka

[Learn more](#)

Afternoon session

Option 1

Advanced 3D meshing

Dr. Carlos Rivera, Sophie Gruschka

[Learn more](#)

Afternoon session

Option 2

Geothermal modelling: From shallow to deep geothermal

Dr. Francesca De Gaspari, Dr. Milan Pelletier

[Learn more](#)

Day 1

30 September 2026

8:30-9:00

Welcome

Coffee/tea, registrations

9:00-9:15

Opening address

Dr. Carlos Rivera, DHI, Germany

9:15-10:00

Keynote

Prof. Jasmin Raymond (INRS, Canada)

10:00-10:40

User presentations

See pages 9–17 for the full list of presentations

10:40-11:00

Morning break

11:00-12:40

User presentations

See pages 9–17 for the full list of presentations

12:40-14:00

Lunch

14:00-14:50

What's new in FEFLOW

Dr. Carlos Rivera, DHI, Germany

Day 1 cont'd

30 September 2026

14:50-15:30

User presentations

See pages 9–17 for the full list of presentations

15:30-16:00

Afternoon break

16:00-17:20

User presentations

See pages 9–17 for the full list of presentations

18:00-21:00

Social event

Conference dinner on a river cruise

Day 2

1 October 2026

8:30-9:00

Welcome

Coffee/tea

9:00-9:45

Keynote

Prof. John Molson, Université Laval, Canada

9:45-10:45

User presentations

See pages 9–17 for the full list of presentations

10:45-11:00

Morning break

11:00-13:00

User presentations

See pages 9–17 for the full list of presentations

13:00-14:00

Lunch

14:00-14:20

FEFLOW: A look under the hood

Dr. Volker Clausnitzer, DHI, Germany

Day 2 cont'd

1 October 2026

14:20-15:20

User presentations

See pages 9–17 for the full list of presentations

15:20-16:00

Afternoon break

16:00-16:40

User presentations

See pages 9–17 for the full list of presentations

16:40-17:00

Interactive discussions

Dr. Carlos Rivera, DHI, Germany

Day 3

2 October 2026

8:30-9:00

Welcome

Coffee/tea

9:00-9:40

Keynote

Prof. Erwan Gloaguen, INRS, Canada

9:40-10:40

User presentations

See pages 9–17 for the full list of presentations

10:40-11:20

Morning break

11:20-12:00

User presentations

See pages 9–17 for the full list of presentations

12:00-12:20

Closing remarks

12:30-14:00

Lunch

Our keynote speakers



Prof. Jasmin Raymond

Professor Jasmin Raymond (INRS) is a hydrogeologist specialising in geoenery systems, including geothermal resources, natural hydrogen and underground hydrogen storage.

He leads the Geothermal Open Laboratory and conducts international research aimed at improving the efficiency, sustainability, and profitability of subsurface energy systems through scientific and social innovation.



Prof. John Molson

Professor John W. Molson is a Full Professor in the Department of Geology and Geological Engineering at Université Laval, Canada. His research focuses on hydrogeological modelling, including reactive contaminant transport, heat transport, density-dependent transport, aquifer protection and remediation and cryo-hydrogeological modelling. He is currently Vice-President of the Canadian Chapter of the International Association of Hydrogeologists (IAH-CNC).



Prof. Erwan Gloaguen

Professor Gloaguen's work focuses on the numerical integration of geoscientific methods to improve the characterisation, monitoring, and prediction of groundwater, mineral, and hydrocarbon resources. His research interests include data integration using ensemble methods and artificial intelligence, quantitative assimilation of data from multiple sources and the monitoring and protection of coastal aquifers.

Conference programme

Day 1: Geothermal

Keynote: On the feasibility of deep borehole heat exchangers and geothermal well doublets in the St. Lawrence Lowlands, Québec, Canada

Prof. Jasmin Raymond (INRS, Canada)

Modelling approaches for deep borehole heat exchanger: a sensitivity analysis of load initialization and operation cycles - results of the InnoGeoPot trilateral project

Marija Macenić (Univ. Zagreb, Croatia)

Stochastic numerical simulation of borehole heat exchanger fields: Integrating variable COP and 3D thermal conductivity models

Nouredine Alawawdeh (INRS, Canada)

Density-dependent flow and heat transport modelling of the Budapest Thermal Karst at regional scale with the BetaGamma plug-in in FEFLOW

Éva Kun (Geological Survey, Hungary)

Reservoir assessment of geothermal site Podsused in the city of Zagreb for HT-ATES development

Katarina Marojević (Univ. Zagreb, Croatia)

Conference programme

Day 1: Mining

Representing impermeable liner performance in flow models: leakage-based and equivalent hydraulic conductivity approaches in FEFLOW

Luis Bayona (AtkinsRéalis, Canada)

Numerical groundwater modelling of in-pit tailings storage facilities using FEFLOW

David Linehan (PSM, Australia)

Dynamic simulation of multiple groundwater rebound stages in pit lake formation for mine closure

Luis Camilo Suescun (DHI, Peru)

Transient modelling of open-pit mine dewatering in a highly permeable fault-controlled aquifer

Emmanuelle Millet (AtkinsRéalis, Canada)

Dynamic representation of mining stages in 3D groundwater flow models

Erin Murphy-Goetz (WSP, Canada)

Automated transient hydrogeological modelling for dynamic mine lifecycle simulation using FEFLOW–Python integration

Edith Ore Rosales (DHI, Peru)

Conference programme

Day 1: Groundwater resources

Development and application of a response model for informed groundwater resource management in the Region of Waterloo

Gaelen Merritt (Aqua Insight Inc., Canada)

Mine dewatering in a highly permeable fault-controlled aquifer

Emmanuelle Millet (AtkinsRéalis, Canada)

The groundwater simulation of an embankment dam site using FEFLOW and FEPEST

Jahanpour Monfared (Laval University, Canada)

Hydrogeological modelling of basement aquifers for assessing water resilience to climate change: The case of the Ivorian Portion of the Volta Basin

Labe Simplicie (Institut National Polytechnique Félix Houphouët-Boigny, Cote d'Ivoire)

Conference programme

Day 2: Groundwater resources

Keynote: Cryo-hydrogeological modelling in the context of water resource development and climate change in northern Quebec, Canada

Prof. John Molson (Université Laval, Canada)

Coupling regional scale FEFLOW and MIKE SHE models in Guelph, Ontario

Steven Murray (Onterris, Canada)

Hydrological model of the interaction between a fluviodeltaic aquifer system and coastal lagoons: Implications for seawater intrusion (SWI)

Eduard Madaula (University of Girona, Spain)

Groundwater resource planning in the presence of VOC contaminant plumes: City of Barrie

Paul J Martin (Aqua Insight Inc, Canada)

Conference programme

Day 2: Mining

Complexity with purpose: Integrating detailed and efficient models for mine dewatering decision-making

Luis Camilo Suescun (DHI, Peru)

Optimising groundwater models for early-stage mining projects

Michael Howlett (RockEng Inc., Canada)

Leveraging 3D layered FEFLOW models to simulate tunnel drainage and weepholes using gravity reorientation

Luis Bayona (AtkinsRéalis, Canada)

3D Numerical groundwater modelling assessment of an underground mine based on plastic strain-hydraulic conductivity relationship

Damian Lee (Klohn Crippen Berger, Australia)

Hybrid 3D mesh generation for geotechnical applications in an open-pit mine using multi-temporal topographic surfaces

André Paes de Oliveira (Water Services and Technologies, Brazil)

Probabilistic drawdown analysis from a borrow-pit excavation using a calibration-constrained Monte Carlo approach

Moïse Rousseau (WSP, Canada)

Pit Dewatering and Pore Pressure Uncertainty Analysis of a 3D FEFLOW Groundwater Model Using a Proxy Model at Geologically Complex Mine Sites in Peru

Robin Marc Dufour (DHI, Denmark)

Conference programme

Day 2: Geothermal

Numerical simulation of geothermal energy supply for cooling and power demands of data centers

Luka Perkovic (University of Zagreb, Croatia)

Evaluation of mine water as a sustainable heat source: Coupled flow and heat transport simulations at the Goldex mine from operation to post-closure

Emna Bouzaiene (INRS, Canada)

Investigating PCM-augmented grout in BTES: Numerical modelling for the InCUBE site in Trento

Don Varghese (Fondazione Bruno Kessler, Italy)

Modelling borehole heat exchangers: On the latest numerical developments in FEFLOW

Fabien Cornaton & Milan Pelletier (DHI, France)

Conference programme

Day 2: Groundwater quality

Case study – dual porosity simulation to support remediation option analysis

Louis-Charles Boutin (Onterris, Canada)

Translating a high-resolution conceptual model into numerical simulations of seawater intrusion in a karstic fractured aquifer

Mostafa F. Mostafa (Univ. Bari, Italy)

An integrated Leapfrog–FEFLOW workflow for 3D groundwater modelling of a structurally complex PFAS-impacted aquifer system

Giorgio Volpi (AECOM, Italy)

Simulating matrix diffusion transport in FEFLOW

Mark Ranjram (Onterris, Canada)

Predicting temporal evolution of PFAS plumes in groundwater using integrated numerical modelling

Krishna Mohan Ganta (North Carolina State University, USA)

FEFLOW-Based Modeling of Sulfate Transport from a Filtered Tailings Storage Facility

Siwar Karoui (MECATER Engineering, Tunisia)

Conference programme

Day 3: Uncertainty quantification

Keynote: Stochastic modelling of groundwater flow and uncertainty quantification to optimise a pump-and-treat plant in Southern Québec

Prof. Erwan Gloaguen (INRS, Canada)

Developing a sustainable management plan for a water supply well network through gradient-based mathematical optimisation in Python

Moïse Rousseau (WSP, Canada)

Monitoring network optimisation for uncertainty reduction using multi-objective optimisation with PEST++ MOU

Matheus Jesus (Water Services and Technologies, Brazil)

InvOpTop: A highly efficient continuous adjoint model for permeability calibration, uncertainty analysis and general inverse design for hydrogeological

Moïse Rousseau (HydrOpTop, Canada)

Hybrid finite-element modelling and uncertainty quantification for a groundwater system in permafrost

Amir Niazi (Ensero Solutions, USA)

Ensemble-based calibration of karst groundwater models using FEFLOW and PEST++

Tereza Filpi (Water Services and Technologies, Brazil)

Conference programme

Special sessions

What's new in FEFLOW: Ongoing developments and vision

Carlos Rivera Villarreyes (DHI, Germany)

FEFLOW: A look under the hood

Volker Clausnitzer (DHI, Germany)

Interactive discussion - Your chance to give us feedback

Carlos Rivera Villarreyes (DHI, Germany)

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