

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](#)

Our keynote speakers



Prof. Jasmin Raymond

Professor Jasmin Raymond (INRS) is a hydrogeologist specialising in geoenergy 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.

Day 1

30 September 2026

8:30-9:00	Welcome Coffee/tea and registrations
9:00-9:10	Opening address Dr. Carlos Rivera (DHI, Germany)
Session: Geothermal	
9:10-10:00	Keynote Presentation: On the Feasibility of Deep Borehole Heat Exchangers and Geothermal Well Doublets in the St. Lawrence Lowlands, Québec, Canada. Prof. Jasmin Raymond (INRS, Canada)
10:00-10:20	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)
10:20-10:40	Stochastic Numerical Simulation of Borehole Heat Exchanger Fields: Integrating Variable COP and 3D Thermal Conductivity Models. Nouredine Alawawdeh (INRS, Canada)
10:40-11:20	Morning break
11:20-11:40	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)
11:40-12:00	Reservoir assessment of geothermal site Podsused in the city of Zagreb for HT-ATES development. Katarina Marojević (Univ. Zagreb, Croatia)
Special Session	
12:00-12:40	What's new in FEFLOW, Ongoing Developments and Vision Dr. Carlos Rivera, DHI, Germany
12:40-14:00	Lunch

Day 1 cont'd

30 September 2026

Session: Mining (Chair: Alexia Carpentier)

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| 14:00-14:30 | Featured Industry Talk: Representing impermeable liner performance in flow models: leakage-based and equivalent hydraulic conductivity approaches in FEFLOW
Luis Bayona (AtkinsRéalis, Canada) |
| 14:30-14:50 | Numerical Groundwater Modelling of In-Pit Tailings Storage Facilities Using FEFLOW
David Linehan (PSM, Australia) |
| 14:50-15:10 | Automated Transient Hydrogeological Modelling for Dynamic Mine Lifecycle Simulation Using FEFLOW–Python Integration
Edith Ore Rosales (DHI, Peru) |
| 15:10-15:30 | Dynamic Representation of Mining Stages in 3D Groundwater Flow Models
Erin Murphy-Goetz (WSP, Canada) |
| 15:30-16:00 | Afternoon break |

Session: Groundwater Resources (Chair: Sophie Gruschka)

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| 16:00-16:20 | Development and Application of a Response Model for Informed Groundwater Resource Management in the Region of Waterloo
Gaelen Merritt (Aqua Insight Inc., Canada) |
| 16:20-16:40 | The groundwater simulation of an embankment dam site using FEFLOW and FEPEST
Jahanpour Monfared (Laval University, Canada) |
| 16:40-17:00 | Hydrogeological Modeling of Basement Aquifers for Assessing Water Resilience to Climate Change: The Case of the Ivorian Portion of the Volta Basin
Labe Simplicie (INP-HB, Cote d'Ivoire) |
| 17:00-17:20 | Translating a High-Resolution Conceptual Model into Numerical Simulations of Seawater Intrusion in a Karstic Fractured Aquifer
Mostafa F. Mostafa (Univ. Bari, Italy) |
| 18:00-22:30 | Social Event
Montreal Dinner Cruise and Networking |

Day 2

1 October 2026

8:30-9:00	Welcome Coffee/tea and registrations
9:00-9:10	Conference Highlights & Keynote Introduction Volker Clausnitzer (DHI, Germany)
	Session: Groundwater Resources
9:10-10:00	Keynote Presentation: Cryo-hydrogeological modelling in the context of water resource development and climate change in northern Quebec, Canada. Prof. John Molson (Université Laval, Canada)
10:00-10:20	Coupling Regional Scale FEFLOW and MIKE SHE models in Guelph Ontario. Steven Murray (Onterris, Canada)
10:20-10:40	Hydrological Model of the Interaction Between a Fluviodeltaic Aquifer System and Coastal Lagoons: Implications for Seawater Intrusion (SWI). Eduard Madaula (Univesity of Girona, Spain)
10:40-11:20	Morning break
	Parallel Session: Option 1 Groundwater Resources
11:20-11:40	Groundwater Resource Planning in the Presence of VOC Contaminant Plumes: City of Barrie. Paul J Martin (Aqua Insight Inc, Canada)
11:40-12:00	Case Study – Dual Porosity Simulation to Support Remediation Option Analysis. Louis-Charles Boutin (Onterris, Canada)
12:00-12:20	An Integrated Leapfrog–FEFLOW Workflow for 3D Groundwater Modelling of a Structurally Complex PFAS-Impacted Aquifer System Giorgio Volpi (AECOM, Italy)
12:20-12:40	Simulating matrix diffusion transport in FEFLOW. Mark Ranjram (Onterris, Canada)

Day 2 cont'd

1 October 2026

	Parallel Session: Option 2 Geothermal (Chair: Milan Pelletier)
11:20-11:40	Special Session: Modelling borehole heat exchangers: On the latest numerical developments in FEFLOW. Fabien Cornation & Milan Pelletier (DHI, France)
11:40-12:00	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 Bouzaïene (INRS, Canada)
12:00-12:20	Numerical Simulation of Geothermal Energy Supply for Cooling and Power Demands of Data Centers. Luka Perkovic (University of Zagreb, Croatia)
12:20-12:40	Towards understanding the limits of analytical solutions for geothermal applications. Alexia Carpentier (DHI, France)
12:40-14:00	Lunch
	Session: Mining (Chair: Robin Marc Dufour)
14:00-14:30	Featured Industry Talk: it 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)
14:30-14:50	Leveraging 3D layered FEFLOW models to simulate tunnel drainage and weepholes using gravity reorientation. Luis Bayona (AtkinsRéalis, Canada)
14:50-15:10	3D Groundwater Modelling Of An Underground Mine Using Strain-Permeability Relationships. Damian Lee (Klohn Crippen Berger, Australia)
15:10-15:30	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)
15:30-16:00	Afternoon break

Day 2 cont'd

1 October 2026

Session: Mining (Chair: Carlos Rivera)

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| 16:00-16:20 | Probabilistic drawdown analysis from a borrow-pit excavation using a calibration-constrained Monte Carlo approach.
Moïse Rousseau (WSP, Canada) |
| 16:20-16:40 | Transient modelling of open-pit mine dewatering in a highly permeable fault-controlled aquifer.
Emmanuelle Millet (AtkinsRéalis, Canada) |
| 16:40-17:00 | Optimizing groundwater models for early-stage mining projects.
Michael Howlett (RockEng Inc., Canada) |

Special Session

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| 17:00-17:30 | FEFLOW: A look under the hood and Feedback session.
Volker Clausnitzer & Carlos Rivera (DHI, Germany) |
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Day 3

2 October 2026

8:30-9:00	Welcome Coffee/tea and registrations
9:00-9:10	Conference Highlights & Keynote Introduction Francesca De Gaspari (DHI, Germany)
	Session: Uncertainty Quantification and more
9:10-10:00	Keynote Presentation: Stochastic Modeling of Groundwater Flow and Uncertainty Quantification to Optimize a Pump-and-Treat Plant in Southern Québec. Prof. Erwan Gloaguen (INRS, Canada)
10:00-10:20	Ensemble-Based Calibration of Karst Groundwater Models Using FEFLOW and PEST++. Danilo Almeida (Water Services and Technologies, Brazil)
10:20-10:40	Developing a Sustainable Management Plan for a Water Supply Well Network through Gradient-Based Mathematical Optimization in Python. Moïse Rousseau (WSP, Canada)
10:40-11:20	Morning break
11:20-11:40	Monitoring Network Optimization for Uncertainty Reduction Using Multi-Objective Optimization with PEST++ MOU. Matheus Jesus (Water Services and Technologies, Brazil)
11:40-12:00	Hybrid finite-element modelling and uncertainty quantification for a groundwater system in permafrost. Amir Niazi (Ensero Solutions, USA)
12:00-12:20	InvOpTop: a highly efficient continuous adjoint model for permeability calibration, uncertainty analysis and general inverse design for hydrogeological. Moïse Rousseau (HydrOpTop, Canada)
12:20-12:30	Closing remarks Mark Britton (DHI, Australia)
12:30-14:00	Lunch

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