

Preliminary Program
8th International Induced Polarization Workshop
May 26–28, 2026
Saint-Alexis-des-Monts, Québec, Canada
<https://internationalipworkshop.com/>

Workshop schedule

Tuesday, May 26, 2026

08:00–08:45	Participant welcome
08:45–09:00	Welcome address
09:00–10:30	Fundamentals of IP
10:30–11:00	Coffee break
11:00–12:30	Emerging IP applications
12:30–14:00	Lunch
14:00–15:30	Outdoor IP networking and site exploration
15:30–16:00	Coffee break
16:00–17:30	Inversion of IP data at field scale
19:00	Group dinner at the Auberge

Wednesday, May 27, 2026

09:00–10:30	Reactive processes controlling IP
10:30–11:00	Coffee break
11:00–12:30	Machine learning and IP data processing
12:30–14:00	Lunch
14:00–15:30	Dedicated poster session
15:30–16:00	Coffee break
16:00–17:30	Mineral exploration and groundwater studies
19:00	Group dinner at the Auberge
21:00	Bonfire (& Marshmallow) Networking Event

Thursday, May 28, 2026

09:00–10:30	IP modelling and upscaling
10:30–11:00	Coffee break
11:00–12:30	Material and interfacial controls on IP
12:30–14:00	Lunch
14:00–15:30	Dedicated poster session
15:30–16:00	Coffee break
16:00	Closing remarks and workshop end

Oral presentation sessions

Talks are 20 minutes long, including time for questions. Each session is 90 minutes.

Fundamentals of IP

Surface Electrical Conductivity of Rocks and Soils: Novel Appraisal Ratios Beyond the Dukhin Number	Youzheng Qi <i>Lawrence Berkeley National Laboratory</i>
The constrictivity exponent as a useful parameter in permeability prediction	Andreas Weller <i>Clausthal University of Technology</i>
Estimating the Volume Fraction of Polarizable Material using IP chargeability	James Macnae <i>RMIT University and CD3D</i>
Spectral induced polarization of sandstones	Konstantin Titov <i>St. Petersburg University</i>

Emerging IP applications

Linking foam electrical conductivity to its electrochemical evolution during aging: a mechanistic approach	Pauline Kessouri <i>BRGM</i>
Laboratory experiments for the investigation of low-frequency polarization effects at ice-water interfaces	Clemens Moser <i>TU Wien</i>
Spectral Induced Polarization for Monitoring Geochemical Reactions during Subsurface Remediation	Hilary Emerson <i>Pacific Northwest National Laboratory</i>
Can sulfide heap bioleaching be monitored by spectral induced polarization? Insights from laboratory column experiments	Philippe Leroy <i>BRGM</i>

Inversion of IP data at field scale

Large-scale Induced Polarization Inversion of Mineral Residues Structures using High-Order Regularization on Unstructured Finite Element Meshes	Yan Zhou <i>The University of Queensland</i>
3-D EM inversion considering induced polarization effect	Gianluca Fiandaca <i>University of Milano</i>
On the Inversion of Temperature Fields from IP Survey Data using unstructured FEM meshes	Lutz Gross <i>The University of Queensland</i>
Joint inversion of inductive and galvanic data: significant resolution improvement honouring both data types – 3D EM and 2D DCIP	Gianluca Fiandaca <i>University of Milano</i>

Reactive processes controlling IP

Mechanistic Insights into Organic Adsorption on Activated Carbon Using Spectral Induced Polarization	Nimrod Schwartz <i>The Hebrew University of Jerusalem</i>
Using Microfluidics to Identify Mechanisms Controlling Induced Polarization Signatures during Hydroxyapatite Precipitation	Klaudio Peshtani <i>Pacific Northwest National Laboratory</i>
Calcite mineralization dynamics with micromodel visualization and SIP monitoring	Sheng Zhou <i>Zhejiang University</i>
On the fate and transport of heavy metals in calcareous soils – a spectral induced polarization study	Alex Furman <i>Israel Institute of Technology</i>

Machine learning and IP data processing

Debye decomposition as a machine learning problem	Charles Bérubé <i>Polytechnique Montréal</i>
Rapid Coal-Ash Characterization using Geophysical Methods & Machine Learning	Klaudio Peshtani <i>Pacific Northwest National Laboratory Rutger's University Newark</i>
A comparison between recurrent and feedforward neural networks for full-waveform TDIP denoising	Isabelle Poliquin <i>Polytechnique Montréal</i>
Triple-Zarc Analysis of Electrical Impedance Spectra	Randy Enkin <i>Geological Survey of Canada</i>

IP for mineral exploration and groundwater studies

Nodal-Based 3D Induced Polarization: A Comprehensive Workflow for Advanced Mineral Deposit Investigation	Bitnarae Kim <i>BRGM</i>
The Role of 3D DCIP in the Leviathan Porphyry Discovery and Exploration	Jonathan Rudd <i>Dias Geophysical</i>

Linking Time-Lapse DCIP to Hydraulic Conductivity in a MAR Infiltration Pond	Ankita Prayag <i>Lund University</i>
Geophysical Characterization of Groundwater Properties for Transport Infrastructure Development	Torleif Dahlin / Tina Martin <i>Lund University</i>

Material and interfacial controls on IP

Combined Spectral Induced Polarization, Gain Phase and Vector Network Analyzer methods to investigate bentonite slurry	Thierry Bore <i>The University of Queensland</i>
Characterization of corrosion effects of metallic spheres	Katrin Breede <i>Clausthal University of Technology</i>
The effect of surface roughness on the spectral induced polarization response of metallic particles	Dennis Kreith <i>Kiel University</i>
Hysteresis in complex conductivity of an opal-CT bearing diatomite under salinity diffusion	Ermis Proestakis <i>Technical University of Denmark</i>

IP modelling and upscaling

Inductive or Galvanic IP? The pros and cons	James Macnae <i>RMIT University and CD3D</i>
SIP modelling using effective medium theory and a GPU-accelerated finite volume Poisson–Nernst–Planck solver	Jean-Luc Gagnon <i>Polytechnique Montréal</i>
Influence of particle-particle interaction on the induced-polarization response	Dennis Kreith <i>Kiel University</i>
A model for the electrical polarization of microbial cells	Felix Keiser <i>TU Braunschweig</i>

Poster presentations

Posters are up at all times in the adjacent Arctic Room.

	Title	First author and affiliation
1.	Adsorbed water as a surface-area indicator in induced polarization of smectite-rich biosiliceous mudstone	Shohreh Irajii <i>Technical University of Denmark</i>
2.	Spectral induced polarization signatures of zero valent iron as a function of particle size and corrosion	Zoe Vincent <i>Pacific Northwest National Laboratory</i>
3.	SIP-responses and effects of anisotropy and flint in bryozoan limestones	Sara Johansson <i>Lund University</i>
4.	Round-robin test of SIP laboratory measurements using electrical test networks	Tina Martin <i>Lund University</i>
5.	Review of broadband electrical behavior of clays: critical synthesis and comparison of experimental signatures and models	Louise Prétou <i>BRGM / Université de Poitiers</i>
6.	Evaluating the Effect of Surface Conduction on Archie's Saturation Exponent from Spectral Induced Polarization	Himadri Shekhar <i>Rutgers University</i>
7.	Surface Conductivity Dynamics During Electrokinetic Remediation	M. Váscónez-Maza <i>British Geological Survey</i>
8.	Numerical Simulations of the Influence of Soil properties on the shape factor	Felix Keiser <i>Technical University Braunschweig</i>
9.	A mesh-free machine learning approach for modelling microscale spectral induced polarization	Emilienne Rachel Kenko <i>Polytechnique Montréal</i>
10.	Contribution of the Induced Polarization method for hillslope characterization of deeply weathered crystalline terrains in Southeast Brazil	Marianna Tagnin <i>University of São Paulo</i>
11.	A multi-method geophysical approach for imaging groundwater flow in dikes: combining electrical resistivity, time-domain induced polarization, seismic refraction and self-potential	Jessy Richard <i>Université Savoie Mont-Blanc / NAGA Geophysics</i>
12.	The ice content of palsas and peat plateaus in Finnmark estimated with High-Frequency Induced Polarization	Raphael Schulz <i>Technical University Braunschweig</i>
13.	Anisotropic complex conductivity of the Manicouagan Reservoir lithologies: Preliminary results	Léopold Poussin <i>Polytechnique Montréal</i>

14.	Spectral Induced Polarization Signatures of Rock samples from the Juomasuo Au-Co Deposit, Finland: Implications for Mineral Exploration	Bitnarae Kim <i>BRGM / Geological Survey of Finland</i>
15.	Concept of a SIP field measuring instrument with multiple decentralised transmitters	Tino Radic <i>Radic Research</i>

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