

5th International Workshop on Induced Polarization

Maximum Poster Dimensions: 3 ft x 5 ft (0.9 m x 1.5 m)

Poster sessions:

Wed 10/3 10:30 am – 12:30 pm

[1] Petrophysics [2] Data processing and inversion

Thu 10/4 10:30 am – 12:30 pm

[1] Biogeophysics [2] Modeling

Fri 10/5 10:30 am – 12:30 pm

[1] Field applications

Petrophysics: Wed 10/3 10:30 am-12:30 pm
IMPACT OF PORE FLUID CHEMISTRY ON COMPLEX CONDUCTIVITY OF GRAPHITE Yuxin Wu ¹ , Luca Peruzzo ¹ (1) Lawrence Berkeley National Lab.
Permeability estimation directly from logging-while-drilling Induced Polarization data Gianluca Fiandaca ¹ , Pradip Kumar Maurya ¹ , Nicola Balbarini ² , Andreas Hördt ³ , Anders Vest Christiansen ¹ , Nicolaj Foged ¹ , Poul L. Bjerg ² and Esben Auken ¹ (1) HydroGeophysics Group, Department of Geoscience, Aarhus University, Aarhus, Denmark, (2) Technical University of Denmark, Department of Environmental Engineering, Lyngby, Denmark, (3) Institute for Geophysik und extraterrestrische Physik, Braunschweig, Germany.
The Geo-Electrical Signature of Heavy Metals Tamar Shalem ¹ , Johan Alexander (Sander) Huisman ² , Egon Zimmerman ³ , Wu Yuyuan ⁴ , Renduo Zheng ⁴ and Alex Furman ¹ (1) Civil and Environmental Engineering, Technion, Israel, (2) Institute of Bio- and Geosciences, Forschungszentrum Jülich, Germany, (3) Central Institute of Engineering, Electronics and Analytics, Forschungszentrum Jülich, Germany, (4) School of Environmental Science and Engineering, Sun Yat-sen University, Guangzhou, China.
Evidence of sorption processes observed with IP in dual domain porosity rock cores during injection/flush solute tracer experiments Samuel Falzone ¹ , Lee Slater ¹ , Frederick Day-Lewis ² , Beth Parker ³ , Kristina Keating ¹ , Judy Robinson ⁴

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(1) Rutgers University Newark, Dept. Earth Environ. Sci., (2) USGS, Hydrogeophys. Branch, (3) Guelph University, Hydrogeol. School Eng., (4) Pacific Northwest National Laboratory, Subsurf. Sci. Tech. Group.

Spectral induced polarization response of calcite precipitation

Satoshi Izumoto¹, Johan Alexander Huisman¹, Egon Zimmermann², Odilia Esser¹, Franz –Hubert Haegel¹, Harry Vereecken¹

(1) Institute of Bio- and Geosciences, Agrosphere, Forschungszentrum Jülich, (2) Central Institute for Engineering, Electronics and Analysis, Electronic System, Forschungszentrum Jülich.

Tracking secondary mineralization in hydrothermal systems with complex electrical measurements: laboratory observations on natural core samples from the Krafla volcano (Iceland)

Léa Lévy^{1,3}, Benoit Gibert², Freysteinn Sigmundsson³, Damien Deldicque¹, Fleurice Parat², Gylfi Páll Hersir⁴, Ólafur G. Flóvenz⁴, Pierre Briole¹

(1) Ecole Normale Supérieure, Department of Geosciences, (2) University of Montpellier, Géosciences Montpellier, (3) University of Iceland, Nordic Volcanological Center, Institute of Earth Sciences, (4) ÍSOR-Iceland Geosurvey.

COMPLEX RESISTIVITY MEASUREMENTS OF ARTIFICIAL SAMPLES CONTAINING VARIOUS MINERALS

Shinichi Takakura¹

(1) National Institute of Advanced Industrial Science and Technology, Geological Survey of Japan.

Spectral induced polarization of nanoporous media

Philippe Leroy¹, Andreas Hördt², Matthias Bucker³, Egon Zimmermann⁴, Johan Alexander Huisman⁵

(1) French Geological Survey, Water Department, Orléans, France, (2) Braunschweig Technical University, Institute for Geophysics, Braunschweig, Germany, (3) Wien Technical University, Geoinformation Department, Vienna, Austria, (4) Forschungszentrum, Electronic Systems ZEA 2, Jülich, Germany, (5) Forschungszentrum, Agrosphere institute IBG 3, Jülich, Germany.

Monitoring and assessing effects of carbonate rock dissolution on spectral induced polarization data

Matthias Halisch¹, Sarah Hupfer¹, Andreas Weller¹, Raphael Dlugosch¹, Hans-Peter Plumhoff²

(1) Leibniz Institute for Applied Geophysics (LIAG), Dept.5 – Petrophysics & Borehole Geophysics, (5) Westphal Präzisionstechnik GmbH & Co. KG, Celle, Germany.

Can we effectively characterize pore geometric properties from spectral induced polarization (SIP) measurements on low porosity mudstones?

Judy Robinson¹, Lee Slater², Andreas Weller³, Tonian Robinson², Manika Prasaad⁴, Kristina Keating²

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(1) Pacific Northwest National Laboratory, Subsurface Science and Technology Group, Richland, Washington, (2) Rutgers University Newark, Department of Earth and Environmental Sciences, Newark, (3) Institut für Geophysik, Technische Universität Clausthal, Clausthal-Zellerfeld, (4) Colorado School of Mines, Department of Petroleum Engineering, Golden, Colorado.

EVALUATION OF IP PARAMETERS FOR PERMEABILITY PREDICTION OF SANDSTONES

Andreas Weller¹, Lee Slater²

(1) Technische Universität Clausthal, Institut für Geophysik, (2) Rutgers University - Newark, Department of Earth and Environmental Sciences.

Enhanced characterization of pore systems by simultaneous use of SIP, μ -CT and NMR

Sabine Kruschwitz¹, Matthias Halisch², Raphael Dlugosch², Carsten Prinz³

(1) Bundesanstalt für Materialforschung und –prüfung (BAM), 8.0 Non-destructive testing, (2) Leibniz Institute for Applied Geophysics, Petrophysics & Borehole Geophysics, (3) Bundesanstalt für Materialforschung und –prüfung (BAM), Structure Analysis.

SIP signals of artificial rocks

Zhuang Xu^{1,2}, Chi Zhang¹, Wanzhong Shi²

(1) Department of Geology, The University of Kansas, (2) School of Resources, China University of Geosciences (Wuhan), Wuhan, China.

Data processing and inversion: Wed 10/3 10:30 am-12:30 pm

3D modelling of time-domain full-decay induced polarization

Line Meldgaard Madsen¹, Gianluca Fiandaca¹, Hong Zhu Cai¹, Kim Engebretsen¹, Esben Auken¹

(1) Aarhus University, Department for Geoscience, HydroGeophysics Group.

Extending accurate four-electrode spectral induced polarization measurements into the kHz range by quantifying the phase errors resulting from leakage currents

Chen Wang¹, Dimitrios Ntarlagiannis¹ and Lee Slater¹

(1) Rutgers University-Newark, Department of Earth and Environmental Science.

Three dimensional forward modelling of induced polarization in inhomogeneous media in time-domain electromagnetic soundings

Marco A. Oliva Gutiérrez¹, Luis A. Gallardo¹ and Carlos Flores¹

(1) Dept. of Applied Geophysics, Ensenada Center for Scientific Research and Higher Education, Ensenada, Mexico.

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Field-scale comparison of frequency- and time-domain spectral induced polarization

Pradip Kumar Maurya¹, Gianluca Fiandaca¹, Anders Vest Christiansen¹, Esben Auken¹

(1) HydroGeophysics Group, Department of Geoscience, Aarhus University, Aarhus C, Denmark.

Comparison of TDIP and SIP measurements in the field scale

Tina Martin¹, Adrian Flores-Orozco², Thomas Guenther³, Torleif Dahlin¹

(1) Lund University, Engineering Geology,

(2) TU Wien, Department of Geodesy and Geoinformation,

(3) Leibniz Institute for Applied Geophysics, Geoelectric and Electromagnetics.

2D inversion of time domain induced polarization data: Investigation of the LIAS Epsilon black shales near Bramsche/Germany

J. Hauser¹, P. Yogeshwar¹, B. Tezkan¹

(1) Institute of Geophysics and Meteorology, University of Cologne, Germany.

Induction-free acquisition range in spectral time- and frequency-domain induced polarization at field scale

Gianluca Fiandaca

Aarhus University, Department for Geoscience, HydroGeophysics Group.

On the strategy of IP inversion in complex media

Victor Kulikov^{1,2}, Nikita Zorin²

(1) Moscow State University, Department of Geophysics, (2) Nord-West Ltd.

Examining the relaxation time distribution determined from time-domain induced polarization method

Deqiang Mao¹, André Revil², Bin Liu³

(1) School of Civil Engineering, Shandong University, Jinan, China, (2) Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, IRD, IFSTTAR, ISTerre, Grenoble, France, (3) Research Center of Geotechnical and Structural Engineering, Shandong University, Jinan, China.

First application of the newly developed 3D Cole Cole inversion algorithm on the time domain IP data from Krauthausen/Germany

Hannah Langenbach¹ and Bülent Tezkan¹

(1) Institute of Geophysics and Meteorology, University of Cologne, Germany.

Automated Detection of IP Effects in AEM Data Using Deep Neural Networks

Dave Marchant¹, Justin Granek¹, Mike McMillan¹, Eldad Haber²

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(1) Computational Geoscience Inc, (2) University of British Columbia, Department of Earth, Ocean and Atmospheric Sciences.

Inclusion of time-domain induced polarization data resolves wellknown resistivity-thickness equivalences

Line Meldgaard Madsen¹, Gianluca Fiandaca¹, Anders Vest Christiansen¹, Esben Auken¹

(1) Aarhus University, Department for Geoscience, HydroGeophysics Group.

SIP simultaneous inversion method giving geological connection among multi-frequency data

Bitnarae Kim¹, Myung Jin Nam¹, Jeong-Sul Son³

(1) Department of Energy & Mineral Resources Engineering, Sejong University, Seoul, Korea, (2) Korea Institute of Geoscience and Mineral Resources, Korea.

Biogeophysics: Thu 10/4 10:30 am – 12:30 pm

Assessing the potential of spectral induced polarization to detect in situ changes in iron reduction

C. Rosier¹, Gamal Abdel Aal², A. Price³, S. Sharma³, E. Atekwana^{3,4}

(1) College of Agriculture and Natural Resources, Plant and Soil Sciences, University of Delaware, Newark, DE, (2) Geology Department, Faculty of Science, Assiut University, Assiut, Egypt, (3) Boone Pickens School of Geology, Oklahoma State University, Stillwater, OK, (4) College of Earth, Ocean, and Environment, University of Delaware, Newark, DE.

Towards an effective characterization of root electrical properties: a spectroscopic approach

Solomon Ehosioko^{1,2}, Sarah Garré², Thomas Kremer¹, Sathyanarayan Rao³, Andreas Kemna⁴, Johan Alexander Huisman⁵, Eggon Zimmermann⁶, Mathieu Javaux^{3,5} and Frédéric Nguyen¹

(1) Department of Architecture, Geology, Environment & Constructions, university of Liege, Belgium, (2) Biosystems Engineering Department, Gembloux Agro-Bio Tech, University of Liege, Belgium, (3) Earth and Life Institute, Environmental Science, Université catholique de Louvain, Belgium, (4) Department of Geophysics, Steinmann Institute, University of Bonn, Germany, (5) Agrosphere (IBG3), Forschungszentrum Juelich GmbH, Juelich, Germany, (6) Electronic Systems (ZEA-2), Forschungszentrum Juelich GmbH, Germany.

The effect of interactions between dissolved organic matter and organic contaminant on the electrical properties of soil

Gal Zakai¹, Nimrod Schwartz¹

(1) The Hebrew University of Jerusalem, Rehovot Israel, Department of Soil and Water Sciences, Robert H. Smith Faculty of Agriculture, Food and Environment.

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ELECTRICAL SIGNATURE OF ROOTS IN HYDROPONIC SOLUTION AND IN SOIL

Tsukanov Kuzma¹, Schwartz Nimrod¹

(1) The Hebrew University of Jerusalem, Rehovot Israel, Department of Soil and Water Sciences, Robert H. Smith Faculty of Agriculture, Food and Environment.

IP lab measurements on E. coli-sand-mixtures

Tina Martin¹, Catherine Paul²

(1) Lund University, Engineering Geology, (2) Lund University, Water Resources Engineering and Applied Microbiology.

Laboratory SIP signature associated with iron and manganese oxide dissolution caused by anaerobic degradation

Perrine Fernandez¹, Andrew Binley², Esther Bloem³ and Helen French^{1,3}

(1) Norwegian University of Life Sciences, Department of Environmental Sciences, (2) Lancaster University, Lancaster Environment Centre, (3) Norwegian Institute of Bioeconomy research, division of Environmental and Natural Resources.

IP responses of jet fuel contaminated soils – a laboratory investigation

Pauline Kessouri¹, Omer Katzir¹, Matteo Camporese², Giorgio Cassiani³, Anna Botto², Mario Putti⁴, Alex Furman¹

(1) Technion - Israel Institute of Technology, Department of Civil and Environmental Engineering, (2) University of Padova, Department of Civil, Environmental and Architectural engineering, (3) University of Padova, Department of Geosciences, (4) University of Padova, Department of Mathematics.

SPECTRAL INDUCED POLARIZATION OF BIOCHAR IN VARIABLY SATURATED SOIL

Zhan Gao¹, Franz-Hubert Haegel¹, Egon Zimmermann², Harry Vereecken¹, Johan Alexander Huisman¹

(1) IBG 3: Agrosphere, Forschungszentrum Jülich, Germany, (2) ZEA 2: Electronic systems, Forschungszentrum Jülich, Germany.

Integration of geophysical and geochemical approaches to improve the understanding of peatland degradation

Laura McAnallen¹, Rory Doherty¹ and Panagiotis Kirmizakis¹

(1) Queen's University Belfast.

Inferring microbial abundance and metabolic state from spectral induced polarization (SIP) signals

Adrian Mellage¹, Christina Smeaton¹, Alex Furman², Estella Atekwana³, Fereidoun Rezanezhad¹, Philippe Van Cappellen¹

(1) University of Waterloo, Department of Earth and Environmental Sciences, (2) Technion – Israel Institute of Technology, Civil and Environmental Engineering, (3) University of Delaware, Department of Geological Sciences.

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Spectral induced polarization as a monitoring tool for in-situ microbial induced calcite precipitation processes

Sina Saneiyani¹, Juliette Ohan², Jungwhoon Lee³, Frederick Colwell^{2,4}, Susan Burns³, Dimitrios Ntarlagiannis¹

(1) Department of Earth and Environmental Sciences, Rutgers, The State University of New Jersey – Newark, NJ, (2) Department of Microbiology, Oregon State University, Corvallis, OR, (3) College of Engineering, Georgia Institute of Technology, Atlanta, GA, (4) College of Earth, Ocean, and Atmospheric Sciences, Oregon State University, Corvallis, OR.

SIP CONTRIBUTION TO PLANT/SOIL INTERACTION STUDY: FIRST RESULTS

Myriam Schmutz^{1,2}, Adrian Flores Orozco³, Tina Martin⁴, Abdoulaye Balde^{1,2}, Susan S. Hubbard²

(1) EA4592, Bordeaux INP - University Bordeaux Montaigne, Pessac, France, (2) Lawrence Berkeley National Laboratory, California, USA, (3) TU Wien, Geodesy and Geoinformation – Geophysics Research Division, Vienna, Austria, (4) Engineering Geology, Lund University, Lund, Sweden.

Spectral induced polarization signatures of sediments in reducing environments

Edmundo Placencia-Gómez¹, James E. Szecsody¹ and Timothy C. Johnson¹

(1) Pacific Northwest National Laboratory, Richland, WA, USA.

Monitoring the transformation of iron oxide into iron sulphide with the method of spectral induced polarization

Sven Nordsiek¹, Stefan Peiffer¹, Ben Gilfedder², Adrian Flores-Orozco³ and Sven Frei¹

(1) University of Bayreuth, Department of Hydrology, Bayreuth, Germany, (2) University of Bayreuth, Limnological Research Station, Bayreuth, Germany, (3) TU Wien, Department of Geodesy and Geoinformation, Research Group Geophysics, Vienna, Austria.

Bioelectrical impedance spectroscopy and ERT plant root-soil system characterization

Luca Peruzzo^{1,2}, Chunwei Chou¹, Xiuwei Liu³, Petr Petrov¹, Gregory Newman¹, Elison Blancaflor³, Xuefeng Ma³, Yuxin Wu¹

(1) Earth & Environmental Sciences Area, Lawrence Berkeley National Lab, Berkeley, (2) Institut Polytechnique de Bordeaux ENSEGID, France, (3) Noble Research Institute, Ardmore, OK.

The Effect of Microbial Growth on the Spectral Induced Polarization Response in Hanford Vadose Zone Sediment in the presence of Autunite Mineral

Alejandro Garcia¹, Yelena Katsenovich², Dean Whitman³, Brady Lee⁴

(1) Florida International University, Department of Earth and Environment, (2) Florida International University, Applied Research Center, (3) Florida International

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University, Department of Earth and Environment, (4) Pacific Northwest National Laboratory.

IP Modeling: Thu 10/4 10:30 am – 12:30 pm

The implication of a new SIP model on pore attributes characterization

Fan Zhang¹, Qifei Niu¹, Chi Zhang¹

(1) The University of Kansas, Department of Geology

What's wrong with Wong? Evaluation of the strengths and weaknesses of the Wong model – an electrochemical model for the IP signature of metallic particles

Pauline Kessouri¹, Edmundo Placencia-Gomez², Lee Slater³

(1) Technion - Israel Institute of Technology, Department of Civil and Environmental Engineering, (2) Pacific Northwest National Laboratory, Richland, Washington, (3) Rutgers University – Newark, Department of Earth and Environmental Sciences.

On Possible Induced Polarization responses from time-domain measurements

Gianluca Fiandaca¹, Per-Ivar Olsson², Torleif Dahlin² and Esben Auken¹

(1) Aarhus University, Department for Geoscience, HydroGeophysics Group, (2) Lund University, Engineering Geology.

Re-parametrizations of Cole-Cole models for improved modelling of spectral induced polarization

Gianluca Fiandaca¹, Line Meldgaard Madsen¹, Pradip Kumar Maurya¹

(1) Aarhus University, Department for Geoscience, HydroGeophysics Group.

ESTIMATION OF BACTERIA CONCENTRATION FROM DEBYE DECOMPOSITION OF SIP RESPONSE FROM BACTERIAL GROWTH IN POROUS MEDIA

Andrea Ustra¹, Chi Zhang², Carlos Alberto Mendonça¹

(1) Universidade de São Paulo, Departamento de Geofísica, (2) University of Kansas, Department of Geology.

Different types of induced polarization: considerations about their mathematical modeling

Hallbauer-Zadorozhnaya V.¹, Santarato G.², Abu-Zeid N.²

(1) Tshwane University of Technology, South Africa, (2) University of Ferrara, Italy.

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Field applications: Fri 10/5 10:30 am – 12:30 pm
New perspectives brought by distributed systems for IP development Julien Gance ¹ , Orlando Leite ¹ , Catherine Truffert ¹ (1) IRIS Instruments, Orléans, France.
CHAMELEON II - Field Equipment for Resistivity Measurements up to 230 kHz Tino Radic ¹ , Andreas Hördt ² , Jan Mudler ² (1) Radic Research, (2) TU Braunschweig, Institute for Geophysics and Extraterrestrial Physics.
Electromagnetic induction measurements of induced polarization for characterization of near surface soils D.R. Glaser ¹ , B.E. Barrowes ¹ , K. O'Neil ² , and F. Shubitidze ² (1) Signature Physics Branch, US Army Cold Regions Research and Engineering Laboratory, Hanover, NH, (2) Thayer School of Engineering, Dartmouth College, Hanover, NH.
Subsurface imaging of water electrical conductivity, hydraulic permeability and lithology at contaminated sites by induced polarization Pradip Kumar Maurya ¹ , Nicola Balbarini ² , Ingelise Møller ³ , Vinni Rønde ² , Anders Vest Christiansen ¹ , Poul L. Bjerg ² , Esben Auken ¹ and Ginaluca Fiandaca ¹ (1) HydroGeophysics Group, Department of Geoscience, Aarhus University, Aarhus C, Denmark, (2) Technical University of Denmark, Department of Environmental Engineering, Bygningstorvet, Denmark, (3) Department of Groundwater and Quaternary Geology Mapping, Geological Survey of Denmark and Greenland (GEUS), Aarhus C, Denmark.
Application of resistivity and induced polarization methods during the study of sand-gravel deposits in Kaluga Region, Russia Svetlana Anoshina ¹ , Viktor Kulikov ¹ , Anastasia Solovyeva ² (1) Lomonosov Moscow State University, Department of Geophysics, (2) Nord-West Ltd, Department of Geophysics.
Field spectral induced polarization with square waveforms Christian Camerlynck ¹ , Pascal Sailhac ² , Nicolas Florsch ³ (1) Sorbonne Université, UMR 7619 METIS, (2) Université Paris Sud, UMR 8148 GEOPS, (3) Sorbonne Université, UMI 209 UMMISCO.
INDUCED POLARIZATION FOR MONITORING SOLIDIFICATION OF CUT-OFF WALLS: A FIRST APPROACH Carole Kaouane ¹ , Lucile Saussaye ¹ , Sérgio Palma-Lopes ² , Myriam Schmutz ³ (1) CEREMA Normandie Centre, LRR, (2) FSTTAR, Geo-END, (3) ENSEGID, Georesource et Environnement.

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Tracking secondary mineralization in hydrothermal systems with complex electrical soundings: 2D inversions of ERT and time-domain IP data at the Krafla volcano (Iceland) and comparison with laboratory data.

Léa Lévy 1,3 , Svetlana Byrdina 2 , Jean Vandemeulebrouck 2 , Freysteinn Sigmundsson 3 , Knútur Árnason 4 ,

Gylfi Páll Hersir 4 , Ólafur G. Flóvenz 4 , Benoit Gibert 5 , Philippe Labazuy 6 , Pierre Briole 1

(1) Ecole Normale Supérieure, Department of Geosciences, (2) University of Savoie-Mont Blanc, ISTerre CNRS, (3) University of Iceland, Nordic Volcanological Center, Institute of Earth Sciences, (4) ÍSOR-Iceland Geosurvey, (5) University of Montpellier, Géosciences Montpellier CNRS, (6) Observatoire de Physique du Globe de Clermont-Ferrand, Laboratoire Magma et Volcans.

Electrical Responses of Proppants: Field Tests in Shallow Hydraulic Fractures

Douglas LaBrecque¹, Lawrence Murdoch², William Slack³, Jessica Denison², Mohsen

(1) Multi-Phase Technologies, LLC, (2) Clemson University, Environmental and Engineering Sciences, (3) FRx Inc., (4) University of Texas Bureau of Economic Geology, Advanced Energy Consortium.

Multi-frequency EIT monitoring at the field scale - Challenges and experiences from the first year

Maximilian Weigand¹, Egon Zimmermann², Johan Alexander Huisman³, Andreas Kemna¹

(1) Department of Geophysics, Steinmann Institute, University of Bonn, Germany, (2) Electronic systems (ZEA-2), Central Institute for Engineering, Electronics, and Analytics, Forschungszentrum Jülich, Germany, (3) Agrosphere (IBG-3), Institute of Bio- and Geosciences, Forschungszentrum Jülich, Germany.

Using the Multi-Source Induced Polarization System for Gold Exploration in Azerbaijan

Gianfranco Morelli¹, Vusal Jalilov Eldar², Douglas LaBrecque³, Mikayil Naghiyev⁴, Fuad Huseynov⁴

(1) Geostudi Astier Srl, (2) AT Geotech, (3) Multi-Phase Technologies, LLC, (4) AzerGold.

Optimization of backwashing in rapid sand filters by time-domain IP monitoring

Thue Bording¹, Gianluca Fiandaca¹, Theis Raaschou Andersen², Line Meldgaard Madsen¹, Esben Auken¹

(1) Hydrogeophysics Group, Department of Geoscience, Aarhus University,

(2) Energy & Environment, VIA University College Horsens.

Monitoring seasonal variations of leaching from a landfill through time-domain induced polarization

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<p>Thue Bording¹, Gianluca Fiandaca¹, Esben Auken¹, Anders Vest Christiansen¹ (1) Hydrogeophysics Group, Department of Geoscience, Aarhus University.</p>
<p>Monitoring of in-situ remediation of chlorinated solvents contamination with the use of the Direct Current resistivity and time-domain Induced Polarization method</p> <p>Aristeidis Nivorlis¹, Torleif Dahlin¹, Matteo Rossi¹ (1) Lund University, Engineering Geology.</p>
<p>Induced-polarization imaging for the delineation of subsurface variability in clay-rich landslides</p> <p>Jakob Gallist¹, Matthias Bucker², Birgit Jochum³, Thomas Glade⁴, Adrian Flores Orozco¹ (1) Geophysics Research Group, Department of Geodesy and Geoinformation, Technische Universität Wien, (2) Institut für Geophysik und extraterrestrische Physik, Technische Universität Braunschweig, (3) Geological Survey of Austria, Department of Geophysics, (4) Geomorphological Systems and Risk Research, Department of Geography and Regional Research, University of Vienna.</p>
<p>Waterborne spectral induced polarization imaging to investigate stream-aquifer exchange</p> <p>Philipp Hoehn¹, Adrián Flores Orozco², Thilo Hofmann¹ (1) University of Vienna, Department of Environmental Geosciences Vienna, (2) TU-Wien, Department of Geodesy and Geoinformation.</p>
<p>LABORATORY AND FIELD IP INVESTIGATIONS AT THE GROUNDWATER-SURFACE WATER INTERFACE</p> <p>Paul McLachlan¹, Andrew Binley¹ (1) Lancaster University, UK, Lancaster Environmental Centre.</p>

INVITED TALKS

Petrophysics of / for SIP (Matthias Halisch1)

Matthias Halisch¹, Andreas Weller², Sabine Kruschwitz³, Zeyu Zhang⁴, Raphael Dlugosch⁵

(1) Leibniz Institute for Applied Geophysics (LIAG), Dept.5 – Petrophysics & Borehole Geophysics, (2) Clausthal University of Technology, Institute of Geophysics, (3) Bundesanstalt für Materialforschung und –prüfung (BAM), (4) Southwest Petroleum University, School of Geoscience and Technology, (5) Leibniz Institute for Applied Geophysics (LIAG), Dept.5 – Petrophysics & Borehole Geophysics

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Strategies for 3D inversion of IP data (Douglas W. Oldenburg)

Douglas W. Oldenburg¹, Seogi Kang²

(1) University of British Columbia, Earth, Ocean, and Atmospheric Sciences.

Electrical interactions between biofilms and surfaces (Sarah M. Glaven)

Lina J. Bird¹, Elizabeth Onderko¹, Daniel Phillips², Brian J. Eddie³, Matthew Yates³, Anthony P. Malanoski³, Leonard M. Tender³ and Sarah M. Glaven³

(1) National Research Council, Washington, DC, (2) American Society for Engineering Education, Washington, DC, (3) Naval Research Laboratory, Washington, DC.

IP MODELLING (Matthias Bucker)

Matthias Bucker¹

(1) TU Braunschweig, Institute for Geophysics and extraterrestrial Physics.

FIELD APPLICATIONS OF TIME-DOMAIN INDUCED POLARISATION (Torleif Dahlin)

Torleif Dahlin¹

(1) Lund University, Engineering Geology.