EAGE

HYBRID

CONFERENCE & EXHIBITION

NEAR SURFACE GEOSCIENCE'21

29 AUGUST - 2 SEPTEMBER 2021 I BORDEAUX, FRANCE & ONLINE

27th | European Meeting of Environmental and Engineering Geophysics

1st | Conference on Hydrogeophysics
Contribution to Exploration and Management of Groundwater, Land-Use and Natural Hazards under a Changing Climate

2nd | Conference on Geophysics for Infrastructure Planning, Monitoring and BIM

PROGRAMME & CATALOGUE

WWW.NSG2021.ORG

#NSG2021

WELCOME TO
THE NEAR SURFACE GEOSCIENCE CONFERENCE & EXHIBITION 2021

27th
European Meeting of Environmental and Engineering Geophysics

1st
Conference on Hydrogeophysics
Contribution to Exploration and Management of Groundwater, Land-Use and Natural Hazards under a Changing Climate

2nd
Conference on Geophysics for Infrastructure Planning, Monitoring and BIM

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General information

Welcome to Bordeaux

Welcome to Bordeaux and the Near Surface Geoscience Conference & Exhibition 2021. With this Programme & Catalogue we will help you make the most of your stay. It contains all necessary information about the workshops, field trips, technical programme, exhibition, and social programme.

This year's event incorporates the following meetings:

- 27th European Meeting of Environmental and Engineering Geophysics
- 1st Conference on Hydrogeophysics : Contribution to Exploration and Management of Groundwater, Land-Use and Natural Hazards under a Changing Climate
- 2nd Conference on Geophysics for Infrastructure Planning, Monitoring and BIM

All full hybrid conference delegates have access to the Technical Programme of each of the three meetings and the exhibition, on-site and online, excluding workshops and field trips.

The social programme includes the Welcome Reception and the Conference Evening.

The Exhibition is the central place where companies from all disciplines display their products and services. The Coffee Breaks and Welcome Reception take place at the Exhibition and provide excellent networking opportunities in an informal setting.

Programme overview

On-site

Sunday, 29 August

09:30 - 17:00	Workshop 2: Electrical Properties of Clay Rocks

Monday, 30 August

10:00 - 11:00	Opening Session
10:30 - 19:00	Exhibition Open
11:30 - 17:10	Technical Programme
17:10 - 19:00	Welcome Reception

Tuesday, 31 August

09:00 - 17:00	Exhibition Open
09:00 - 17:00	Technical Programme
12:50 - 14:00	Student Networking Event
19:00 - 23:00	Conference Evening

Wednesday, 1 September

09:00 - 16:00	Exhibition Open
09:00 - 17:00	Technical Programme
17:00 - 17:30	Closing Session

Thursday, 2 September

Field Trip 1	Geology and Bordeaux Wines (AOC Saint-Emilion)

On-line

Monday, 30 August

10:00 - 11:00 CEST	Opening Session
10:30 - 19:00 CEST	Exhibition Open
11:30 - 17:10 CEST	Technical Programme

Tuesday, 31 August

09:00 - 17:00 CEST	Exhibition Open
09:00 - 17:00 CEST	Technical Programme
12:50 - 14:00 CEST	Happy NSG Hour

Wednesday, 1 September

09:00 - 16:00 CEST	Exhibition Open
09:00 - 17:00 CEST	Technical Programme
17:00 - 17:30 CEST	Closing Session

Opening Hours EAGE Registration Desk On-site

Sunday, 29 August	08:30 - 17:00
Monday, 30 August	08:30 - 19:00
Tuesday, 31 August	08:00 - 17:00
Wednesday, 1 September	08:00 - 16:00

NSG2021 Event App

To access the app, you first have to download the InEvent App from the App Store (Apple) or Play Store (Android). On the first screen you will be asked for a code. Please use the **code 6826** and select "**North America**" (if asked). You can now log in with the credentials you received by email (Confirmation Letter or Important Information).

The NSG21 Event App will allow you to:

- Access the extended abstracts
- View live sessions online
- View the online exhibition & list of exhibitors
- Network
- See the plan of the venue
- Find travel advice, catering options, social programme information
- Read the HSSE & COVID-19 instructions
- And more!

For more information on the app, please ask a member of staff at the EAGE booth #17.

About Bordeaux

A world-renowned city, Bordeaux is famed for its vineyards, gastronomy, and unique art de vivre. But there's more! Offering an intoxicating mix of rich historical heritage and modernity, the city is home to stunning contemporary architectural works. To explore the city and its heritage, you will be spoilt for choice. Whether you wish to wander through Bordeaux's World Heritage area and its beautiful quarters, discover the city's sites and monuments by bike, visit its museums, enjoy a romantic weekend, or travel with your children, you won't be bored!

Getting around Bordeaux

With 3 tram lines, a vast metropolitan bus network, river shuttles, a self-service or rental bike and car system, you will optimize your trips by alternating bus, tram, bike and car! On the menu: rental of vans, cars with driver and taxi, the choice is yours!

Venue

The Palais des Congrès, with its contemporary architecture focusing on natural light, is located in the heart of the Bordeaux Lac business district. The Bordeaux Congress Centre is directly accessible from the St Jean Train Station and the City Centre, with only a 20 minutes tram ride.

Health & Safety

Please refer to the Plan of the Venue (page 5) for the location of the First Aid. In case of emergency, always follow the instructions given by the staff of the venue and/or emergency services. Use the emergency exits to leave the building. Stay calm and avoid panic.

Catering

Coffee/tea breaks are included in the registration fee for all registered delegates and will be served at the Exhibition. Lunch is not included in your conference and exhibition registration. Lunch will be available only to registrants who pre-ordered via the online lunch order form prior to the start of the event. For any questions, please go to the Registration desk.

Wi-Fi

You will have access to Wi-Fi throughout the venue if you connect to the network "**EAGE**" and type in the password "**EAGE2021**".

Event Papers on Earthdoc and the App

EarthDoc is EAGE's online geoscience database and enables you to browse through thousands of event papers and journal articles online. EAGE members have free access to Earth-Doc (www.earthdoc.org).

The event papers of the three meetings are available online. Go to www.earthdoc.org and log in with your EAGE membership credentials. If you are yet to be processed as an EAGE member, you can also access the papers via the EAGE Event App.

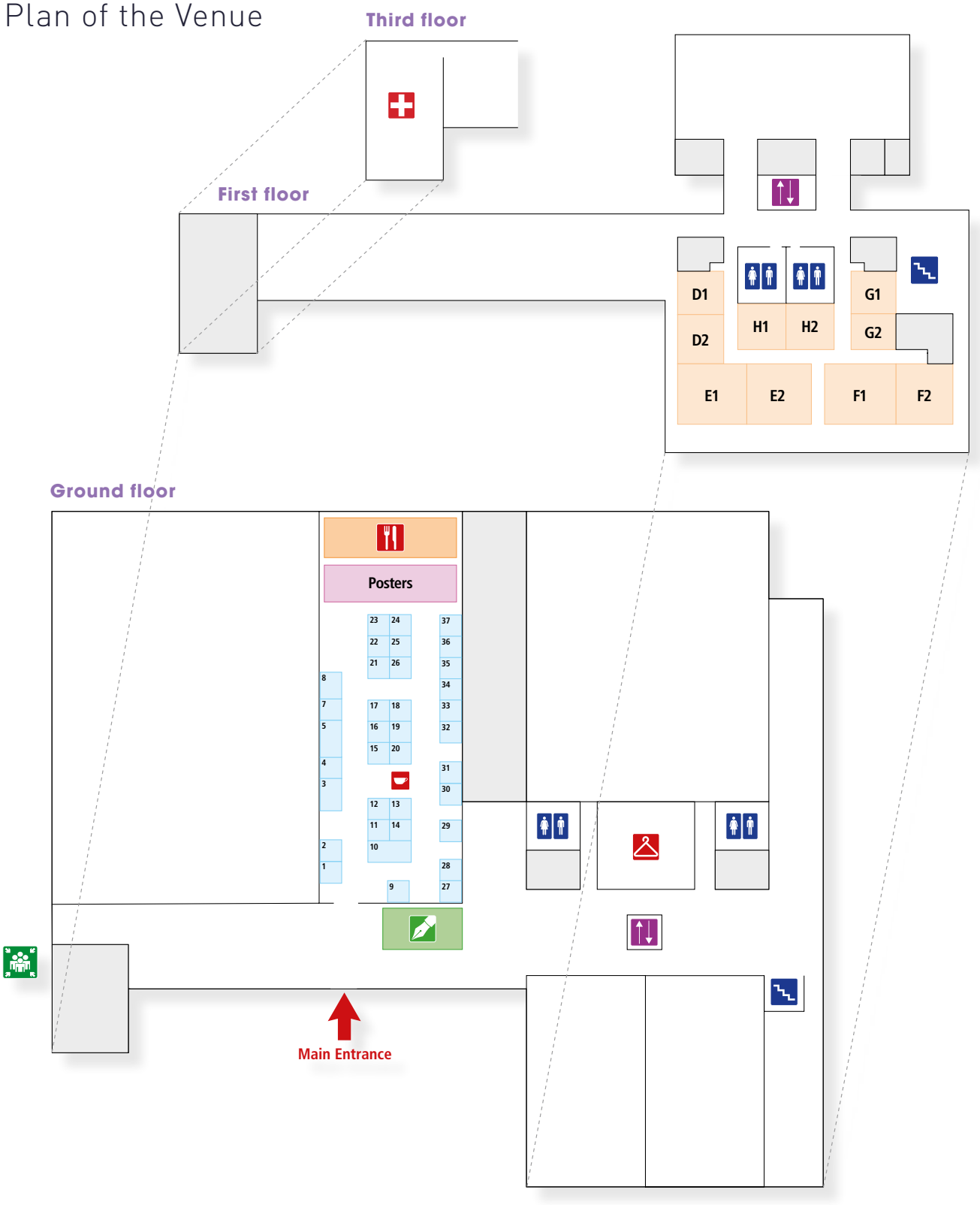
Social Media

Stay connected with EAGE through our Social Media channels on Facebook, LinkedIn and Twitter, and join the conversation with #NSG2021.

Local Advisory Committee

Colette Sirieix (Chair)	University of Bordeaux I2M
Catherine Truffert (Co-chair)	IRIS Instruments
Vincent Allegre	University of Bordeaux I2M
Konstantinos Chalikakis	Avignon University
Philippe Cosenza	University of Poitiers IC2MP
François Demontoux	University of Bordeaux IMS
Olivier Douez	BRGM Nouvelle-Aquitaine Bordeaux
Jérôme Gouin	Pôle Avenia
Delphine Lacanette	Bordeaux INP I2M
Olivier Le Roux	Bordeaux INP
Antoine Marache	University of Bordeaux I2M
Mehdi Sbartai	University of Bordeaux I2M
Myriam Schmutz	Bordeaux INP
Cécile Verdet	University of Bordeaux I2M

Plan of the Venue



Highlights of NSG 2021

Opening Session

Monday, 30 August | 10:00 - 11:00
Location: Exhibition

Join us for the Opening Session where we will kick off the event by discussing the role of *Near-Surface Geoscience as a Key Enabler for a Smooth energy Transition*.

Student Networking Event

Tuesday, 31 August | 12:50 - 14:00
Location: Exhibition

Are you a student and looking for the next step at your career? Join us at our dedicated NSG student event where you will be able to meet company representatives in an informal setting and get their take on career prospects within their organisation.

Social Programme

Welcome Reception

Monday, 30 August | 17:10 – 19:00
Location: Exhibition

Meet with exhibitors, catch up with your colleagues and expand your network while enjoying delicious finger food and drinks.

Conference Evening

Tuesday, 31 August | 19:00 - 23:00
Location: Bateau Restaurant Le Sicambre
24 quai Chartrons, 33000 Bordeaux

The Conference Evening will be hosted on board the Sicambre for a memorable river cruise on the Garonne river. Join us for an informal evening to discover the beauty of the UNESCO World Heritage quays and illuminated bridges of Bordeaux, while savouring a delicious dinner. All registered full delegates are invited to this extraordinary venue for a dinner filled with hospitality, gastronomy and entertainment.

Make sure you pick up your conference evening invitation at the Registration desk in the conference venue!

EAGE Booth

The EAGE booth #17 is the one stop shop for all that EAGE has to offer. Come by to meet the people behind our communities, our membership, our student activities and much more throughout the week. Have us explain the EAGE Recognition programme to you and pick up your special pin if you reached the status of Silver, Gold or Platinum member.

Closing Session

Wednesday, 1 September | 17:00 – 17:30
Location: Room E1

Join us as we look forward to the next Near Surface Geoscience Conference & Exhibition in Belgrade in 2022, and officially close this year's activities.

Thanks to...

We would like to thank our reviewers as well as the technical committees of all three parallel meetings, for their valuable assistance in preparing the technical programme of Near Surface Geoscience 2021. In addition, thank you to everyone chairing a session, convening a workshop or leading a field trip and also to those who took part in our Local Advisory Committee! Without the help of our volunteers and community, EAGE would not be able to continue to expand and improve on our exciting events, such as NSG2021.

Workshops

Workshop 2: Electrical Properties of Clay Rocks: Challenges and opportunities

Sunday, 29 August | 9:30 – 17:00

The aim of the workshop is to bring together geophysicists and clay scientists working on the characterization of the frequency dependence electrical properties of clays minerals, mixtures and clayey rocks. We welcome field, technical, experimental, or modeling contributions that address the following key issues. Can we:

- correctly model the clay electrical behavior at the pore scale?
- upscale DC resistivity or complex resistivity spectra at the laboratory scale to the EM geophysical exploration scale?
- develop petrophysical upscaling procedures, from the mineral/water interface (nano/micrometric) to the field scale (decametric to kilometric)?
- improve numerical modeling and inversion to allow quantitative interpretation of complex resistivity at field scale, up to several kilometers?
- develop new SIP and EM Induction devices in order to image densely over large zone the shallow earth subsurface (from deca to hectometers) particularly rich in clay materials?

Field Trips

Field Trip 1: Geology and Bordeaux Wines (AOC Saint-Emilion)

Thursday, 2 September | 7:30 – 19:00

From a geological point of view, the Saint-Emilion wine label's area is constituted by a "substrate" of tertiary deposits: Eocene and Oligocene limestones sands and clays, and, in some parts, a cover of quaternary fluvial terraces. This field trip aims to highlight these geological influences on wine characteristics.

About the conferences

27th European Meeting of Environmental and Engineering Geophysics

For its 27th edition, the European Meeting of Environmental and Engineering Geophysics will continue to build on 27 years of research and development in the field of engineering geophysics. The three day scientific conference will cover a wide array of topics related to the near surface field, drawing on a wealth of excellent plenary talks, oral and poster presentations, and rich discussions.

Being Europe's most significant meeting of its kind, the 27th European Meeting of Environmental and Engineering Geophysics offers participants the opportunity to meet the people behind the most cutting-edge research across a range of topics, from the applications of geophysics to the emergence of new technologies and research trends. Take part in the bright future of environmental and engineering geophysics, and join us on 29 August - 2 September 2021, in Bordeaux, France.

Scientific Committee

Colette Sirieix (Chair)	University of Bordeaux I2M
Catherine Truffert (Co-Chair)	IRIS Instruments
Vincent Allègre	University of Bordeaux I2M
Adnand Bitri	BRGM
Albert Casas	University of Barcelona
Philippe Cosenza	University of Poitiers IC2MP
Stéphane Garambois	University of Grenoble Alpes & CNRS / ISTerre / UMR 5275
Jean François Girard	University of Strasbourg / IPGS / EOST
Jean François Lataste	University of Bordeaux I2M
Donatienne Leparoux	University of Gustave Eiffel
Alexis Maineult	CNRS / Sorbonne University - UMR 7619 METIS
Gianfranco Morelli	Geostudi Astier srl
Marina Rosas Carbajal	IPGP
Nadia Sénéchal	University of Bordeaux / UMR CNRS EPOC / OASU

1st Conference on Hydrogeophysics

Contribution to Exploration and Management of Groundwater, Land-Use and Natural Hazards under a Changing Climate

Scientific Committee

Konstantinos Chalikakis (Chair)	Avignon University
Max Halkjær (Co-Chair)	Ramboll Group
George Apostolopoulos	National Technical University of Athens
Esther Bloem	Norwegian Institute of Bioeconomy Research
Anders Vest Christiansen	Aarhus University
Nathalie Dörflinger	Danone Waters
Adrián Flores-Orozco	Technical University of Wien
Thomas Günther	Leibniz Institute for Applied Geophysics
Olivier Kaufmann	University of Mons
Patrick Lachassagne	University of Montpellier
Frédéric Nguyen	University of Liege
Myriam Schmutz	Bordeaux INP
Lee Slater	Rutgers University Newark
Panos Tsourlos	Aristotle University of Thessaloniki
Ute Wollschläger	Helmholtz Centre for Environmental Research

Over the last three decades, hydrogeophysics has emerged as an important sub-discipline in hydrogeology and ecohydrology. It involves investigations of the structure and processes of the subsurface environment, at different spatiotemporal scales, by identifying key properties and state variables related to water flow and solute transport. The first EAGE conference on Hydrogeophysics, in Bordeaux, 2021, will bring together geoscientists from academia, research institutes, industry, service and engineering companies to present and discuss the state-of-art in the latest research and advances on Hydrogeophysics.

The objective is to provide a comprehensive overview of the state of hydrogeophysical research (tools and theoretical advances) for investigating dynamic processes in subsurface settings regarding various environmental issues such as water resources management, remediation, natural and anthropogenic hazards as well shallow geothermal energy. It will allow identification of challenges and ways forward within an integrated cross disciplinary Framework.

The technical program of this first EAGE conference on Hydrogeophysics will cover the widest range of topics on geophysics (e.g. airborne/satellite, surface based and logging) applied in all types of hydrosystems of the Critical Zone (e.g. fractured, karstified and porous aquifers, volcanic and complex aquifers, island aquifers, wetlands, saltwater intrusion, permafrost) and at different temporal (from seasonal to high frequency monitoring) and spatial scales (from sample to the catchment scale).

2nd Conference on Geophysics for Infrastructure Planning, Monitoring and BIM

After a successful first conference on Geophysics for Infrastructure Planning, Monitoring and BIM in 2019, we are pleased to announce that the second conference will be held from 29 August to 2 September 2021 in the French city of Bordeaux, within the framework of the wider scientific and technical event: EAGE Near Surface Geoscience Conference & Exhibition 2021.

This conference will provide an attractive forum where researchers and professionals can share geophysical innovation and technologies aimed at providing solutions for the challenges of the infrastructure life cycle. Geophysics and Non-Destructive Testing (NDT) can play an essential role prior, during and after the construction of engineered structures and for their long-term monitoring, evaluation and maintenance. We look forward to a fruitful exchange among academia, research institutions, governmental organisations, industry and end-users, because effective and useful communication among each other is essential.

We encourage contributions in the form of oral or poster presentations on the application of geophysics and NDT in the broad construction and maintenance sectors (e.g. tunnels, bridges, roads, runways, railroads, etc.), for water retaining/supply and power supply infrastructures as well as detection and localisation of underground objects and buried utilities. We will also cover the ever-increasing need of improving the way geophysical results are integrated with other design information used by geotechnical and civil engineers, planners and asset owners. Therefore, we will focus on assessment of infrastructure using parameters derived from Geophysics, NDT and monitoring, as well as on data visualisation and registration in Building Information Modelling (BIM) and Geographic Information Systems (GIS). We intend to provide a unique platform for communication alignment across Geophysics, Civil Engineering, town planners and policy makers. Finally, special interest will be given to applications of new and emerging geophysical technologies to infrastructure such as airborne, satellite, UAV, fiber optics, digital sensors among others, as well as data processing using artificial intelligence (e.g. data driven, machine learning, data fusion, etc.).

Scientific Committee

Beatriz Benjumea (Chair)	Spanish Geological Survey (IGME)
Arre Verweerd (Co-Chair)	AECOM
Xavier Dérobert	University Gustave Eiffel
Thomas Dickmann	Amberg Technologies - Switzerland
Shane Donohue	University College Dublin
Charlotte Krawczyk	GFZ-Postdam
Alireza Malehmir	Uppsala University
Loic Michel	Sercel
Ernst Niederleithinger	BAM - Federal Institute for Materials Research and Testing
Andreas Pfaffhuber	EMerald Geomodelling
Robert Sturk	Skanska Sweden
Koya Suto	Terra Australis Geophysica Pty. Ltd.
Mehdi Sbartaï	University of Bordeaux I2M
Léon olde Scholtenhuis	University of Twente
Valentina Socco	Politecnico di Torino
Mats Svensson	Tyréns AB

Technical Programme At a glance

The technical programme consists of oral and poster presentations on a broad range of near surface related topics.

Monday, 30 August 2021

	27TH EUROPEAN MEETING			1ST HYDROGEOPHYSICS	1ST HYDROGEOPHYSICS	2ND INFRASTRUCTURE
	ROOM D	ROOM E	POSTER AREA	ROOM H	POSTER AREA	ROOM F1
11:30	New Technologies and Innovative Research Trends I	Artificial Intelligence, Machine Learning and Data Fusion			Posters: Critical Zone Interfaces	
12:50	Lunch Break					
14:00	New Technologies and Innovative Research Trends II	Polars, Alpines Regions & Permafrost Investigation	Posters: New Technology and Hot Zones & Natural Hazard and Preservation of Cultural Heritage	Critical Zone Interfaces I		Geophysics and NDT for Water Related Infrastructure
15:20	Coffee Break					
15:50	Best of SAGEEP	Best of KEGS	Posters: Geophysics for Mineral Exploration and Mining	Critical Zone Interfaces II		Detection and Localisation of Objects and Utilities
17:10 - 19:00	Icebreaker Reception					

Tuesday, 31 August 2021

	27TH EUROPEAN MEETING			1ST HYDROGEOPHYSICS	1ST HYDROGEOPHYSICS	2ND INFRASTRUCTURE	2ND INFRASTRUCTURE
	ROOM D	ROOM E1	POSTER AREA	ROOM H	POSTER AREA	ROOM F1	POSTER AREA
09:00	Geohazard and Anthropogenic Hazard Studies I	Geophysics in Agricultural Studies	Posters: Modelling, Inversion, and Data Processing	Aquifer Characterization		Assessment and Monitoring of Damaged or Unstable Infrastructure	
10:40	Coffee Break						
11:10	Geohazard and Anthropogenic Hazard Studies II	Laboratory Measurements and Rock Physics	Posters: 27th European Meeting Combined II	Environmental Characterization and Remediation I	Posters: Hydrogeophysics Combined	Geophysics and NDT for Transportation Infrastructure	

Technical Programme information is accurate as of 20 August 2021. For the most up to date information, please visit **www.NSG2021.org**

	27TH EUROPEAN MEETING			1ST HYDROGEOPHYSICS	1ST HYDROGEOPHYSICS	2ND INFRASTRUCTURE	2ND INFRASTRUCTURE
	ROOM D	ROOM E1	POSTER AREA	ROOM H	POSTER AREA	ROOM F1	POSTER AREA
12:50	Student Networking Event						
12:50	Lunch Break (Tue)						
14:00	Special Session: Advanced Geophysical Imaging of Plant-Soil Interactions	Marine Geophysical Studies		Environmental Characterization and Remediation II		Data Analysis and Sharing using BIM and GIS	
15:20	Coffee Break						
15:50 - 17:10			Posters: Modelling, Inversion, and Data Processing		Posters: Hydrogeophysics Combined		Posters: Infrastructure Planning, Monitoring and BIM
19:00 - 23:00	Conference Evening						

Wednesday, 1 September

	27TH EUROPEAN MEETING			1ST HYDROGEOPHYSICS	2ND INFRASTRUCTURE
	ROOM D	ROOM E1	POSTER AREA	ROOM H	ROOM F1
09:00	Geophysics for Mineral Exploration and Mining I	Monitoring and Characterisation of the Subsurface		Advances in Methods from Monitoring, Modelling to Processes I	Applications of Emerging Technologies for Infrastructure
10:40	Coffee Break				
11:10	Geophysics for Mineral Exploration and Mining II	Modelling, Inversion, and Data Processing I	Posters: Monitoring and Characterisation of the Subsurface	Advances in Methods from Monitoring, Modelling to Processes II	Geophysical Methods for Engineering Site Characterization
12:50	Lunch Break				
					27TH EUROPEAN MEETING
14:00	Geophysics for Cultural Heritage I	Modelling, Inversion, and Data Processing II	Posters: 27th European Meeting Combined III	Novel Sensors and Systems I	Airborne and UAV Geophysics
15:20	Coffee Break				
15:40	Geophysics for Cultural Heritage II	3D Geophysical Studies		Novel Sensors and Systems II	
17:00	Closing Session				

Technical Programme information is accurate as of 20 August 2021. For the most up to date information, please visit **www.NSG2021.org**

Technical Programme

Oral Presentations | Monday 30 August

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

Opening Session

10:00 Opening Session

11:00 Coffee Break

ROOM D

New Technologies and Innovative Research Trends I

11:30 **Results of performance tests of electrodynamic vibratory seismic sources** - T. Burschil[1]*, H. Buness[1], P. Leineweber[2], U. Polom[1]
[1]Leibniz Institute for Applied Geophysics; [2]Geosym

Preliminary results from real and synthetic data using the MASW-Dual Streamer (DS) technique - H. Hamdan[1]*, G. Kritikakis[2], M. Harb[3], A. Vafidis[2]
[1]Petroleum Geosciences and Remote Sensing Program, Department of Applied Physics and Astronomy, University of Sharjah; [2]Applied Geophysics Lab, Technical University of Crete; [3]Arab Center for Engineering Studies (ACES)

Seismic monitoring with low-cost MEMS sensor arrays in Italy - V. Cascone[1]*, J. Boaga[1], G. Cassiani[1]
[1]University of Padova

Using 1C nodes in a 3C combination - benefits, and inconveniences - A. Ourabah[1]*, L. Petronio[2], A. Affatato[2], L. Baradello[2], N. Goujon[1], Z. Song[1]
[1]STRYDE; [2]OGS

ROOM E

Artificial Intelligence, Machine Learning and Data Fusion

Session Chairs: G. Grandjean (BRGM), A. Marache (University of Bordeaux)

11:30 **Diffraction recognition using deep learning** - M. Markovic Juhlin[1]*, R. Malehmir[2], A. Malehmir[1]
[1]Uppsala University; [2]Tetra Tech

Data fusion of ERT and infiltration tests, using Bayesian Maximum Entropy to mapping Saturated Hydraulic conductivity - S. Rabouli[1]*, M. Serre[2], V. Dubois[1], J. Gance[3], H. Henine[4], P. Molle[1], C. Truffert[3], R. Clement[1]
[1]INRAE-REVERSAAL; [2]University of North Carolina; [3]IRIS Instruments; [4]INRAE-HYCAR

Convolutional neural networks for the characterization of magnetic anomalies - J. Cardenas Chapellin[1]*, C. Denis[3], H. Mousannif[4], C. Camerlynck[2], N. FLORSCH[1]
[1]Unit for Mathematical and Computer Modeling of Complex Systems (UMI 209, UMMISCO), Sorbonne University; [2]Environment, Transfers and Interactions in Soils and Water Bodies (UMR 7619, METIS), Sorbonne University; [3]Computer Laboratory of Paris 6 (UMR 7606, LIP6), Sorbonne University; [4]Department of Computer Science, Cadi Ayyad University

Sparse data transformation for unsupervised clustering for the exploration ahead of tunnel face - A. Sapronova[1]*, P.J. Unterlas[1], J. Hecht-Méndez[2], T. Dickmann[2], T. Marcher[1]
[1]Institute of Rock Mechanics and Tunnelling, Graz University Of Technology; [2]Amberg Technology

12:50 Lunch Break

ROOM D

New Technologies and Innovative Research Trends II

Session Chair: A. Bitri (BRGM)

14:00 **A new flexible floating, towed transient electromagnetic system for hydrogeological mapping under surface water** - A.V. Christiansen[1]*, P.K. Maurya[1], F.E. Christensen[1], A. Kass[1], J.B. Pedersen[1], R.R. Frederiksen[1], N. Foged[1]
[1]Institute of Geoscience

Location accuracy of seabed nodes during 3D seismic survey for seep studying at Laptev sea. - D. Ilinskiy[1]*
[1]Shirshov Institute Of Oceanology Russian Academy Of Science

Verification of ERT numerical results of g11n and traditional configurations by quasi field modelling - S. Szalai[1,2]*, K. Szokoli[1], M.K. Baracza[3], M. Kárpi[3], P. Szűcs[4,5], I. Lemperger[1], K. Gribovszky[1], E. Prácser[1], M. Zubair[6], L. Szarka[1]
[1]Institute of Earth Physics and Space Science, Loránd Eötvös Research Network; [2]Department of Geophysics, University of Miskolc; [3]Research Institute of Applied Earth Sciences, University of Miskolc; [4]University of Miskolc, Institute of Environmental Management; [5]MTA-ME Geoengineering Research Group; [6]Department of Earth Science, IIT, 247667

Typical effects of the registration technology implemented in the GPR receiver - O. Gulevich[1]*, L. Volkomirskaya[1], A. Reznikov[1], V. Varenkov[1]
[1]IZMIRAN

ROOM E

Polars, Alpines Regions & Permafrost Investigation

14:00 **Perspectives in Ground-Penetrating Radar at high latitudes: from occasional imaging to automated continuous monitoring** - A. Saintenoy[1]*, E. Léger[1], C. Grenier[2], N.M. Thiéry[3]
[1]Université Paris-Saclay, CNRS, GEOPS; [2]IPSL/LSCE, CEA-CNRS-UVSQ, Université Paris-Saclay; [3]Université Paris-Saclay, CNRS, LISN

Capacitive electrical resistivity: an alternative non-invasive method for permafrost monitoring - S. Bazin[1]*, S.G. Syed[2], G.L. Gilbert[3], B. Etzelmüller[2]
[1]Institut Universitaire Européen De La Mer; [2]Oslo University; [3]Norwegian Geotechnical Institute

Active versus passive seismic monitoring of near-surface Arctic thawing - H.M. Stemland[1,2]*, T.A. Johansen[1,2,3], B.O. Ruud[1,2], R. Romeyn[2,4]
[1]University Of Bergen, Department of Earth Science; [2]Research Centre for Arctic Petroleum Exploration (ARCEx); [3]The University Centre in Svalbard (UNIS); [4]UiT The Arctic University of Norway, Department of Geosciences

15:20 Coffee Break

Oral Presentations | Monday 30 August

1ST CONFERENCE ON HYDROGEOPHYSICS		2ND CONFERENCE ON GEOPHYSICS FOR INFRASTRUCTURE PLANNING, MONITORING AND BIM	
Opening Session			
10:00	**Opening Session**		
11:00	**Coffee Break**		
ROOM H		**ROOM F1**	
12:50	**Lunch Break**		
Critical Zone Interfaces I Session Chairs: K. Chalikakis (Avignon University), N. Dorfliger (Danone Waters/Water Institute by Evian)		**Geophysics and NDT for Water Related Infrastructure** Session Chairs: L.V. Socco (Politecnico di Torino), S. Zoubir-Mehdi (University of Bordeaux 1)	
14:00	**Mapping biogeochemically active zones at the catchment-scale with induced polarization -** A. Flores Orozco[1]*, T. Katona[1], J. Gallistl[1], B. Gilfedder[2], M. Bücker[3], S. Frei[2], L. Pavlin[4], P. Blaschke[4], P. Strauss[5], G. Blöschl[4] [1]TU Wien, Research Unit Geophysics, Department of Geodesy and Geoinformation; [2]University of Bayreuth, Department of Hydrology,; [3]TU Braunschweig, Research Group Applied Geophysics, Institute for Geophysics and Extraterrestrial Physics; [4]TU Wien, Institute of Hydraulic Engineering and Water Resources Management; [5]Austria Institute for Land and Water Management Research, Federal Agency for Water Management	**14:00**	**Measuring shallow shear wave velocity profiles for earthquake ground motion estimation -** P. Somerville[1]* [1]AECOM
	Inversion of hydraulic conductivity from Induced Polarisation, Part A: methodology and verification - G. Fiandaca[1]*, L. Meldgaard Madsen[2], M. Olmo[1], L. Römhild[3], P. Maurya[2] [1]University of Milano "La Statale"; [2]Aarhus University; [3]Martin Luther University Halle-Wittenberg		**Overcoming signal-to-noise challenges with pole-dipole resistivity monitoring at a hydroelectric dam site -** D. Boulay[1]*, K. Butler[1] [1]University Of New Brunswick
	Characterizing the vadose zone transport dynamics by using a multi-method hydrogeophysical approach - M. Abbas[1]*, C. Mallet[1], C. Jodry[2], J. Baltassat[3], J. Deparis[3], A. Isch[1], M. Azaroual[1] [1]Univ. Orléans, CNRS, BRGM, ISTO, UMR 7327, F-45071, Orléans, France; [2]Institut Terre et Environnement de Strasbourg, Université de Strasbourg/EOST/ENGEES, CNRS UMR 7063, F-67084 Strasbourg, France; [3]BRGM, French Geological Survey, 45060 Orléans, France		**Constraining gravity inversion using interpreted GPR data -** F. Rahimzadeh[1]*, A. Rodgers[1], A. Faramarzi[1], N. Metje[1], M. Stringfellow[2] [1]University Of Birmingham; [2]RSK Engineering and Environmental Consultancy
	Identifying ice-rich layers in rock glaciers using geophysics: a case study in the Andes - G. De Pasquale[2], R. Valois[1,2]*, S. MacDonell[2], N. Schaefer[2] [1]Avignon University; [2]CEAZA		
15:20	**Coffee Break**		

Oral Presentations | Monday 30 August

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

	ROOM D		ROOM E
	Best of SAGEEP - ONLINE ONLY		**Best of KEGS - ONLINE ONLY**
15:50 - 17:10	**Application Of Artificial Neural Network To Forecast Geotechnical Parameters And Seismic Wave Velocity -** F. Johora[1]*, C. Hickey[1], H. Yasarer[1] [1]University Of Mississippi	15:50 - 17:10	**3D Geophysical Inversion And Integration Combined With A Structural Geological Interpretation: An Innovative Workflow For The Keats Discovery Zone, Queensway Project Newfoundland -** A. Aghaee[1]*, P. Shamsipour[1], B. Sharp[1], V. Janviershort[1] [1]GoldSpot Discoveries Corporation
	Efficient Hydrogeologic Characterization With A New Direct Push Magnetic Resonance System - E. Grunewald[1]* [1]Vista Clara Inc.		**Towards Geologic Inversions: Merging Geophysics, Petrophysics, and Geology with Machine Learning in Joint Inversions -** T. Astic[1]*, D.W. Oldenburg[1], L.J. Heagy[1], D. Fournier[2] [1]Geophysical Inversion Facility - University of British Columbia (UBC - GIF); [2]Mira Geoscience Ltd.
	Electrofacies Mapping Of The Santa Cruz And San Pedro Alluvial Floodplains With Multiple Geoelectrical Methods - M. Poje[1]*, D. Rucker[1], C. Baldyga[1], J. Cain[1] [1]Hydrogeophysics, Inc.		**Linking Geology and Geophysics: Mineralogy and Lithology from Physical Properties -** R. Enkin[1]*, W.A. Morris[2], T.S. Hamilton[1] [1]Geological Survey of Canada; [2]McMaster University
	Airborne Soil Conductivity Assessment Using Frequency Domain Electromagnetic Induction - B. Barrowes[1]*, D. Glaser[1], M. Prishvin[2], M. Coleman[1], F. Shubitidze[3] [1]US Army Corps of Engineers; [2]Subsurface Sensing Technologies and Consulting, LLC; [3]Dartmouth College		**Probabilistic Groundwater Salinity Mapping Using Airborne Electromagnetic Data In California's San Joaquin Valley -** L. Ball[1]*, T. Davis[2], B. Minsley[1], J. Gillespie[3], M. Landon[2] [1]U.S. Geological Survey; [2]U.S. Geological Survey; [3]U.S. Geological Survey

Oral Presentations | Monday 30 August

1ST CONFERENCE ON HYDROGEOPHYSICS

ROOM H

Critical Zone Interfaces II
Session Chairs: A.V. Christiansen (Aarhus University, Dept. of Geoscience), R. GUERIN (Sorbonne Université)

15:50 - 17:10	**Contribution of TDEM and ERT saltwater interface observations to developing decision-support seawater intrusion models -** C. Coulon[1,2,3]*, A. Pryet[4], J. Lemieux[1,2,3], B.J.F. Yrro[5], A. Bouchedda[5], E. Gloaguen[5], J. Comte[6], C.J. Dupuis[1], O. Banton[7] [1]Département de géologie et de génie géologique, Université Laval; [2]Centre d'études nordiques; [3]Centre québécois de recherche sur l'eau; [4]EA 4592 Géoressources et Environnement, Bordeaux INP and Univ. Bordeaux Montaigne, ENSEGID; [5]Institut national de la recherche scientifique, Centre Eau Terre Environnement (INRS-ETE); [6]School of Geosciences, University of Aberdeen; [7]UMR 1114 EMMAH Avignon Université – INRAE
	Mapping a fluvial aquifer in New Zealand using airborne TEM, seismic, and electrical soundings - R. Kellett[1]*, Z. Rawlinson[2], R. Westerhoff[2], R. Reeves[2], J. Smith[3], S. Harper[3], N. Foged[4], J. B. Pedersen[4], P. Maurya[4] [1]GNS Science; [2]GNS Science; [3]Hawkes Bay Regional Council; [4]HydroGeophysics Group, Department of Geoscience, Aarhus University
	Near surface electromagnetic survey to support the design of urban development plans - a case study - P. Thomsen[1]*, M. Halkjær[1], C. Sørensen[1], A.A. Behroozmand[1] [1]Ramboll
	Microgravimetric Monitoring of Hydrological Changes Related to Surface Mining - J. Mrlina[1]* [1]Institute of Geophysics CAS

2ND CONFERENCE ON GEOPHYSICS FOR INFRASTRUCTURE PLANNING, MONITORING AND BIM

ROOM F1

Detection and Localisation of Objects and Utilities
Session Chairs: L.L. Olde Scholtenhuis (University Of Twente)

15:50 - 17:10	**Fast near-surface investigation with surface-wave attributes -** M. Papadopoulou[1]*, C. Colombero[1], M. Staring[2], J. Singer[2], R. Eddies[3], M. Fliedner[4], F. Janod[3], V. Socco[1] [1]Politecnico di Torino; [2]Fugro Innovation & Technology; [3]Fugro; [4]Fugro
	Use of Deep Lerning on GPR data for parameter inversion of buried cylindrical pipes - R. Mohamed Jaufer[1]*, A. Ihamouten[2], S. Savant Todkar[4], F. Bosc[3], Y. Goyat[6], X. Dérobert[5] [1]Cerema Ouest - ENDSUM Angers, Logiroad; [2]Université Gustave Eiffel - MAST - LAMES laboratory; [3]Cerema Ouest - ENDSUM Angers; [4]Université Gustave Eiffel - COSYS; [5]Université Gustave Eiffel - GERS - GeoEND laboratory; [6]Logiroad
	Evaluating of a deep learning method for detecting exposed bars from images - P. Foucher[1]*, G. Decor[1,2], F. Bock[1,3], P. Charbonnier[1], F. Heitz[2] [1]Cerema, research team ENDSUM; [2]ICube, UMR 7357, University of Strasbourg, CNRS; [3]Spacetec Gmbh
	Deep convolutional neural network for estimation of depth and radius from GPR raw signals - R. Mohamed Jaufer[1]*, C. HEINKELE[4], N. LOUBAT[4], D. GUILBERT[3], A. IHAMOUTEN[2] [1]Cerema Ouest - ENDSUM Angers, Logiroad; [2]Université Gustave Eiffel - MAST - LAMES laboratory; [3]Cerema Ouest - ENDSUM Angers; [4]Cerema Est - ENDSUM Strasbourg

Poster Presentations | Monday 30 August

1ST CONFERENCE ON HYDROGEOPHYSICS

POSTER AREA/ONLINE

Posters: Critical Zone Interfaces

Session Chair: A.V. Christiansen (Aarhus University)

11:30	**Inversion of hydraulic conductivity from Induced Polarisation, Part B: field examples from five countries -** T. Martin[1]*, P.S. Pauw[2], M. Karoulis[2], A. Mendoza[1], T. Günther[3], L. Meldgaard Madsen[4], P.K. Maurya[4], J. Doetsch[5], S. Rejkjær[1], T. Dahlin[1], G. Fiandaca[6] [1]Lund University, Division of Engineering Geology; [2]Deltares, Department of Soil and Groundwater; [3]Leibniz Institute for Applied Geophysics; [4]Aarhus University, Department of Geoscience; [5]ETH Zurich, Department of Earth Science; [6]University Milano, Department on Earth Sciences "Ardito Desio"
	Geophysical characterization of near-surface formations in the La Villa River catchment (Los Santos, Panama) - F. Rejiba[1]*, A. Mojica[2], M. Schmutz[3], A. Ruiz[4], M.G. Castrellón[9], J.L. De Guevara[5], S. Saavedra[6], J. Fábrega[6], C. Finco[1], C. Schamper[7], L.H. Cavalcante Fraga[8], M. Llubes[10] [1]Normandie Univ, UNIROUEN, UNICAEN, CNRS, M2C; [10]UMR5563, GET, Observatoire Midi Pyrénées; [2]LIICA-CEI, Universidad Tecnológica de Panamá; [3]Géoressource et Environnement, Bordeaux INP, Université Bordeaux Montaigne; [4]Fundación INDICRI, Panama; [5]Facultad de Ciencias y Tecnología, Universidad Tecnológica de Panamá; [6]CIHH - Universidad Tecnológica de Panamá; [7]Sorbonne Université, CNRS, EPHE, UMR7619, Métis; [8]ENVISOL; [9]Universidad del Istmo
	Combining electrical sounding and tomography to explain artesian aquifer spring in andesitic volcanic setting - M. DUMONT[1], F. MOHAMAD[2], R. GUERIN[1]*, P. LACHASSAGNE[3], B. NUGAGRAHA[2], G. BROCARD[4], M. ALFADLI[2], A. FADILLAH[5], T. ISKANDARSYAH[2], A. SATRYA MUHAMMAD[5], N. DORFLIGER[6], V. PLAGNES[1] [1]Sorbonne Université; [2]Universitas Padjadjaran; [3]Université de Montpellier; [4]Université Louis Lumière-Lyon 2; [5]Danone Aqua group; [6]Danone Aqua group
	Groundwater dynamics in karst hydrosystem unsaturated zone; evidences from a 2-years SNMR monitoring - K. Chalikakis[1]*, N. Mazzilli[1], S.D. Carrière[2], G. Massonnat[3], C. Danquigny[1,3], A. Legchenko[4] [1]Avignon University, UMR 1114 EMMAH (INRAE-AU); [2]Sorbonne University, UMR 7619 METIS (UPMC-CNRS-EPHE); [3]Total S.E., CSTJF; [4]Grenoble Alps University, Institute of Research for Development, IGE
	Spectral Induced Polarization applied at different mountain permafrost sites in the European Alps (ONLINE) - T. Maierhofer[1,2]*, C. Hauck[2], C. Hilbich[2], A. Flores-Orozco[1] [1](1)Department of Geodesy and Geoinformation, TU-Wien, Austria; [2](2)Department of Geosciences, University of Fribourg, Switzerland
	Estimating water content of unsaturated sandy soils by ground-penetrating radar during an infiltration experiment (ONLINE) - M. ZHANG[1,2]*, M. BANO[1], X. FENG[2] [1]School and Observatory of Earth Sciences (EOST), University of Strasbourg; [2]College of Geo-exploration science and Technology, Jilin University
	VERTICAL ELECTRICAL SOUNDING (VES) RESISTIVITY METHOD TO ANALYSIS FRESHWATER ZONE AT SRIWUNGU PAMSIMAS PROJECT (ONLINE) - T. Taufiq[1]*, H. Duta Mega[2] [1]Pertamina; [2]Lampung Geoscience Survey
	Small island groundwater exploration, Southern Thailand (ONLINE) - H. Duerrast[1]*, W. Ngansom[2] [1]Prince of Songkla University; [2]Ramkhamhaeng University
12:50	**Lunch Break**

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

POSTER AREA/ONLINE

Posters: 27th European Meeting Combined I

14:00	**Distributed acoustic sensing of daylight on a glacier in Canada: hotspot monitoring -** R. Ferguson[1]*, C. Mosher[2], J. Dettmer[1], J. Mish[1] [1]Department of Geoscience, University of Calgary; [2]MoMacMo
	Low-frequency drone-borne GPR for soil conductivity mapping - K. Wu[1]*, E. Jacquemin[1], L. Palt[1], L. Ory[1], T. Parizel[1], V. Vincent Dienst[2], S. Lambot[1] [1]Université catholique de Louvain; [2]Château de Bousval
	Seismic Characterization of a historical heritage building - M.A. Martinez[1]*, C. García[1], M. Vásconez[1], E. Aracil, U. Maruri, P. Martínez[1] [1]Universidad Politecnica de Cartagena
	Imaging a near-vertical structure with seismic refraction tomography: an offshore study - B. Benjumea[1]*, F. Bohoyo[1], C. Morales[2], M. Druet[1], A. Maestro[1], C. Rey-Moral[1], C. Escutia[2] [1]Geological Survey of Spain (IGME); [2]Instituto Andaluz de Ciencias de la Tierra, CSIC-University of Granada
	EASYMAG: a versatile solution for high-quality UAV magnetic acquisitions (ONLINE) - J. Mercier de Lepinay[1]*, T. Fréville[1], B. Gavazzi[2], B. Kiemes[1], L.M. Sanabria[1], H. Reiller[2] [1]Terremys; [2]ITES (Institut Terre et Environnement de Strasbourg, UMR 7063 Université de Strasbourg, CNRS
	Georadar investigations in the Church of San Paolo (San Giacomo dei Militari, Palermo) (ONLINE) - P. Capizzi[1]*, M. Marrone[2], C. Aleo Nero[2], A. Bonfardeci[1], A. Canzoneri[1], A. Carollo[1], R. Martorana[1], F. Romano[1] [1]DiSTeM department, University of Palermo; [2]Superintendence of Cultural and Environmental Heritage of Palermo
	Ground-penetrating radar evidence of faulting in unconsolidated coarse sediments (ONLINE) - S. Bricheva[1,2,4]*, E.V. Deev[2,3,4], I.O. Dubrovin[5], M.M. Doroshenkov[1,2], A.L. Entin[1,2], A.V. Panin[2] [1]Lomonosov Moscow State University; [2]Institute of Geography Russian Academy of Science; [3]A.A. Trofimuk Institute of Petroleum Geology and Geophysics, Siberian Branch of RAS; [4]Novosibirsk State University; [5]Skolkovo Institute of Science and Technology
	An integrated tool for the seismic hazard mitigation of the Durrës city, in Albania (ONLINE) - E. Shehu[1], K. Skrame[1]* [1]Polytechnic University of Tirana
15:20	**Coffee Break**

Posters: Geophysics for Mineral Exploration and Mining

Session Chair: L.D. Leparoux (Gustave Eiffel University)

15:50 - 17:10	**Estimation and confirmation of electromagnetic attenuation and resistivity of Mátra mountains rock -** I. Lemperger[1]*, A. Novák[1], P. Ván[2], V. Wesztergom[1], P. Lévai[2], Á. Kis[1], S. Szalai[1,3], J. Mlynarczyk[4] [1]Institute of Earth Physics and Space Science; [2]Wigner Research Centre for Physics; [3]Department of Geophysics, University of Miskolc; [4]Department of Electronics, AGH University of Science and Technology
	Near-mine exploration for iron ore at Malmberget using body-wave seismic interferometry - A. Stoch[1]*, H. Van Den Berg[1] [1]LKAB
	Mineral prospectivity mapping for forecasting gold deposits in the Central Kolyma region (North-East Russia) - I. Goryachev[1], A. Parshin[1,2]* [1]Irkutsk National Research Technical University; [2]Vinogradov Institute of Geochemistry SB RAS
	In-mine seismic method for platinum orebody exploration in Maseve platinum mine, South Africa (ONLINE) - M.K. Rapetsoa[1]*, M. Manzi[1] [1]University of the Witwatersrand
	Reprocessing of legacy seismic data for gold exploration: case study from Witwatersrand goldfields, South Africa (ONLINE) - N. Mutshafa[1]*, M. Manzi[1], M. Westgate[1], I. James[2], R. Durrheim[1], P. Staley[3] [1]University of the Witwatersrand; [2]HiSeis Pty Ltd; [3]Sibanye stillwater
	The Innovative Exploration Drilling and Data Acquisition Research School (ONLINE) - M. Ask[1]*, B. Almqvist, S. Buske, C. Juhlin, T. Kalscheuer, T. Maack Rasmussen, U. Harms, J. Kück, T. Wiersberg, R. Giese, J. Rosberg, P. Jonsson, C. Linden, Q. Wenning, S. Målberg, P. Sandberg [1]Luleå University of Technology
	Re-appraising legacy seismic data using modern processing algorithms: case studies from South African Goldfields (ONLINE) - M. Sihoyiya[1]*, M. Manzi[1], M. Westgate[1], I. James[2], R. Durrheim[1], P. Staley[3] [1]University of the Witwatersrand; [2]HiSeis Pty Ltd; [3]Sibanye Stillwater
	3D-Underground Seismics in crystalline, salt and clay rocks (ONLINE) - R. Giese[1]*, S. Lueth[1], H. Richter[1], B. Wawerzinek[1], K. Jaksch[1], R. Esefelder[1] [1]GFZ German Research Centre for Geosciences

Oral Presentations | Tuesday 31 August

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

ROOM D

Geohazard and Anthropogenic Hazard Studies I
Session Chair: A. Sendrós (Universitat de Barcelona)

09:00 **Integrating electrical resistivity and seismic refraction tomography at an active landslide site** - J. Whiteley[1,2]*, A. Watlet[1], S. Uhlemann[3], P. Wilkinson[1], J. Boyd[1,4], C. Jordan[1], M. Kendall[5], J. Chambers[1]
[1]British Geological Survey; [2]University of Bristol; [3]Lawrence Berkeley National Laboratory; [4]Lancaster University; [5]University of Oxford

Increasing the understanding of the Viella landslide functioning through geophysical data fusion - M. Lajaunie[1,2], J. Gance[3], O. Leite[3], C. Broucke[1], J. Malet[1,2]*, C. Hibert[2], C. Bertrand[4], C. Truffert[3]
[1]Ecole et Observatoire des Sciences de la Terre (UMS 830 - EOST), CNRS/Université de Strasbourg; [2]Institut Terre et Environnement de Strasbourg (UMR 7063 - ITES), CNRS/Université de Strasbourg; [3]IRIS Instruments, R&D; [4]Laboratoire Chrono-Environnement (UMR 6249), THETA/University of Bourgogne Franche-Comté

Forecasting of the development of a landslide by studying its fracture system - S. Szalai[1,2]*, K. Szokoli[1], M.K. Baracza[3], P. Szűcs[4,5], I. Lemperger[1], K. Gribovszky[1], M. Zubair[6], L. Szarka[1]
[1]Institute of Earth Physics and Space Science, Eötvös Loránd Research Network; [2]Department of Geophysics, University of Miskolc; [3]Research Institute of Applied Earth Sciences, University of Miskolc; [4]University of Miskolc, Institute of Environmental Management; [5]MTA-ME Geoengineering Research Group; [6]Department of Earth Science, IIT, 247667

The forgotten shear-wave reflections in the compressional-wave surveys - A. Malehmir[1]*
[1]Uppsala University

Combined geophysical methods to the detection and filling certification of cavities - G. Vargemezis[1]*, P. Tsourlos[1], N. Diamanti[1], E. Amanatidou[1], I. Fikos[1], P. Louvaris[1], K. Polydoropoulos[1]
[1]Aristotle University of Thessaloniki

ROOM E1

Geophysics in Agricultural Studies
Session Chair: M. Schmutz (Bordeaux INP)

09:00 **The potential of electrical imaging for field root zone phenotyping** - S. Garre[1,2]*, T. Deswaef[1], I. Borra-Serrano[1], P. Lootens[1], G. Blanchy[1]
[1]ILVO; [2]ULiège - Gembloux Agro-Bio Tech

Seismic monitoring of a maritime pine root-system failure during its overturn: a field experiment - V. Allègre[1]*, A. Denis[1], A. Cointe[1], J. Coureau[1]
[1]University of Bordeaux, I2M, UMR 5295

A theoretical approach to near surface pedophysical permittivity models - G. Mendoza Veirana[1]*, P. De Smedt[1,2], W. Cornelis[1], D. Hanssens[1], J. Verhegge[1,2]
[1]Department of Environment, Faculty of Bioscience Engineering, Ghent University, Coupure Links 653, geb. B, 9000; [2]Department of Archaeology, Ghent University, Sint-Pietersnieuwstraat 35-UFO, 9000

Classification of vineyard soil physicochemical zones using non-invasive frequency-domain electromagnetic induction and NDVI methods. - P. McLachlan[1], M. Schmutz[1]*, J. Cavailhes[1], S. Hubbard[1]
[1]Bordeaux Inp

Combining soil sampling, EM38 and 3D GPR techniques to map key water distribution parameters - E. Bloem[1]*, J. Sala[2], H. Johansen Lindgaard[1], I. Sturite[1], Ø. Austad[3]
[1]Norwegian Institute of Bioeconomy Research; [2]3D-Radar AS; [3]AgroIT AS

10:40 Coffee Break

Geohazard and Anthropogenic Hazard Studies II

11:10 **Geophysical investigations of a landslide to interpret the distortion of a railway tunnel** - J. Lataste[1], J. Bruneau[1]*
[1]University of Bordeaux

Seismic noise azimuthal spectral ratios to monitor landslide kinematics - A. Aguzzoli[1]*, L. Zanzi[2], D. Arosio[1]
[1]Università Degli Studi di Modena E Reggio Emilia; [2]Politecnico di Milano

Laboratory Measurements and Rock Physics

Session Chair: P. Cosenza (CNRS-University of Poitiers)

11:10 **Tomographic seismic imaging of a carbonate core at the laboratory scale** - D. BRITO[1]*, C. SHEN[1,2], J. DIAZ[2], C. BORDES[1], J. VIRIEUX[3], S. GARAMBOIS[3]
[1]Université de Pau et des Pays de l'Adour, E2S UPPA, CNRS, Total, LFCR; [2]Inria, Makutu project-team, E2S UPPA, CNRS, LMAP; [3]Grenoble Alpes University, Savoie Mont Blanc University, CNRS, IRD, Gustave Eiffel University, ISTerre

Impedance network modelling to simulate the chargeability of sand-pyrite mixtures - A. Maineult[1]*, G. Gurin[2], K. Titov[2]
[1]Sorbonne University; [2]Saint-Petersburg State University

Oral Presentations | Tuesday 31 August

1ST CONFERENCE ON HYDROGEOPHYSICS

ROOM H

Aquifer Characterization

Session Chairs: A.V. Christiansen (Aarhus University, Dept. of Geoscience), N. Dorfliger (Danone Waters/Water Institute by Evian)

09:00 **Advancing the Adoption of Earth Imaging for Multi-Scale Groundwater Science and Management -** R. Knight*, S. Kang[1], A. Ahamed[1], M. Lees[1], M. Goebel[1]
[1]Dept. of Geophysics, Stanford University

Airborne geophysical survey for water resources planning, a case history, Bromölla, Southern Sweden - H. Jeppsson[1]*, B. Bergman[1], A. Edsen[2], J. Jager Jensen[2], A. Johnsson[3], C. Brolin[4], P. Dahlqvist[4]
[1]WSP; [2]WSP; [3]Bromölla Energy and Water Ltd; [4]Geological Survey of Sweden

A numerical assessment of electrical imaging for seawater intrusion monitoring in heterogeneous coastal aquifers - A. Gonzalez Quiros[1]*, J. Comte[1]
[1]University of Aberdeen

Passive Seismic Monitoring of a Karst Aquifer During Flood Events. - A. Abi Nader[1]*, J. Albaric[1], A. Marchand[1], M. Gros[1], M. Steinmann[1], B. Fores[1], V. Stefani[1], B. Pohl[2], H. Celle-Jeanton[1], C. Sue[1]
[1]Université Bourgogne Franche-comté, Chrono-Environnement laboratory; [2]Université Bourgogne Franche-Comté, Biogéosciences laboratory

10:40 Coffee Break

Environmental Characterization and Remediation I

Session Chair: A. Flores Orozco (TU-Wien)

11:10 **Improved understanding of the spectral induced polarization response of reactive transport through millifluidic experiments -** S. Izumoto[1]*, J.A. Huisman[2], E. Zimmermann[3], J. Heyman[1], F. Gomez[1], H. Tanuteau[4], R. Laniel[4], H. Vereecken[2], Y. Méheust[1], T. Le Borgne[1]
[1]Univ. Rennes, CNRS, Géosciences Rennes, UMR 6118; [2]Agrosphere (IBG-3), Institute of Bio- and Geosciences, Forschungszentrum Jülich; [3]Electronic Systems (ZEA-2), Central Institute for Engineering, Electronics and Analytics, Forschungszentrum Jülich; [4]Institute de Physique de Rennes, Université de Rennes 1

Optimized management of point-source polluted sites by using 3D geophysics - J.B. Pedersen[1]*, P.K. Maurya[1], R. Kraghede[1], A.V. Christiansen[1], O.F. Nielsen[1], J.K. Pedersen[1]
[1]HydroGeophysics Group, Institute of Geoscience, Aarhus University

2ND CONFERENCE ON GEOPHYSICS FOR INFRASTRUCTURE PLANNING, MONITORING AND BIM

ROOM F1

Assessment and Monitoring of Damaged or Unstable Infrastructure

Session Chairs: J. Chambers (British Geological Survey), S. Donohue (University College Dublin)

09:00 **Geophysical remote condition monitoring of transportation infrastructure slopes -** J. Chambers[1]*, P. Meldrum, P. Wilkinson, D. Gunn, A. Watlet, B. Dashwood, J. Whiteley, H. Harrison, R. Swift, C. Inauen, O. Kuras, G. Jessamy, S. Glendinning, P. Clarkson, C. Minto, A. Godfrey, R. Crickmore
[1]British Geological Survey

Experimental study to characterize a magneto-functional technology vs. corrosion in reinforced concrete structures - D. Souriou[1]*, A. Ihamouten[2], S. Kadkhodazadeh[1], B. Fan[1], D. Guilbert[1]
[1]Cerema Ouest - ENDSUM Angers; [2]Université Gustave Eiffel - MAST - LAMES laboratory

Geophysical investigation of failure on a railway cutting - A. Verweerd[1], W. Andrews[1]*, J. Eason[1]
[1]AECOM Ltd

Experiences gathered from geophysical surveying in five small Harbour yards, SW Sweden - M. Persson[1,2]*, A. Håkansson[1], E. Nyström Hult[1]
[1]Norconsult AB; [2]Dept. of Earth Sciences, University of Gothenburg

Geophysics and NDT for Transportation Infrastructure

Session Chair: A. Verweerd (AECOM Ltd)

11:10 **GPR and NDT Surveys on a Proposed UK Spaceport Runway -** J. Eason[1]*, A. Verweerd[1], W. Andrews[1]
[1]AECOM Ltd

Numerical modeling using gprMax to identify a subsurface tack coat for SVM classification - G. Andreoli[1]*, A. Ihamouten[2], C. Fauchard[3], R. Jaufer[1,6], S.S. Todkar[5], D. Guilbert[1], V. Buliuk[1,4], X. Dérobert[4]
[1]Cerema Ouest - ENDSUM Angers; [2]Université Gustave Eiffel - MAST - LAMES laboratory; [3]Cerema Normandie-Centre - ENDSUM Rouen; [4]Université Gustave Eiffel - GERS - GeoEND laboratory; [5]Université Gustave Eiffel - COSYS; [6]Logiroad

Oral Presentations | Tuesday 31 August

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

ROOM D

11:10 **Correlation between Distributed Rayleigh Sensing (DRS) and moisture sensors as indicators of slope instability -** P. Clarkson[1]*, R. Crickmore[1], A. Godfrey[1], C. Minto[1], J. Chambers[2], B. Dashwood[2], D. Gunn[2], L. Jones[2], P. Meldrum[2], D. Morgan[2], A. Watlet[2], J. Whiteley[2]
[1]OptaSense; [2]British Geological Survey

New insights into a very-large, slowly moving landslide (Hell-Bourg, Reunion) from high-resolution seismic surveys. - C. Rault[1]*, K. Samyn[1], B. Aunay[1], A. Bitri[2], M. Delatre[2]
[1]BRGM; [2]BRGM

Fiber Optic Sensing for Landslides Early Signs Monitoring and Consequences Assessment - F. Ravet[1]*, A. Goy[1], E. Rochat[1]
[1]Omnisens

ROOM E1

11:10 **Investigation of magnetic susceptibility effect on NMR measurement: case of the volcanic rocks -** N. Chibati[1]*, Y. Geraud[1], V. Navelot[2]
[1]Georessources; [2]solexperts AG

A Fractional Differential Model for the Electrical Conductivity of Clay Rocks
- P. Cosenza[1]*, R. Giot[1], A. Giraud[2], S. Hedan[1]
[1]University of Poitiers (ENSI Poitiers); [2]University of Lorraine (ENSG)"

Experiments and modelling of seismoelectrics in the ultrasonic range: a comparison with electrokinetic theory - V. Martins Gomes[1]*, D. Brito[2], S. Garambois[3], C. Bordes[2], H. Barucq[4]
[1]Université de Pau et des Pays de l'Adour, E2S UPPA, CNRS, Total, LFCR, Inria, Makutu project-team; [2]Université de Pau et des Pays de l'Adour, E2S UPPA, CNRS, Total, LFCR; [3]Grenoble Alpes University, Savoie Mont Blanc University, CNRS, IRD, Gustave Eiffel University, ISTerre; [4]Inria, Makutu project-team, E2S UPPA, CNRS, LMAP

12:50 **Lunch Break**

Special Session: Advanced Geophysical Imaging of Plant-Soil Interactions

Session Chairs: T. Martin (Lund University), M. Schmutz (Bordeaux INP)

14:00 **Remote Sensing of Microbial Metabolism from Genomes to Ecosystems -** E. Brodie[1]*, P. Sorensen[1], U. Karaoz[1], D. Chadwick[2], N. Falco[1], N. Bouskill[1], H. Wainwright[1], J. Kim[1], K. Williams[1], B. Dafflon[1], H. Steltzer[3], A. Henderson[4], K. Maher[5], C. Lawrence[6], B. Enquist[7], S. Hubbard[1]
[1]Lawrence Berkeley National Laboratory; [2]University of Texas; [3]Fort Lewis College; [4]Rocky Mountain Biological Lab; [5]Stanford University; [6]US Geological Survey; [7]University of Arizona

The use of near surface geophysics to estimate soil related terroir factors in viticulture - C. Van Leeuwen[1]*
[1]EGFV, Univ. Bordeaux, Bordeaux Sciences Agro, INRAE, ISVV

Nature-based solution - Deep rooting, potential assets for plant resilience to climate - J. Maeght[1]*
[1]AMAP, Univ Montpellier, IRD, CIRAD, CNRS, INRAE,

Geophysical imaging of the root zone: methods, implications and outlook. - G. Cassiani[1]*, B. Mary[1], J. Boaga[1], I. Barone[1], V. Ivan[1]
[1]Universita degli Studi di Padova

Marine Geophysical Studies

Session Chairs: I. Lecomte (University of Bergen), N. SENECHAL (University Of Bordeaux)

14:00 **Near-surface Marine Geophysics for Offshore Windfarm Developments – Trends and Developments -** M. Vanneste[1]*, G. Sauvin[1], J. Dusart[2], C.F. Forsberg[1], J. Park[1], J. Dujardin[1], E. Skomedal[1], C.S. Forsberg[1], R.C. Hansen[1], P. Tarits[2]
[1]NGI (Norwegian Geotechnical Institute); [2]Université de Bretagne Occidentale (UBO) & MAPPEM Geophysics

The Application of Distributed Acoustic Sensing for Shallow Marine Investigations an Intertidal Case Study - A. Trafford[1]*, S. Donohue[1], R. Ellwood[2], A. Godfrey[2], L. Wacquier[1]
[1]University College Dublin; [2]OptaSense Limited

Geological features of the near-surface in Vostochno-Prinovozemelsky area in the Kara Sea - Z. Zamotina[1]*, A. Starovoytov[1], M. Tokarev[1], Y. Terekhina[1], A. Roslyakov[1], A. Kolubakin[2]
[1]Lomonosov Moscow State University; [2]"RN-Exploration" LLC

Applying multivariate statistical analysis to marine electromagnetic sounding data - Y. Davydenko[1,2]*, S. Iakovlev[1,2], A. Bashkeev[1], E. Krainova[1], A. Davydenko[1,3], M. Persova[4]
[1]INRTU; [2]LLC "Gelios"; [3]ISU; [4]NSTU

15:20 **Coffee Break**

Oral Presentations | Tuesday 31 August

1ST CONFERENCE ON HYDROGEOPHYSICS

ROOM H

11:10 **Cross-borehole electrical monitoring in groundwater remediation projects: understanding the flow path of remediation agents -** L. Lévy[1]*, T. Bording[3], A. Vest Christiansen[1], R. Thalund-Hansen[2], P.L. Bjerg[2]
[1]Hydrogeophysics Group, Department of Geosciences, Aarhus University; [2]Technical University of Denmark, Department of Environmental Engineering; [3]Aarhus Geoinstruments

Geoelectric monitoring on a contaminated former steel site - O. Kaufmann[1], K. Tsakirmpaloglou[1]*, T. Martin[1]
[1]University of Mons

Evaluating the cause of TDIP signals in woochips-filled infiltration trenches for treated wastewater - L. Delgado-Gonzalez[1]*, V. Dubois[1], L. Lassabatère[2], J. Aubert[1], C. Boutin[1], M. Seger[3], R. Clément[1]
[1]Inrae-REVERSAAL; [2]Université de Lyon-ENTPE; [3]Inrae - SOLS

2ND CONFERENCE ON GEOPHYSICS FOR INFRASTRUCTURE PLANNING, MONITORING AND BIM

ROOM F1

11:10 **Multi-disciplinary geophysical investigation to identify road failure mechanism -** A. Verweerd[1]*, J. Gomery[1]
[1]AECOM Ltd

Robust B-spline surface estimation for tunnel lining modelling and equipment surveying - M. Tual[1], P. Charbonnier[1], P. Foucher[1]*
[1]Cerema, Research Team ENDSUM

Structural dynamic assessment of the Gravina Bridge (Southern Italy) using Engineering and Geophysical NDT - V. Serlenga[1]*, M.R. Gallipoli[1], B. Petrovic[2], R. Ditommaso[3], F.C. Ponzo[3], N. Tragni[3], A. Perrone[1], T.A. Stabile[1], G. Calamita[1], R.F. Carso[4], D. Pietrapertosa[4]
[1]National Research Council of Italy - Institute of Methodologies for Environmental Analysis (CNR - IMAA); [2]National Institute of Oceanography and Experimental Geophysics (OGS); [3]School of Engineering, University of Basilicata; [4]ANAS S.p.A.

12:50 **Lunch Break**

Environmental Characterization and Remediation II

Session Chair: G. Apostolopoulos (National Technical University of Athens)

14:00 **Laboratory and field spectral induced polarization measurements for characterization of graphite ores -** T. Katona[1]*, C. Neumayr[1], L. Aigner[1], M. Steiner[1], A. Römer[2], A. Flores Orozco[1]
[1]Tu Wien; [2]Geological Survey of Austria

Change in geophysical field variations related to 2020 Lebanon chemical explosion - S. Riabova[1]*, A. Spivak[1]
[1]Sadovsky Institute of Geosphere Dynamics of Russian Academy of Sciences

Mapping temperatures of complex shallow geothermal resources under Bordeaux urban area, using external-drift kriging. - J. Barriere[1], C. Maurel[2]*, P. Bourbon[1], Y.O. Assy[2], M. Savourat[1]
[1]BRGM; [2]BRGM

Data Analysis and Sharing using BIM and GIS

Session Chair: M. Svensson (Tyréns AB)

14:00 **Algorithmic route optimization and risk reduction of a Norwegian highway using airborne geophysics197 -** M. Hedly[1]*, C.W. Christensen[2], E. Harrison[2]
[1]Trimble; [2]EMerald Geomodelling AS

Optimized joint interpretation of many different datasets using BIM methodology combining CoClass and GeoBIM - M. Svensson[1]*, O. Friberg[1]
[1]Tyréns AB

Sharing geophysical data for seismic characterization of the Matera (Southern Italy) urban area - N. Tragni[1]*, G. Calamita[1], L. Lastilla[3,4], V. Belloni[5], R. Ravanelli[5], M. Lupo[1], V. Salvia[1], M.R. Gallipoli[1]
[1]National Research Council of Italy (CNR-IMAA); [2]School of Engineering, University of Basilicata; [3]Department of Computer, Control and Management Engineering Antonio Ruberti (DIAG), Sapienza University of Rome; [4]Sapienza School for Advanced Studies; [5]Geodesy and Geomatics Division, DICEA, Sapienza University of Rome

Operational Use Cases Using RESQML Standard to communicate Geotechnics and Subsurface Information to BIM - V. Gauthier[1]*, P. LABOURG[2], J. LEONARD[2], J. RAINAUD[1]
[1]GEOSIRIS Cy; [2]EGIS Group

15:20 **Coffee Break**

Poster Presentations | Tuesday 31 August

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

POSTER AREA/ONLINE

Posters: 27th European Meeting Combined II - ONLINE ONLY

11:10	**Delay effects in current switching-off and their manifestation in the early time TEM response** - M. Sharlov[1]*, N. Kozhevnikov[2], T. Pestyurin[3] [1]SIGMA-GEO, LLC; [2]Institute of Petroleum Geology and Geophysics SB RAS; [3]SIGMA ELECTRONICS, LLC
	Using the structure extraction method for analyzing data from spectrometric gamma-ray logging - S. Kataev[1,2]*, S. Kataeva[3], A. Miller[4] [1]Tomsk State Pedagogical University; [2]Institute of Monitoring of Climatic and Ecological Systems of the Siberian Branch of the Russian Academy of Sciences (IMCES SB RAS); [3]National Research Tomsk State University; [4]Saint-Petersburg Mining University
	Most accurate or fastest possible? The multi-frequency SIP excitation enables a choice - T. Radic[1]* [1]Radic Research
	Magnetometry survey applied to geothermal exploration in Chachimbiro, Northern Ecuador - J. Pauta[1]*, C. Mandon[1], E. Piispa[1], M. Urquizo[2] [1]Yachay Tech University; [2]CELEC EP
	APPLICATION OF SATELLITE IMAGERY LANDSAT-8 TO IDENTIFY SURFACE HOTSPOT AS PRELIMINARY SURVEY ON RANAU - T. Taufiq[1]*, M. Maharani[2] [1]Pertamina; [2]University of Lampung
	Anomalous geomagnetic variations associated with the Etna volcanic activity during February 2021 - S. Riabova[1]* [1]Sadovsky Institute of Geosphere Dynamics of Russian Academy of Sciences
	Prospects of tensor CSRMT soundings for the delineation of hydrogenic taliks in permafrost areas - N. Bobrov[1]*, A. Shlykov[1], A. Saraev[1], B. Tezkan[2] [1]Saint-Petersburg State University; [2]University of Cologne
	The Roles of Thermokarst Lakes in Thawing Permafrost Zones: Ecological Response - D. Vural[1]*, E.V. Yavuz[2] [1]Polar Research Institute, The Scientific And Technological Research Council Of Turkey; [2]Turkish German University
	Preliminary evaluation of geothermal energy potential in western part of Dahomey Basin, Southwestern Nigeria - E.A. Ayolabi[1,2], O. Balogun[2]*, M.O. Okunubi[2], R.P. Akinwale[2] [1]Department of Geosciences, University of Lagos; [2]Department of Geosciences, Mountain Top University
12:50	**Lunch Break**

Poster Presentations | Tuesday 31 August

1ST CONFERENCE ON HYDROGEOPHYSICS	2ND CONFERENCE ON GEOPHYSICS FOR INFRASTRUCTURE PLANNING, MONITORING AND BIM
POSTER AREA/ONLINE	POSTER AREA/ONLINE

12:50	Lunch Break

Poster Presentations | Tuesday 31 August

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

POSTER AREA/ONLINE

Posters: Modelling, Inversion, and Data Processing

Session Chair: F. Bretaudeau (BRGM)

15:50 - 17:10

Calibration of multi-frequency EMI data: example at a test site in Rouen (France) - C. Finco[1]*, F. Rejiba[1], C. Schamper[2], L.H. Cavalcante Fraga[3]
[1]Normandie Univ, UNIROUEN, UNICAEN, CNRS, UMR 6143 M2C; [2]Sorbonne Université, CNRS, EPHE, UMR 7619 METIS; [3]Envisol

Is it redundant to use model-based subtraction together with the reference noise cancellation? - L. Liu[1]*, M.P. Griffiths[2], M.Ø. Vang[1], D.J. Grombacher[1], J.J. Larsen[2]
[1]Department of Geoscience, Aarhus University; [2]Department of Electrical and Computer Engineering, Aarhus University

COMPLEX RESISTIVITY IMAGING USING CONTROLLED SOURCE ELECTROMAGNETIC DATA - J. Porté[1,2]*, J. Girard[1], F. Bretaudeau[2]
[1]Ites (UMR- 7063) - University of Strasbourg; [2]BRGM (French Geological Survey)

Cross-borehole ERT: sensitivity, model resolution, and field data quality - L.M. Madsen[1]*, A.K. Kühl, L. Levy, A.V. Christiansen
[1]Aarhus University

Discrete Cosine Transform reparameterization for Bayesian Time-Lapse ERT inversion - A. Vinciguerra[1]*, M. Aleardi[2], A. Hojat[3], E. Stucchi[2]
[1]Università di Firenze, Università di Pisa; [2]Università di Pisa; [3]Shahid Bahonar University of Kerman

Characterization of a complex fault system by 2D acoustic Random Objective Waveform Inversion (ONLINE) - D. Köhn[1]*, M. Thorwart[1], D. De Nil[1], W. Rabbel[1]
[1]Christian-Albrechts-University

On the applicability of 2D SH-FWI for high-resolution imaging of 3D subsurface structures (ONLINE) - D. Köhn[1]*, M. Thorwart[1], D. De Nil[1], J. Albert[2], W. Rabbel[1], F. Sirocko[2]
[1]Christian-Albrechts-University; [2]Johannes Gutenberg University

Transient Analysis of GPR Dipole Antenna using Time Domain Energy Measures - D. Poljak[1]*, S. Antonijevic[1], V. Doric[1], E. Miler[2], E.K.D. Khalil[3]*
[1]University of Split; [2]LLNL; [3]UCA

Marine gas hydrate deposits study: temperature inversion advantages - A. Vasilev[1]*, E. Kozhuharov[2], N. Botoucharov[3], I. Genov[1], P. Petsinski[1], R. Pehlivanova[1]
[1]Institute of Oceanology - BAS; [2]Jes E Ltd.; [3]Faculty of Geology and Geography, Sofia University

1ST CONFERENCE ON HYDROGEOPHYSICS

POSTER AREA/ONLINE

Posters: Hydrogeophysics Combined

Session Chair: R. GUERIN (Sorbonne Université)

15:50 - 17:10

USE OF 2D/3D ELECTRICAL RESISTIVITY TOMOGRAPHY FOR SUBSURFACE INFILTRATION ASSESSMENT OF PIG SLURRY PONDS. - X. Capa-Camacho[1], P. Martínez-Pagán[1]*, Á. Faz Cano[1], M. Martínez-Segura[1], M. Gabarrón[1]
[1]Universidad Politécnica de Cartagena

Enhanced geology of the Chalk aquifer (Northern France) from ERT imaging for hydrogeological purposes - A. Portal[1]*, L. Cary[2], R. Sylvain[2], B. Maurice[1], A. Bonnière[2,3], A. Bouvet-Swialkowski[4]
[1]BRGM (French Geological survey); [2]BRGM (French Geological survey); [3]Univ. Lille, CNRS, Univ. Littoral Côte d'Opale, UMR CNRS 8187, LOG, Laboratoire d'Océanologie et de Géosciences; [4]European Metropolis of Lille

Valles Half-Graben (NE Spain), a preliminary regional Geothermal Model - A. Llobet[1], L. Rivero[1,2], A. Sendrós[1,2], M. Himi[1,2], A. Urruela[1,2], R. García-Artiga[2,1], R. Lovera[1,2], C. Abancó[1], A. Casas[1,2]*
[1]Department of Mineralogy, Petrology and Applied Geology, Faculty of Earth Sciences,University of Barcelona; [2]Water Research Institute (IdRA), University of Barcelona

Integrated analysis of the coastal aquifer system of Thorikos Valley, Attica, Greece (ONLINE) - G. Apostolopoulos[1]*, C. Pouliaris[1], S. Karizonis[1], M. Perdikaki[1], A. Kallioras[1]
[1]National Technical University of Athens

Combining Multi-temporal Electric Resistivity Tomography and Predictive Algorithms for supporting aquifer monitoring and management (ONLINE) - V. Giampaolo[1]*, P. Dell'Aversana[2], L. Capozzoli[1], G. De Martino[1], E. Rizzo[3,1]
[1]CNR - IMAA; [2]Eni SpA; [3]University of Ferrara

Integrated inversion algorithms to analyse TDEM data for groundwater resource assessment in volcanic aquifers (ONLINE) - A. Vergnano[1]*, F. Pace[1], C. Comina[2]
[1]Politecnico Di Torino; [2]Università degli Studi di Torino

Imaging hydrogeological and mechanical parameters in landslides through geophysical data fusion: the Hofermühle site (ONLINE) - N. Roser[1]*, M. Steiner[1], M. Stumvoll[2], T. Katona[1], T. Glade[2], A. Flores Orozco[1]
[1]Research Unit Geophysics, Department for Geodesy and Geoinformation, TU Wien, Wiedner Hauptstraße 8, 1040 Vienna; [2]Department of Geography and Regional Research, University of Vienna, Universitaetsstraße 7, 1010 Vienna

Geophysical characterization of alluvial aquifers in plutonic and volcanic semi-arid Andes using electromagnetic methods (ONLINE) - G. De Pasquale[1]*, R. Valois[2], E. Bresciani[1], P. Alvarez[3]
[1]Centro De Estudios Avanzado En Zonas Aridas (CEAZA); [2]UMR EMMAH, Université de Avignon; [3]PROMMRA. Universitad de La Serena

2ND CONFERENCE ON GEOPHYSICS FOR INFRASTRUCTURE PLANNING, MONITORING AND BIM

POSTER AREA/ONLINE

Posters: Infrastructure Planning, Monitoring and BIM

15:50 - 17:10

Electrical imaging of the slip geometry of a deep-seated landslide (Canelles Dam, NE Spain) - A. Sendrós[1,2]*, M. Himi[1], C. Abancó[1], R. Lovera[1,2], L. Rivero[1], A. Urruela[1], R. Garcia-Artigas[2], A. Casas[1,2]
[1]Mineralogy, Petrology and Applied Geology, Universitat de Barcelona; [2]Water Research Institute, Universitat de Barcelona

High-resolution assessment of road basement using ground-penetrating radar (GPR) - A. Sendrós[1,2]*, A. Casas[1,2], C. Abancó[1], L. Rivero[1], R. Garcia-Artigas[2], A. Urruela[1], R. Lovera[1,2], M. Himi[1]
[1]Mineralogy, Petrology and Applied Geology, Universitat de Barcelona; [2]Water Research Institute, Universitat de Barcelona

3D Ground Penetrating Radar for non-invasive large-scale tank investigation (ONLINE) - L. Guireli Netto[1]*, V.L. Galli[1], P. Del Gaudio Orlando
[1]Institute For Technological Research of The State of São Paulo - IPT

Towed transient electromagnetic survey results at Ilulissat, Greenland for water vulnerability and infrastructure planning - M.A. Kass[1], P.K. Maurya[1]*, T. Ingeman-Nielsen[2], J. Pedersen[1], S. Tomaskovicova[2], A.V. Christiansen[1]
[1]Aarhus University; [2]Danish Technical University

Oral Presentations | Wednesday 1 September

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

ROOM D

Geophysics for Mineral Exploration and Mining I
Session Chairs: J. Gouin (Pole Avenia), A. Malehmir (Uppsala University)

09:00 **Complex electrical conductivity of kimberlite** - K. Titov[1]*, V. Emelianov[1], V. Abramov[1], A. Revil[2]
[1]Institute of Earth Sciences St.Petersburg State University; [2]Laboratoire EDYTEM - UMR CNRS 5204 - Université Savoie Mont Blanc

The Muography – A passive technique among state-of-the-art geophysical methods - C. Truffert[1]*, S. Bouteille[1], A. Bitri[2], M. Dietz[2]
[1]Iris Instruments; [2]BRGM

The Abra Xcite AIP modelling case study - A. Viezzoli[1]*, A. Menghini[1]
[1]EMergo srl

Three decades of reflection seismic surveying at Neves-Corvo, Portugal - G. Donoso[1]*, A. Malehmir[1], J. Carvalho[3], V. Araujo[2]
[1]Uppsala University; [2]LNEG; [3]Somincor (Lundin Mining)

Geological and geophysical conditions for application of 3D seismic in mineral exploration - A. Sirazhev[1]*, S. Istekova[2]
[1]Seism-A; [2]Satbayev University

10:40 Coffee Break

Geophysics for Mineral Exploration and Mining II
Session Chair: M. Manzi (University of the Witwatersrand)

11:10 **UAV based EM survey: the comparison with results of ground-based methods for gold-promising site investigation** - K. Antashchuk[1]*, A. Atakov[1], A. Kocherov[1]
[1]Russian Geological Research Institute (VSEGEI)

Application of a stochastic algorithm for 3D inversion of EM sounding data - D. Bogdanovich[1,2]*, K. Antashchuk[3], I. Pesterev[1], D. Shimianskii[1], A. Bashkeev[1,2], A. Politcina[4]
[1]Geoinversion, Ltd; [2]Irkutsk National Research Technical University; [3]Russian Geological Research Institute; [4]GEODEVICE SAS

Interpretation of legacy 3D seismic data for underground platinum mines: Implication for mine safety - S. Matloga[1]*, M. Manzi[1], G. Bybee[1]
[1]University of the Witwatersrand

Mapping the traps of Yakutia kimberlite province using the controlled source radiomagnetotellurics - A. Saraev[1]*, A. Shlykov[1], B. Tezkan[2]
[1]Saint Petersburg State University; [2]University of Cologne

Mapping the Far Western Bushveld Complex using legacy 2D seismic reflection and petrophysical data - T. Nadan[1]*, M. Manzi[1], S. Scheiber-Enslin[1]
[1]University of the Witwatersrand

12:50 Lunch Break

ROOM E1

Monitoring and Characterisation of the Subsurface
Session Chairs: S. Bazin (CNRS), A. Casas (University of Barcelona)

09:00 **Examples of seismic shallow subsurface characterisation and deep electromagnetic monitoring** - E. Slob[1]*, D. Draganov[1], M. Eltayieb[1], G. Drijkoningen[1], D. Werthmüller[1], R. Ghose[1]
[1]Delft University of Technology

Characterization of undercover karst morpholoies by 3D geostatistical modeling of ERT data - C. Verdet[1]*, C. Sirieix[1], A. Marache[1], J. Riss[1], J. Portais[2]
[1]Université de Bordeaux, CNRS, Arts et Métiers Institute of Technology, Bordeaux INP, INRAE, I2M Bordeaux; [2]Ministère de la culture, Direction Régionale des Affaires Culturelles Nouvelle-Aquitaine

Monitoring underground heat storages by means of borehole electrical resistivity tomography. A model test. - S.L. Fischer[1]*, E. Erkul[1], M. Gräber[2], B. Wang[1], S.A. Al Hagrey[1], S. Bauer[1], W. Rabbel[1]
[1]Christian-Albrechts-Universität Kiel; [2]GeoServe - Angewandte Geophysik

Porosity of near-surface soil layers from 3D elastic full-waveform inversion: tests on synthetic data - Y. Kawasaki[1,2]*, R. Ghose[1], S. Minato[1,2]
[1]TU Delft; [2]OYO corporation

3D DAS Full Waveform Inversion (FWI) Case Study for SAGD Steam Chamber Imaging - W. Wang[2]*, H. Feng[1], T. Kay[1], A. Knudsen[1], A. Ayre[3]
[1]Cenovus Energy Inc.; [2]GeoTomo LLC; [3]BP Canada Energy Group ULC

Modelling, Inversion, and Data Processing I
Session Chair: J.F. Girard (ITES)

11:10 **Monitoring a Spatial Drilling Trajectory Deviation Using a Drill-Bit Signal as a Source.** - Z. Wilczynski[1]*, A. Kaslilar[1]
[1]Department of Earth Sciences, Uppsala University

Multiparameter anisotropic first-arrival seismic tomography of acoustic laboratory data in carbonates - M. Salcedo[1]*, S. Garambois[1], D. Brito[2], F. Sanjuan[2]
[1]Grenoble Alpes University, Savoie Mont Blanc University, CNRS, IRD, Gustave Eiffel University, ISTerre; [2]Université de Pau et des Pays de l'Adour, E2S UPPA, CNRS, Total, LFCR

Regularized Gauss-Newton iterative scheme applied to shallow subsurface imaging - Q. Didier[1]*, S. Arhab[1], G. Lefeuve-Mesgouez[1]
[1]UMR AU-INRA EMMAH, Agroparc, 301 rue Baruch de Spinoza, BP 21239, 84911, AVIGNON cedex 9, France

Comparison between classical and geostatistical regularization methods for ERT crosshole imagery - K. Tsakirmpaloglou[1]*, O. Kaufmann[1]
[1]University of Mons

Ensemble-based time-lapse ERT inversion with model and data space compression through deep variational autoencoders - A. Vinciguerra[1]*, M. Aleardi[2]
[1]Università di Firenze, Università di Pisa; [2]Università di Pisa

1ST CONFERENCE ON HYDROGEOPHYSICS

ROOM H

Advances in Methods from Monitoring, Modelling to Processes I

Session Chairs: D. Jougnot (Sorbonne Universite), M. Schmutz (Bordeaux INP)

09:00 **Mapping fracture flow anisotropy using the Self Potential method: field and laboratory experiments** - Y. Kumar[1]*, J. Comte[1], J. Vinogradov[2], D. Healy[1], J. Mezquita Gonzalez[1], A. Gonzalez Quiros[1], L. Smith
[1]School of Geosciences, University Of Aberdeen; [2]School of Engineering, University Of Aberdeen

Locating Underground Water Pathways in Karst using a Seismic Amplitude Location Method - H. Karbala Ali[1]*, C.J. Bean[1]
[1]Geophysics Section, School of Cosmic Physics, Dublin Institute for Advanced Studies (DIAS), Dublin, Ireland.

Resolving hydrogeological parameters through joint inversion of seismic and electric data considering surface conductivity - M. Steiner[1]*, T. Katona[1], N. Roser[1], G. Blöschl[2,3], A. Flores Orozco[1]
[1]Research Unit Geophysics, Department for Geodesy and Geoinformation, TU Wien; [2]Centre for Water Resource Systems, TU Wien; [3]Institute of Hydraulic Engineering and Water Resources Management, TU Wien

Using crosshole seismics to evaluate petrophysical parameter dependencies in the field scale - S. Birnstengel[1]*, M. Pohle[1], K. Peisker[1], L. Hu[2], S. Bauer[2], G. Hornbruch[2], A. Dahmke[2], P. Dietrich[1], U. Werban[1]
[1]Helmholtz Centre For Environmental Research - UFZ; [2]Christian-Albrechts-Universität zu Kiel - CAU

Improving conceptual flow and transport models in fractured rock through GPR and hydrogeological data - P. Giertzuch[1]*, B. Brixel[1], A. Shakas[1], J. Doetsch[1], H. Maurer[1]
[1]Department of Earth Sciences, ETH Zurich

10:40 Coffee Break

Advances in Methods from Monitoring, Modelling to Processes II

Session Chairs: T. Günther (Leibniz Institute For Applied Geophysics), R. Valois (Avignon University)

11:10 **Data-driven hydrogeophysical and redox modelling** - N. Claes[1]*, N. Foged, T. Norvin Vilhelmsen, R. Rumph Frederiksen, H. Kim, A. Vest Christiansen
[1]Aarhus University

Predicting streaming potentials in partially saturated porous media, a review of capillary-based models - D. Jougnot[1]*, L.D. Thanh[2], M. Soldi[3], F. Rembert[4], J. Vinogradov[5], L. Guarracino[3]
[1]Sorbonne Universite, CNRS, EPHE, UMR 7619 METIS; [2]Thuyloi University, 175 Tay Son, Dong Da; [3]Facultad de Ciencias Astronómicas y Geofísicas, Universidad Nacional de La Plata; [4]Earth Sciences Institute of Orléans, CNRS-Université d'Orléans-BRGM; [5]School of Engineering, University of Aberdeen, AB24 3UE

Combining geophysical, geochemical and statistical techniques to characterise an abandoned fertiliser plant area - M.D. Vásconez Maza[1]*, M.A. Martínez Segura[1], M.D.C. Bueso Sánchez[1], J.A. Acosta Avilés[1], Á. Faz Cano[1]
[1]Universidad Politécnica de Cartagena

Ground penetrating radar two-way travel time sensitivity to hydrodynamic parameters during soil water infiltration - R. Moua[1]*, J. Girard[1], N. Lesparre[1], B. Belfort[1], F. Lehmann[1], A. Younes[1]
[1]Institut Terre et Environnement de Strasbourg

Electrical signatures of dual domain mass transfer observed in rock cores - L. Slater[1], F. Day-Lewis[2], B. Parker[3], L. Slater[1]*
[1]Rutgers University Newark; [2]USGS Water Resources Mission Area; [3]University of Guelph

12:50 Lunch Break

2ND CONFERENCE ON GEOPHYSICS FOR INFRASTRUCTURE PLANNING, MONITORING AND BIM

ROOM F1

Applications of Emerging Technologies for Infrastructure

Session Chairs: C.M. Krawczyk (GFZ German Research Centre for Geosciences), L. Michel (Sercel)

09:00 **City-scale seismology with distributed fibre-optic sensing** - B. Biondi[1]*
[1]Stanford University

Distributed fiber optic sensing technologies for underground monitoring - K. Soga[1]*
[1]University of California, Berkeley

Terrestrial CSEM for buried steel infrastructure - M. Hickey[2]*, S. Trevino III[2], M. Everett[1]
[1]Texas A&M University; [2]XR Geo

DAS dataset analysis for reflection imaging with ambient noise in urban areas: Granada, Spain - B. Benjumea[1]*, B. Gaite[2], Z. Spica[3], F. Bohoyo[1], M. Schimmel[4], S. Ruiz-Barajas[2]
[1]Geological Survey of Spain (IGME); [2]National Geographic Institute of Spain; [3]Department of Earth and Environmental Sciences, University of Michigan; [4]Geosciences Barcelona (GEO3BCN-CSIC)

TEST RANGE FOR UAV-BASED GEOPHYSICAL SENSORS - A. Dobrovolskiy[1], K. Linkevičius[1]*
[1]SPH Engineering

Geophysical Methods for Engineering Site Characterization

Session Chair: B. Benjumea (Geological Survey of Spain (IGME))

11:10 **Geophysical survey in the frame of preservation works for an old silo of planes** - G. Apostolopoulos[1]*, S. Karizonis[1], G. Amolochitis[1], D. Karaiskos[1]
[1]National Technical University of Athens

Seismic modelling for monitoring of historical quay walls and detection of failure mechanisms - F. Balestrini[1]*, D. Draganov[1], M. Staring[2], J. Singer[2], J. Heijmans[3], P. Karamitopoulos[1,4]
[1]Delft University Of Technology; [2]Fugro Innovation & Technology B.V.; [3]Fugro NL Land B.V.; [4]AMS Institute

Combination of passive and active methods towards site characterization of accelerometer stations in Greece - G. Papadopoulos[1]*, I. Fikos[1], A. Garcia-Jerez[3], N. Theodoulidis[2], G. Vargemezis[1]
[1]Aristotle University Of Thessaloniki; [2]Institute of Engineering Seismology and Earthquake Engineering; [3]University of Almeria

An Automatic Surface Wave Analysis Approach for the quasi-3D Vs estimation in engineering applications - K. Leontarakis[1]*, C. Orfanos[1], G. Apostolopoulos[1], I. Zevgolis[1]
[1]National Technical University of Athens

Geological reconstruction by 2D-ERT of the Maddaloni-Durazzano ridge (Italy) for a railway line design - C. Fabozzi[1]*, S. Vitale[1], C. De Paola[2], S. Ciarcia[3], R. Di Maio[1]
[1]Dipartimento di Scienze della Terra, dell'Ambiente e delle Risorse,Università Di Napoli Federico II; [2]SOCOTEC Italia s.r.l; [3]Dipartimento di Scienze e Tecnologie, Università degli Studi del Sannio

Oral Presentations | Wednesday 1 September

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

ROOM D

Geophysics for Cultural Heritage I
Session Chairs: N. Florsch (Sorbonne University), C. Verdet (University of Bordeaux)

14:00 **Electrostatic profiling and mapping of electrical resistivity and dielectric permittivity in an urban context** - C. Schamper[1], A. Tabbagh[1]*, S. Flageul[1], C. Benech[2], Q. Vitale[2,3], C. Benjamin[4], M. Dabas[5], C. Parfant[2], L. Perruchon-Monge[2]
[1]Sorbonne Université, UMR SU CNRS EPHE 7619 METIS; [2]Université de Lyon, CNRS, Archeorient, UMR 5133, Maison de l'Orient et de la Méditerranée; [3]Éveha International, 161 avenue de Verdun; [4]Université de Franche-Comté, CNRS UMR 6249 Chrono-Environnement; [5]ENS, UMR 8546 CNRS-ENS-EPHE (PSL), AOrOc

Active and passive 3D seismic survey around the Scrovegni Chapel using autonomous nodes - I. Barone[1]*, R. Deiana[1], A. Ourabah[2], J. Boaga[1], G. Cassiani[1]
[1]Università degli Studi di Padova; [2]Stryde

Geoelectric investigations with special measurement geometry to delimit prehistoric mining areas in Hallstatt - D. Ottowitz[1]*, B. Jochum[1], M. Yi[2], S. Pfeiler[1], A. Römer[1], K. Kowarik[3], D. Brandner[3], A. Nevosad[1], H. Reschreiter[3]
[1]Geological Survey of Austria/Department of Geophysics; [2]Korea Institute of Geoscience and Mineral Resources (KIGAM)/Exploration Geophysics and Mining Engineering Department; [3]Natural History Museum Vienna/Department of Prehistory

Geophysical investigations to study the Celtic open settlement of La Peyrouse (Dordogne, France) - J. Hantrais[1,2]*, V. Mathé[2], P. Corfmat[1], G. Sheehan[2], C. Chevillot[3], R. Chapoulie[1], E. Hiriart[4]
[1]IRAMAT-CRP2A, University of Bordeaux-Montaigne; [2]LIENSs, University of La Rochelle; [3]CReAAH, University of Rennes; [4]CNRS - IRAMAT-CRP2A

ROOM E1

Modelling, Inversion, and Data Processing II

14:00 **Seismic SH Full Waveform Inversion: A tool for high-resolution near-surface characterization** - D. Köhn[1]*, M. Zolchow[1], R. Mecking[2], D. Wilken[1], T. Wunderlich[1], D. De Nil[1], W. Rabbel[1]
[1]Christian-Albrechts-University; [2]Leibniz Institute for Applied Geophysics

Electromagnetic-interferometric direct-wave suppression for detection of shallow buried targets with GPR - F. Balestrini[1]*, D. Draganov[1], D. Ngan-Tillard[1], F. Hansen[1]
[1]Delft University Of Technology

Surface-waves extraction using a shot-receiver-time transformation - Y. Ding[1]*, A. Malehmir[1]
[1]Dept. of Earth Sciences, Uppsala University, SE 75236

Inversion of VLF data using a non-linear smoothing operator - M.A. Uge[1]*, G. Karcioglu[1], A. B.Tekkeli[1], M.S. Arslan[1]
[1]Istanbul University-Cerrahpasa

15:20 **Coffee Break**

Geophysics for Cultural Heritage II
Session Chair: A. Tabbagh (Sorbonne Université)

15:40 - 17:10 **Geophysics for Cultural Heritage** - R. Deiana[1]*
[1]University of Padua

Transept foundations of a 12th century chapel revealed by geophysical and photogrammetric prospection - C. Fauchard[1]*, L. Aillaud[2], A. Legrand[3], R. Antoine[1], V. Guilbert[1], C. Ledun[1], B. Beaucamp[1]
[1]Cerema, Research Team ENDSUM; [2]École et observatoire des sciences de la terre (EOST); [3]University of Rouen Normandy, IUT Mesures Physiques

Detection of ancient mine voids by using geophysical methods: the case of Castel-Minier - N. FLORSCH[1]*, M. LLUBES[2], L. SEOANE[2], F. TEREYGEOL[3]
[1]UMI 209 UMMISCO and UMR 7619 METIS, Sorbonne University; [2]1.GET – UMR5563, Observatoire Midi-Pyrénées; [3]3.LAPA-IRAMAT, NIMBE, CEA, CNRS, Université Paris-Saclay, CEA Saclay

UAVs and ground-based geophysical surveys and 3D inversion when studying archeological objects in Baykal Region - S. Tereshkin[1], S. Davydenko[2], Y. Davydenko[1,3,5]*, A. Davydenko[4,1], A. Parshin[1,6], S. Snopkov[4]
[1]Irkutsk National Research Technical University; [2]Sergo Ordzhonikidze Russian State University for Geological Prospecting; [3]LLC "Gelios"; [4]Irkutsk State University; [5]Institute of the Earth's Crust of the Siberian Branch of the RAS; [6]A.P. Vinogradov Institute of Geochemistry of the Siberian Branch of the RAS

3D Geophysical Studies

15:40 - 17:10 **Impact of the DEM's resolution on 2D and 3D-ERI common pratice** - Y. Fargier[1]*, T. Dezert[1], R. Antoine[2], A. Tonnoir[3], C. Fauchard[2]
[1]Université Gustave Eiffel; [2]Cerema; [3]INSA

Three-dimensional time-lapse inversion of TEM data with application in an Icelandic geothermal site - L. Xiao[1]*, G. Fiandaca[2], P. K. Maurya[1], A. Vest Christiansen[1], L. Lévy[1,3]
[1]Aarhus University; [2]University of Milano; [3]ISOR, Iceland GeoSurvey

3D image of the subsoil from complementary seismic methods - M. Saade[1]*, A. Dechamp[2], S. Robert[1]
[1]Sixense Engineering; [2]CEA/DIF/DP2I/S2IN

Evolution of the Orange Basin; Cretaceous Deepwater Fold-and-Thrust Belts to Cenozoic Mass Transport Systems - N. Maduna[1]*, M. Manzi[1], Z. Jinnah[1]
[1]University Of The Witwatersrand

Oral Presentations | Wednesday 1 September

1ST CONFERENCE ON HYDROGEOPHYSICS

ROOM H

Novel Sensors and Systems I
Session Chairs: M. Halkjaer (Ramboll), F. Rejiba (Université de Rouen Normandie)

14:00 **New electromagnetic sensors as the drive for a much more widespread usage of geophysical subsurface images -**
E. Auken[1]*, P. Maurya[1]
[1]Geological Survey Of Denmark And Greenland

A new drone-based semi-airborne electromagnetic system for mapping saltwater-freshwater interfaces - T. Günther[1]*, M. Ronczka[1], R. Rochlitz[1], P. Kotowski[2], M. Müller-Petke[1]
[1]Leibniz Institute For Applied Geophysics; [2]Westfälische Wilhelms-Universität

Rapid mapping of hydrological systems in remote conditions using the tTEM system - D. Grombacher[1]*, P. Maurya[1], J.C. Lind[1], E. Auken[2], J. Lane[3], R. Kraghede[1], M. Schapers[4], F. De Lange[5], J. Pedersen[1]
[1]Aarhus University; [2]Geological Survey of Denmark and Greenland; [3]United States Geological Survey; [4]JG Afrika; [5]University of the Free State

The relevance of modelling Airborne IP for hydrogeological applications - A. Menghini[1], A. Viezzoli[1]*
[1]EMergo srl

15:20 **Coffee Break**

Novel Sensors and Systems II
Session Chairs: T. Günther (Leibniz Institute For Applied Geophysics), M. Halkjaer (Ramboll)

15:40 - 17:10 **Validation of a newly developed surface NMR system -**
D.J. Okholm[1]*
[1]WSP Denmark A/S

Measuring soil moisture using surface-NMR with prepolarization - T. Hiller[1], S. Costabel[2], R. Dlugosch[4], T. Radic[3], M. Müller-Petke[1]*
[1]Leibniz Institute for Applied Geophysics; [2]Federal Institute for Geosciences and Natural Resources; [3]Radic Research; [4]Federal Institute for Geosciences and Natural Resources

Original experimental bench based on a large loop for environmental measurements at LSBB - C. Dezord[1]*, G. Micolau[1,2], C. Abbas[1], A. Mesgouez[1], E. Pozzo Di Borgo[1,2]
[1]UMR 1114 EMMAH, Avignon Université, INRAe; [2]Laboratoire Souterrain à Bas Bruit

Ohmpi project: an open-source resistivity meter - R. Clement[1]*, H. GUYARD[2], V. Dubois[1], N. Forquet[1], O. Kaufmann[3], Y. Farquier[4]
[1]INRAE-REVERSAAL UNIT; [2]IGE; [3]Université de Mons; [4]Université Gustave Eiffel

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

ROOM F1

Airborne and UAV Geophysics
Session Chair: D. Truffert (Iris Instruments)

14:00 **Airborne and ground-based TEM mapping in polar regions – Antarctica cases -** N. Foged[1]*, L. Meldgaard Madsen[1], S. Tulaczyk[2], D. Grombacher[1]
[1]Department of Geoscience, Aarhus University; [2]Department of Earth and Planetary Sciences, University of California – Santa Cruz

Lightweight TEM and VLF systems for low-altitude UAV-based geophysical - A. Parshin[1,2,3]*, Y. Davidenko[1,4], S. Yakovlev[1,4], V. Vinokurov[1], A. Bashkeev[1]
[1]Irkutsk National Research Technical University; [2]Vinogradov Institute of Geochemistry SB RAS; [3]SibGIS Tech LLC; [4]Gelios LLC

Universal aero-ground overhauser magnetometer-gradiometer. POS-2Aero vertical gradiometer testing with DJI-600Pro drone - E. Narkhov[1,2]*, V. Sapunov[1], A. Denisov[1], A. Sergeev[1,2], A. Fedorov[1,2], A. Shirokov[1,2], V. Ushakov[1,2], I. Kozlova[3], L. Muravyov[3]
[1]Ural federal university, Quantum Magnetometry Laboratory; [2]LLC "Quantum Magnetic Pipe Test"; [3]Institute of Geophysics, Ural Branch of the Russian Academy of Sciences

Drone geophysics for forecasting and monitoring natural hazards - B. Dupuy[1]*, A. Tobiesen[1], A. Grøver[1], A. Einbu[1], A. Romdhane[1]
[1]SINTEF

TECHNICAL PROGRAMME

Poster Presentations | Wednesday 31 August

27TH EUROPEAN MEETING OF ENVIRONMENTAL AND ENGINEERING GEOPHYSICS

POSTER AREA/ONLINE

Posters: Monitoring and Characterisation of the Subsurface

11:10

Tailing site characterizations using near-surface geophysical tools in south-central Sweden - S. Tavakoli[1]*, I. Kronsell[2]
[1]Norwegian Geotechnicl Institute (ngi); [2]Luleå University of Technology

Getica CCS demo project-CO2 storage capacity calculation using static modelling - S. Anghel[1]*
[1]National Research and Development Institute for Marine Geology and Geoecology

TIME-LAPSE MONITORING OF MOISTURE INDUCED LANDSLIDE USING SURFACE WAVES AT HOLLIN HILL LANDSLIDE OBSEVATORY - L. Wacquier[1]*, J. Whiteley[2], D. Gunn[2], B. Dashwood[2], J. Chambers[2], A. Watlet[2], A. Trafford[1], S. Donohue[1]
[1]University College Dublin; [2]British Geological Survey

Reprocessing of reflection seismic data to highlight near-surface glacio-tectonic deformations - H. Buness[1]*, T. Burschil[1]
[1]Leibniz Institute for Applied Geophysics (LIAG)

Characterization of a coastal area from integration of resistivity and active multicomponent seismic data - F. Da Col[1]*, F. Accaino[1], G. Böhm[1], S. Picotti[1], M. Giorgi[1], F. Meneghini[1]
[1]National Insitute of Oceanography and Experimental Geophysics, Trieste - Italy

A physical model to study deep contaminated sites: ERT study with surface-downhole electrode configuration (ONLINE) - M.V. Bongiovanni[1,2]*, V. Grünhut[1,2], E. López[3,4]
[1]Facultad de Ingeniería - Universidad Austral - LIDTUA; [2]Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET); [3]Departamento de Física. Facultad de Ciencias Exactas y Naturales (FCEyN), Universidad de Buenos Aires; [4]CBC, Universidad de Buenos Aires

Geological controls over stacked Quaternary pockmark distributions above the Horda Platform, northern North Sea (ONLINE) - J. Osmond[1]*, E.H. Leon[1], M.J. Mulrooney[1], A. Braathen[1]
[1]University of Oslo

A heat tracing experiment using cross-borehole time-lapse ERT (ONLINE) - B. Shariatinik[1]*, A. Bouchedda[1], E. Gloaguen[1], J. Raymond[1], G. Fabien-Ouellet[2]
[1]Institut National de la Recherche Scientifique, Centre Eau-Terre-Environnement; [2]Polytechnique Montréal, Department of Civil, Geological and Mining Engineering

Integrated Geophysical Methods to Characterize Triassic Microbialites (ONLINE) - A. Urruela Garcia[1]*, M. Himi[1], L. Rivero[1], F. Pinheiro[3], R. Mercedes[4], R. Lovera[1,2], R. Garcia-Artigas[1,2], A. Sendrós[1,2], A. Casas[1,2]
[1]University of Barcelona (UB); [2]Water Research Institute (IDRA); [3]Universidade Federal do Rio Grande do Norte (UFRN); [4]Universitat Autònoma de Barcelona (UAB)

Imaging Clogging in a Treatment Wetland Using Time-Domain Induced Polarization (ONLINE) - R. Garcia-Artigas[1,2]*, M. Himi[2], L. Rivero[1,2], A. Revil[3], A. Urruela Garcia[2]*, R. Lovera[1,2], A. Sendrós[2], C. Abancó[2], A. Casas[1,2]
[1]Water Research Institute (IdRA). University of Barcelona; [2]Mineralogy, Petrology and Applied Geology Department, Faculty of Earth Sciences. University of Barcelona; [3]EDYTEM, Univ. Grenoble Alpes, Univ. Savoie Mont-Blanc

12:50 **Lunch Break**

Posters: 27th European Meeting Combined III - ONLINE ONLY

Session Chair: G. Sauvin (NGI)

14:00

Assessing Groundwater-Citarum River Interaction and Groundwater Contribution to Flooding - A. Ramdhan[1]*, A. Arifin[1], R. Suwarman[1]
[1]Institut Teknologi Bandung

Tectonic evolution of the deepwater Orange Basin (South Africa) using 3D reflection seismic data - V. Mahlalela[1]*, M. Manzi[1], Z. Jinnah[1]
[1]University Of The Witwatersrand

Monitoring settling and consolidation of fluid mud in a laboratory using ultrasonic measurements - I. Fadel[1]*, A. Kirchek[2,3], M. Buisman[2], K. Heller[2], D. Draganov[2]
[1]The Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente; [2]Faculty of Civil Engineering and Geosciences, Delft University of Technology; [3]Deltares

Induced Polarization of ion-conducting porous media: A review of mathematical models. Pt.1.Phenomenology and Electrical Double Layer - K. Titov[1]*, B. Mehalli[1], G. Gurin[1], A. Tarasov[1]
[1]St Petersburg State University

Induced Polarization of ion-conducting porous media: A review of mathematical models. Pt.2. Granular and capillary models - K. Titov[1]*, B. Mehalli[1], G. Gurin[1], A. Tarasov[1]
[1]St Petersburg State University

Modeling Hydrocarbon Bearing Reservoirs Using Fuzzy SVR and Electrofacies Analysis - N. Moosavi[1]*, M. Bagheri
[1]Department of Earth Sciences, Science and Research Branch, Islamic Azad University, Tehran, Iran.; [2]Institutes of Geophysics, University of Tehran, Tehran, Iran.

Gas hazard and origin: near-surface zone of the Upper and Lower Silesian coal basins - M. Kotarba[1]*, H. Sechman[1]
[1]AGH University of Science and Technology

15:20 **Coffee Break**

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Tuesday, 31 August	09:00 - 17:00
Wednesday, 1 September	09:00 - 16:00

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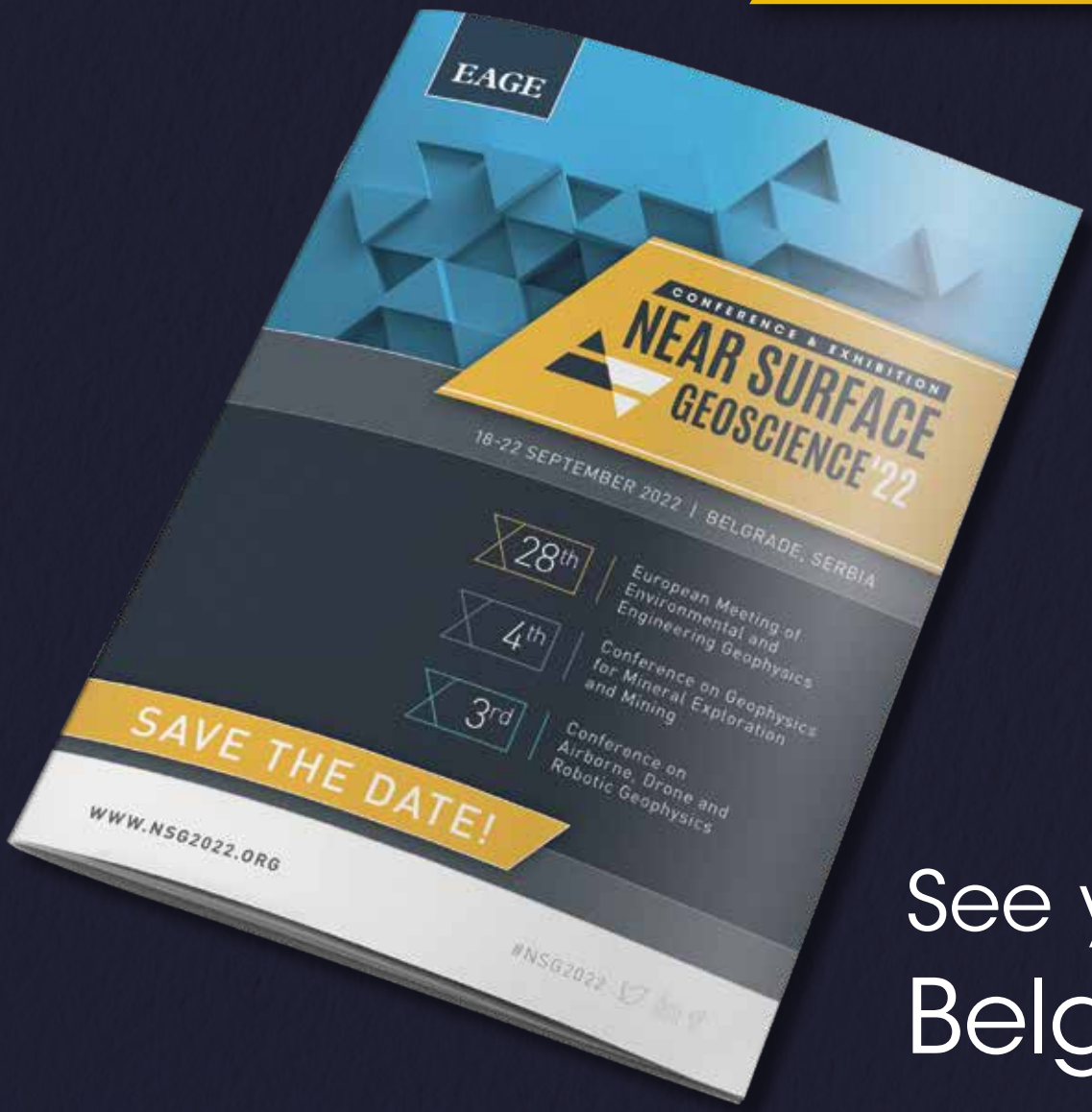

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