EAGE

EUROPEAN ASSOCIATION OF GEOSCIENTISTS & ENGINEERS

Geophysics in Environmental Studies'21

INTERNATIONAL WORKSHOP

27 APRIL 2021 • ONLINE & GELENDZHIK (RUSSIA)

- **Programme**

The EAGE Near Surface Geoscience Division, in collaboration with steering committee of Engineering and Mining Geophysics 2021 conference invite to an international workshop on subject Geophysics in Environmental Studies which will be held in Gelendzhik (Russia) and online 27 April 2021. This event aims to bring together researchers from Russia and Europe to tie together these communities.

WELCOME

Dear colleagues!

We invite you to participate in a workshop organized in collaboration with the EAGE Near Surface Geoscience Division International Committee as a part of the Engineering and Mining Geophysics 2021 Conference and Exhibition. The key issue is the usage of near-surface geophysics for the study of productive soils, groundwater, pollution, different eco- and biosystems like trees and roots, including urban and permafrost conditions - a topic that has been actively developing in the world over the past decade. Discussion of foreign and Russian experience, promising research directions, new ideas and achievements will be held in English with the participation of Russian and foreign speakers in face-to-face and online formats.

Chair: Svetlana Bricheva, PhD, Lomonosov MSU, Institute of Geography Russian Academy of Science, junior researcher

TECHNICAL PROGRAMME

Pay attention please

There is Moscow time (UTC+3) in programme.*
10.00 Moscow time (UTC+3) - 8.00 London Time (UTC+1) - 9.00 Amsterdam Time (UTC+2) - 14.00 Novosibirsk Time (UTC+7)

Tuesday, 27 April

ONLINE

International Wokshop 'Geophysics in Environmental Studies'

09:45	**Opening**

LG. Landforms & Geohazards
Chair: Svetlana Bricheva, Wolfram Geissler

10:00	**LG1 - Possibility of Geotechnical Monitoring of Geohazards with The Use of Crosshole Seismic Tomography (CST) -** M. Aleshkin [1]*, Yu. Ashmarina [1], M. Sadurtdinov [2], A. Konkov [1], A. Oshkin [3], V. Ignatiev [4], V. Mershchiy [5] [1]GEODEVICE; [2]Earth Cryosphere Institute; [3]NEOGEN; [4]BREND-VIK CANADA; [5]Tesseral Technologies Inc
10:15	**LG2 - Combined Use of DAS and DSS for Landslide Detection and Assessment -** F. Ravet[1]*, A. Goy[1], E. Rochat[1] [1]Omnisens
10:30	**LG3 - Geophysical monitoring of natural and engineered slopes: towards improved early warning of landslides -** J. Chambers[1]*, P. Meldrum[1], P. Wilkinson[1], J. Whiteley[1], A. Watlet[1], J. Boyd[1], J. Holmes[8], S. Donohue[2], D. Gunn[1], O. Kuras[1], R. Swift[1], H. Harrison[1], C. Inauen[1], S. Uhlemann[3], J. Kendall[4], A. Binley[5], D. Huntley[6], P. Bobrowsky[6], P. Clarkson[7] [1]British Geological Survey; [2]University College Dublin; [3]Lawrence Berkeley National Laboratory; [4]University of Oxford; [5]Lancaster University; [6]Geological Survey of Canada; [7]OptaSense; [8]Queens University Belfast
10:45	**LG4 - Integrating Ground-Penetrating Radar and Morphological Analysis to Study The Giant Gravel Dunes -** S. Bricheva[1,2]*, T.V. Gonikov[1], M.M. Doroshenkov[1,2], V.M. Matasov[3,1], A.L. Entin[1,2], A.V. Panin[2] [1]Lomonosov Moscow State University; [2]Institute of Geography Russian Academy of Science; [3]Peoples' Friendship University of Russia (RUDN University)
11:00	**LG5 - GPR survey of Storegga tsunami deposits, Shetland Islands UK, and geohazard discussion -** C. Bristow[1]*, L. Buck[1] [1]Birkbeck University Of London
11:15	**LG6 - Resource evaluation of valuable and toxic tailing components by electrotomography data and geochemical sampling -** P. Osipova[1]*, N. Yurkevich[1], V. Olenchenko[1] [1]Trofimuk Institute of Petroleum Geology and Geophysics of SB RAS
11:30	**LG7 - Classification of slag material in the laboratory and field scale with spectral induced polarisation -** T. Martin[1,2]*, Thomas Günther[3], Kerstin Kuhn[2], Rudolf Knieß[2,4], Andreas Weller[5] [1]Lund University, Lund, Sweden; [2]Federal Institute for Geosciences and Resources, Hannover, Germany; [3]Leibniz Institute for Applied Geophysics, Hannover, Germany; [4]Eastern Atlas, Berlin, Germany; [5]Clausthal University of Technology, Clausthal-Zellerfeld, Germany
11:45	**Coffee-break**

WP. Water & Permafrost
Chair: Ivan Khristoforov, Michael Angeloupoulos

12:00	**WP1 - Monitoring Contaminated Snowmelt Infiltration with Electrical Resistivity Tomography (ERT) -** Esther Bloem[1]*, Nicolas Forquet[2], Astri Søiland[3], Andrew Binley[4], Helen K. French[5] [1]Norwegian Institute of Bioeconomy Research, Norway; [2]INRAE, France; [3]Norwegian University of Life Sciences (NMBU), Norway; [4]Lancaster University, UK; [5]NMBU & NIBIO, Norway
12:15	**WP2 - Methodology of GPR survey of lakes and rivers within continuous permafrost -** I. Khristoforov[1]* [1]Melnikov Permafrost Institute SB RAS
12:30	**WP3 - Geophysical and geocryological investigation of active layer along the North Russian Railway (Khanovey, Russia). -** M. Rossi[1]*, M. Dal Cin[1,2], S. Picotti[2], D. Gei[2], V. Isaev[3], A. Pogorelov[3], E. Gorshkov[3], D. Sergeev[4], P. Kotov[3], M.L. Rainone[1] [1]Università degli Studi G. D'Annunzio; [2]OGS - National Institute of Oceanography and Applied Geophysics; [3]Lomonosov Moscow State University; [4]Geocryology Lab., Sergeev Institute of Environmental geoscience RAS
13:00	**WP5 - Geophysical methods within the complex of investigations aimed at studying outburst glacial lakes on the example of the Progress Lake (Larsemann Hills oasis, East Antarctica) -** S. Grigoreva[1]* [1]Federal State Budgetary Institution "Arctic and Antarctic Research Institute"
13:15	**WP6 - New geophysical approaches to the study of subaquatic permafrost in the Russian Arctic shelf -** A. Pirogova[1]*, M. Tokarev[1], Z. Zamotina[1], A. Roslyakov[1], A. Suchkova[1], E. Biruykov[2], N. Rybin[3] [1]Moscow State University; [2]SPLIT LLC; [3]Gazprom nedra LLC
13:30	**WP7 - The Influence of Thermokarst on Subsea Permafrost Evolution -** M. Angelopoulos[1,2]*, P.P. Overduin[1], S. Westermann[3], M.Jenrich[1,2], J.Strauss[1], S.Liebner[4,5], L. Schirrmeister[1], M.N. Grigoriev[6], G. Grosse[1] [1]Alfred Wegener Institute Helmholtz Center for Polar and Marine Research; [2]University of Potsdam, Institute of Geosciences; [3]University of Oslo; [4]GFZ German Centre of Geosciences, Section Geomicrobiology; [5]University of Potsdam, Institute of Biochemistry and Biology; [6]Melnikov Permafrost Institute of SB RAS
13:45	**Coffee-break**

AG. Agriculture & Ecosystems
Chair: Pavel Ryazantsev, Esther Bloem

14:30	**AE1 - The use of ERT to identity irrigatation patterns and efficiency in potato fields -** T. Manhaeghe[2], F. Wagner[3], T. Astic[4], D. Fournier[4], P. Janssens[5], S. Garre[1,2]* [1]Research Institue for Agriculture, Fisheries and Food; [2]Liège Université (ULiège); [3]Institute for Applied Geophysics and Geothermal Energy, RWTH Aachen University; [4]University of British Columbia; [5]Soil service of Belgium(BDB)

14:45	**AE2 - Detecting spatial variability of soil compaction using soil apparent electrical conductivity and maize traits -** L. Ren[1,4]*, W. Cornelis[1], T. D'Hose[2], G. Ruysschaert[2] [1]Department of Environment, Ghent University, Belgium; [2]Plant Sciences Unit, Flanders Research Institute for Agriculture, Fisheries and Food (ILVO), Belgium; [3]Institute of Agricultural Resources and Regional Planning Chinese Academy of Agricultural Sciences
15:00	**AE3 - Ground-penetrating radar for solving problems of soil science: state of the art and prospects -** P. Ryazantsev[1]* [1]Karelian Research Centre RAS
15:15	**AE4 - In-Vivo Monitoring of Daily Water Cycle in Palm Date Trees Using Electrical Resistivity -** P. Fernandez*[1], J. Zhen[1], A. Furman[2], N. Lazarovitch[1] [1]Ben Gurion University of the Negev; [2]Technion – Israel Institute of Technology, Haifa, Israel
15:30	**AE5 - Determination of tree trunks different species moisture content by Ground penetrating radar tomography -** M. Sudakova[2]*, E. Terentieva[1], A. Kalashnikov[3] [1]MSU Lomonosov; [2]ECI Tyumen SC SB RAS; [3]Moscow State University of Civil Engineering
15:45	**Coffee-break**
Special Section 'Breaking the barriers' Chair: Sarah Garré, Benjamin Mary	
15:50	**Indoor poster session 'Opportunities for open science and FAIR practices in geophysics';**
16:20	**Outdoor poster session 'Breaking the barriers between researchers from the EU and Russia to enhance future collaborations on geophysics';**
16:40	**Outdoor reception to meet with fellow geophysicists**

Special section «Breaking the barriers»

We invite you to become a part of free of charge special section 'Breaking the barriers' which will be organized on gather.town virtual platform.

Please register beforehand: https://eage.eventsair.com/engineering-and-mining-geophysics-2021/register-btb

There are 3 main 'experiences' you can attend to:
15:50-16:20 indoor poster session '**opportunities for open science and FAIR practices in geophysics**';

While other communities such as in Mathematics (arXiv) or in Neurosciences have already developed tools and adopted FAIR practices, the geophysical community has not yet sufficiently moved into a new era of open geophysical research sharing both data and methodologies, creating of large-scale databases and the development of standards for sharing.

We therefore invite contributions covering a wide range of different actors in 'Open Science', going from governance and policies over FAIR database management up till conception open-source codes and community-driven software packages. We will also emphasize how early-career researchers can benefit from making their research output open and gain visibility in their research community.

16:20-16:40 outdoor poster session '**breaking the barriers between researchers from the EU and Russia to enhance future collaborations on geophysics**';

In order to sparkle collaborations, we will highlight success stories of EU-Russian collaborations, pay attention to funding channels and exchange experiences. This will be done with short poster presentations and the possibility to exchange experiences with the people who shared their stories with us. If you have a great story yourself, feel free to contact us!

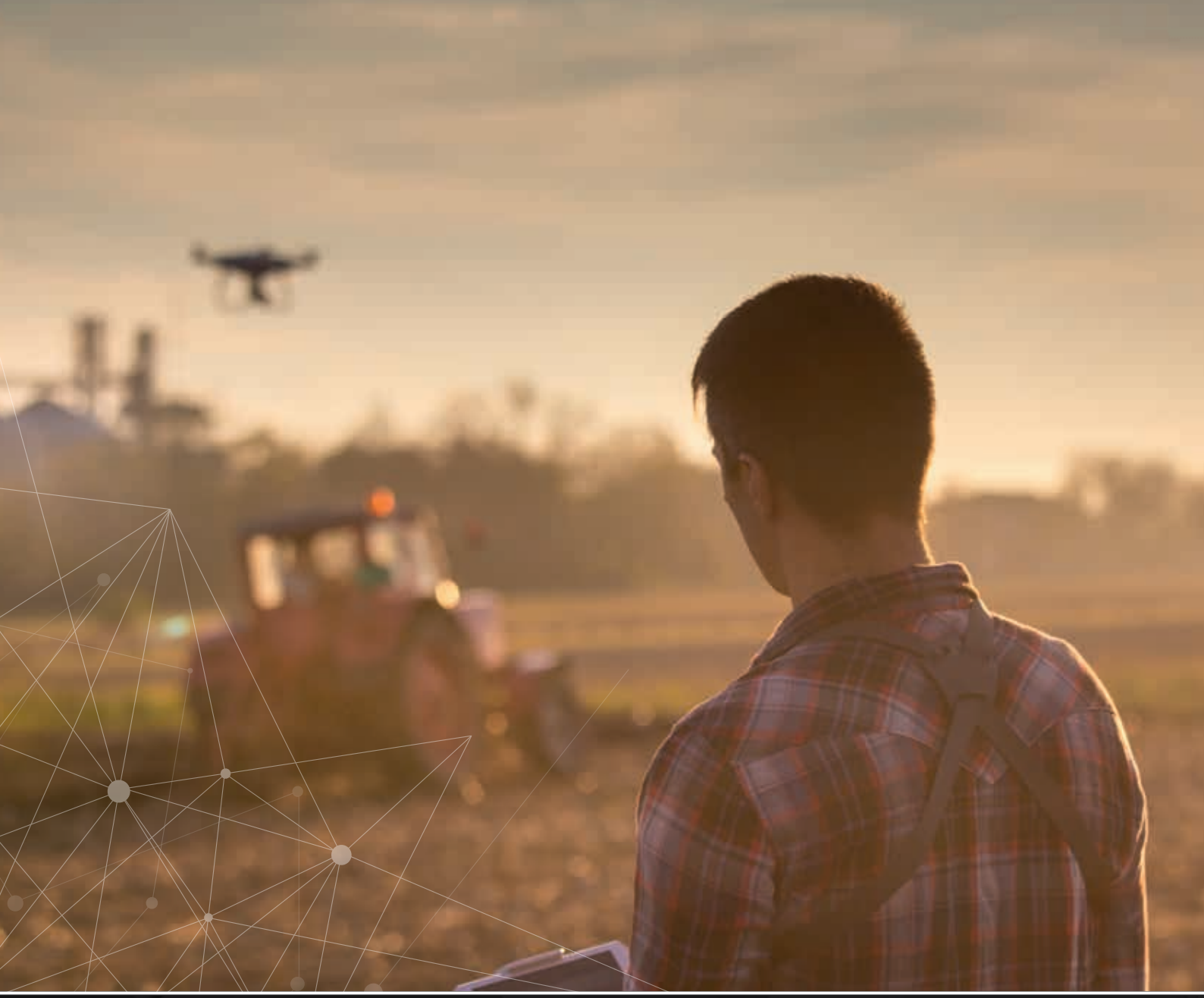
16:40-17:00 outdoor **virtual reception** to meet with fellow geophysicists.

There will be a virtual reception in our virtual conference venue where you can go chat with old friends or interesting unknowns. Come and check out who is actually behind those funny avatars!

REGISTRATION FEES

REGISTRATION FEES FOR THE WORKSHOP ONLY	
EAGE Member	€ 70
EAGE Student Member	€ 35
Non-member	€ 115
Student Non-member	€ 55
Breaking the Barriers	free of charge

Register now: https://eage.eventsair.com/engineering-and-mining-geophysics-2021/global-reg
Free of charge registration to Breaking the Barriers: https://eage.eventsair.com/engineering-and-mining-geophysics-2021/register-btb



EUROPE OFFICE
+31 88 995 5055
EAGE@EAGE.ORG

RUSSIA & CIS OFFICE
+7 495 640 2008
MOSCOW@EAGE.ORG

MIDDLE EAST/AFRICA OFFICE
+971 4 369 3897
MIDDLE_EAST@EAGE.ORG

ASIA PACIFIC OFFICE
+60 3 272 201 40
ASIAPACIFIC@EAGE.ORG

LATIN AMERICA OFFICE
+57 1 7449566 EXT 116
AMERICAS@EAGE.ORG

HEAD OFFICE • PO BOX 59 • 3990 DB HOUTEN • THE NETHERLANDS • +31 88 995 5055 • EAGE@EAGE.ORG

www.eage.ru

join us on social media!