

October 16-19
أكتوبر 2023



المؤتمر العالمي السابع
للجيوفيزياء الهندسية
Seventh International Conference
on Engineering Geophysics

TECHNICAL PROGRAM

16 -19 OCTOBER 2023 • UNITED ARAB EMIRATES UNIVERSITY • AL AIN, UAE

WWW.SEG.ORG/EVENTS/ICEG23

TIME		PROGRAM DETAILS	
		DAY 1: SUNDAY, 15 OCTOBER 2023 UNITED ARAB EMIRATES UNIVERSITY (UAU)	
08:00	12:00	Innovation Award for Geophysics Competition	
12:00	16:15	Multiphysics Approach in Energy Transition: Advances in Methodologies and Applications A Pre-conference Seminar at ICEG2023	
17:00	19:00	Icebreaker at UAEU Business Center Registration	
		DAY 2: MONDAY, 16 OCTOBER 2023 UNITED ARAB EMIRATES UNIVERSITY (UAU)	
08:00	09:00	Onsite Registration Open	
09:00	09:10	Opening Address by UAE University Chancellor	
09:10	09:20	Introductory Film	
09:20	09:30	SEG President Opening Address - Arthur Cheng	
09:30	09:40	Opening Address	
09:40	09:50	Announcing the Innovation Award Winners	
09:50	10:10	EXHIBITION OPENING & COFFEE BREAK - 20 MIN	
10:10	10:35	GENERAL KEYNOTE: DISTRIBUTED ACOUSTIC SENSING (DAS) AND SUSTAINABLE CITIES OF THE FUTURE BIONDO BIONDI, STANFORD UNIVERSITY	
		PANEL SESSION: MINING INNOVATIONS WITH GEOPHYSICS FOR NET ZERO EMISSIONS	
10:35	10:55	PANEL KEYNOTE: TBC	
10:55	11:25	Panel Moderator: John Bradford, Colorado School of Mines	
PANEL SPEAKERS		Member 1: Anna Lim, Argeo	
		Member 2: Yaoguo Li, Colorado School of Mines	
		Member 3: Yousef Jawabreh, Ministry of Energy & Infrastructure, UAE	
		Member 4: TBC	
11:25	11:55	BREAKOUT SESSION FOR POSTER PRESENTERS - 30 MIN	
11:55	12:55	LUNCH BREAK - 1 HR	
		SESSION 1: CCS AND MINERALS EXPLORATION (SESSION CHAIRS: TBC)	
12:55	13:20	SESSION KEYNOTE: TOWARDS A COST-EFFECTIVE AND FUTURE-PROOF APPROACH TO MONITORING GEOLOGICAL CARBON STORAGE YAOGUO LI, COLORADO SCHOOL OF MINES	
13:20	13:40	TBC BC	
13:40	14:00	Subsurface Imaging with Portable Active Seismic Source through Amplified Vertical Vibration Ahmad Bahaa Omar Ahmad, Kyushu University	
14:00	14:20	TBC TBC	
14:20	14:40	Using Airborne Geophysics for Mineral Exploration in UAE – A Case Study Karim Benhammam, Ministry of Energy & Infrastructure	
14:40	15:10	BREAKOUT SESSION FOR POSTER PRESENTERS - 30 MIN	
15:10	15:30	COFFEE BREAK - 20 MIN	
SESSION 2A: AI & MACHINE LEARNING SESSION CHAIRS: TBC		SESSION 2B: TECHNOLOGY AND METHOD ADVANCES SESSION CHAIRS: TBC	
15:30	15:40	PRODUCT DEMONSTRATION - 10 MINS	
15:40	16:00	Building an Initial Model for Near-surface Surface Waves based Full-waveform Inversion with Deep Learning Dmitry Borisov, Kansas Geological Survey	Investigation of Seismic Wave Attenuation in Carbonate Rocks Fateh Bouchaala, Khalifa University
16:00	16:20	TBC TBC	Evaluation of Key Geotechnical Parameters (OCR, K0) using Seismic SH-and SV-Wave Cross-Hole Data Thomas Fechner, Geotomographie GmbH
16:20	16:40	TBC TBC	Assessment of Air Quality in Abu Dhabi Emirate, UAE Using Geoinformatics Rana Saqer, United Arab Emirates University (UAU)
16:40	17:00	Multi-scale Full-waveform Inversion based on a Convolutional Neural Network Wenda Li, Institute of Geology and Geophysics, Chinese Academy of Science	The Influence and Inspiration of the Yucatan Event Changcheng Li, Southern University of Science and Technology
17:00	17:20	AI on AI: Training AI Classifier on AI-Generated Remote Sensing Images Abdullah Alsalmami, United Arab Emirates University (UAU)	S-wave Propagation and Analysis under the Modified Couple Stress Theory Hong Liu, Institute of Geology and Geophysics

TIME		PROGRAM DETAILS
START	END	DAY 3: TUESDAY, 17 OCTOBER 2023 UNITED ARAB EMIRATES UNIVERSITY (UAEU)
PANEL SESSION: ROLE AND CONTRIBUTION OF NEAR-SURFACE GEOPHYSICS TO SUSTAINABLE FUTURE		
08:00	08:20	PANEL KEYNOTE: PROVIDING WATER TO 400 MILLION PEOPLE IN SUB-SAHARAN AFRICA PAUL BAUMAN, BGC ENGINEERING
08:20	08:50	Panel Moderator: Sue Webb, University of Witwatersrand
PANEL SPEAKERS		Member 1: Chi Zhang, University of Vienna
		Member 2: Paul Bauman, BGC Engineering
		Member 3: Khalid Obaid, ADNOC
		Member 4: TBC
08:50	09:20	BREAKOUT SESSION FOR POSTER PRESENTERS - 30 MIN
09:20	09:40	COFFEE BREAK - 20 MIN
SESSION 3: GEOTHERMAL AND HYDROGEOPHYSICS (SESSION CHAIRS: TBC)		
09:40	10:05	SESSION KEYNOTE: MONITORING GROUNDWATER LEVEL USING WIND TURBINE GENERATED NOISE ELITA LI, PURDUE UNIVERSITY
10:05	10:25	Contribution of Gravimetry to the Study of the Structure of the Télijdjene Basin (Eastern Algeria): Hydrogeological Implications Tarek Drias, Batna 2 University
10:25	10:45	Risk Identification in Levees Using Near-surface Seismic Methods Steve Sloan, U.S. Army Engineer Research & Development Center
10:45	11:05	A Comprehensive Study of Egypt's Geothermal Energy Potential Mohamed Abdel Zaher, National Research Institute of Astronomy and Geophysics (NRIAG)
11:05	11:25	Imaging Subsurface Geothermal Structures Using Magnetotelluric Data at Tendaho Geothermal Field, Northeast Ethiopia Biruk Abera Cherkose, United Arab Emirates University (UAEU)
11:25	11:45	Gravity and Magnetic Data for the Hot Dry Rocks (HDR) Delineation of the Enhanced Geothermal System (EGS) in Gonghe town, China Xueyu Zhao, University of New South Wales (UNSW) Sydney
11:45	12:15	BREAKOUT SESSION FOR POSTER PRESENTERS - 30 MIN
12:15	13:15	LUNCH BREAK - 1 HR
SESSION 4: BEST OF ICEEG		
13:15	13:40	SESSION KEYNOTE: ACCURATE LINEAR-ARRAY DISPERSION IMAGING OF PASSIVE SURFACE WAVES IN URBAN ENVIRONMENTS JIANGHAI XIA, ZHEJIANG UNIVERSITY
13:40	14:00	Reconstructing Near-surface Model via Joint Random-objective Waveform Inversion of Rayleigh and Love Waves Yudi Pan, Wuhan University
14:00	14:20	TBC TBC
14:20	14:40	Shallow Structure of the Longmenshan Central Fault Zone Based on Dense Seismic Array Hongyi Li, China University of Geosciences Beijing
14:40	15:00	TBC TBC
15:00	15:20	COFFEE BREAK - 20 MIN
SESSION 5: PLANETARY AND LUNAR GEOPHYSICS (SESSION CHAIRS: TBC)		
15:20	15:30	PRODUCT DEMONSTRATION - 10 MINS
15:30	15:50	Mapping the Internal Structure Arctic Pingos using Ground-penetrating Radar: Results from the Pingo Canadian Landmark John H Bradford, Colorado School of Mines
15:50	16:10	TBC TBC
16:10	16:30	Development of Lunar Gravity Field and its Application Jianguo Yan, Wuhan University
16:30	16:50	3D Imaging of Mars' Subsurface with Mars Reconnaissance Orbiter Shallow Radar Data Frederick J. Foss II, Freestyle Analytical & Quantitative Services, LLC
16:50	17:10	A Large Low-density Igneous Pluton Occurring beneath the Aristarchus Plateau Revealed by Gravity Inversion Feng Liang, Wuhan University

TIME		PROGRAM DETAILS	
START	END	DAY 4: WEDNESDAY, 18 OCTOBER 2023 UNITED ARAB EMIRATES UNIVERSITY (UAEU)	
SESSION 6: GEOHAZARDS AND RISK (SESSION CHAIRS: TBC)			
08:00	08:25	SESSION KEYNOTE: OBSTACLE FORECASTING FOR TUNNEL CONSTRUCTION USING REFLECTED SEISMIC WAVES ENHEDELIHAI ALEX, NILOT	
08:25	08:45	Geotechnical Imaging Ahead of Underground Developments De-risks Mine Planning Reece Van Buren, Digital Surveying	
08:45	09:05	Use of Passive Seismic Arrays for Seismic Hazard Assessment Dan Hollis, Sisprobe	
09:05	09:25	Identification of an Air-filled Collapse by Using ERT and SRT Geophysical Methods. A Case Study from Latvia Peteris Dzerins, University of Latvia	
09:25	09:45	TBC TBC	
09:45	10:15	BREAKOUT SESSION FOR POSTER PRESENTERS - 30 MIN	
10:15	10:35	COFFEE BREAK - 20 MIN	
		SESSION 7A: GEOHAZARDS AND RISK II SESSION CHAIRS: TBC	SESSION 7B: AI & MACHINE LEARNING II SESSION CHAIRS: TBC
10:35	10:45	PRODUCT DEMONSTRATION - 10 MINS	
10:45	11:05	Direct Detection of 135 m Deep Void Using High Resolution Seismic Reflection Richard Miller, Kansas Geological Survey	Artificial Intelligence Potential in Digitizing Old and Raw Geodata Khalid Elhaj, United Arab Emirates University (UAEU)
11:05	11:25	Using High Frequency Seismic Signal to Give New Information About Shallow Earth and Environmental Hazard Mitigation Mohamed Gamal, Cairo University	An Integrated Approach of Remote Sensing and DC Resistivity Techniques for Geological and Hydrogeological Evaluation in Wadi Systems: A Case Study from the Eastern Desert, Egypt Abdelhalim, United Arab Emirates University (UAEU)
11:25	11:45	Underwater ERT Method to Image Karst Cave Distribution Below the River Water Daopu Wang, Southern University of Science and Technology	TBC TBC
11:45	12:05	Unveiling Hidden History: GPR Survey Reveals Buried Water Well in Liluiyah, Khorfakkan's Historic District Khadija Safa, Sharjah University	Anisotropy Estimation by Using Machine-learning Methods Guibin Zhao, Khalifa University
12:05	12:25	Land Use and Land Cover Mapping using Google Earth Engine: A Comparative Analysis of Machine Learning Algorithms Mubbashra Sultan, United Arab Emirates University (UAEU)	TBC TBC
12:25	13:25	LUNCH BREAK - 1 HR	
SESSION 8: CASE STUDIES IN ENGINEERING GEOPHYSICS (SESSION CHAIRS: TBC)			
13:25	13:50	SESSION KEYNOTE: 3D ELASTODYNAMIC MODELLING APPLIED IN THE DESIGN OF TECHNICAL BLASTS LINDSAY LINZER, SRK CONSULTING	
13:50	14:10	Case Studies from the North: Implementation of Geophysical Methods in Extreme Conditions Esther Babcock, Logic Geophysics	
14:10	14:30	TBC TBC	
14:30	14:50	Surveys Using the Loupe Transient EM System Christopher Leech, Geomatrix	
14:50	15:10	Geophysical Modeling helps Interpret Subsurface Data: Example from North Oman Mohammed Farfour, Sultan Qaboos University	
15:10	15:40	BREAKOUT SESSION FOR POSTER PRESENTERS - 30 MIN	
15:40	16:00	COFFEE BREAK - 20 MIN	
SESSION 9: METHOD DEVELOPMENT AND MONITORING (SESSION CHAIRS: TBC)			
16:00	16:20	Modeling of Scholte Wave for Offshore Seismic Survey Chih-Ping Lin, National Yang Ming Chiao Tung University	
16:20	16:40	High-resolution Tomographic Imaging as a Basis for Geomechanical Assessment Prior to Subsurface Excavation Michael Behm, Geodata Ziviltechnikergesellschaft	
16:40	17:00	TBC TBC	
17:00	17:20	Verifying the Effectiveness of Retrofit Measures for Improving the Earthquake Resistance of Buildings through Large-Scale Testing and Dynamic Simulation Roshen Joseph, United Arab Emirates University (UAEU)	
17:20	17:40	Borehole Vector Gravity for Waterflood Monitoring in Vertical and Horizontal Wells: Feasibility Study Using Numerical Conceptual Simulation Model Taqi Alyousuf, Saudi Aramco	

TIME		PROGRAM DETAILS	
START	END	DAY 5: THURSDAY, 19 OCTOBER 2023 UNITED ARAB EMIRATES UNIVERSITY (UAEU)	
SESSION 10: TECHNOLOGY AND METHODOLOGICAL ADVANCES II (SESSION CHAIRS: TBC)			
08:00	08:25	SESSION KEYNOTE: RETRIEVING DETAILED SUBSURFACE VELOCITY INFORMATION FROM COMMON-OFFSET GPR AND CMP-STACKED SEISMIC REFLECTION DATA KLAUS HOLLIGER, UNIL	
08:25	08:45	VLF-EM Anomaly Interpretation by Applying Analytic Signal Haydar A. Baker, United Arab Emirates University (UAEU)	
08:45	09:05	Seismic Interferometry from Correlated Sources by Crosscoherence: Application to the Retrieval of Rayleigh, Love and Virtual Refraction Waves from 3C Train-Traffic-Induced Vibrations Binbin Mi, Zhejiang University	
09:05	09:25	TBC TBC	
09:25	09:45	3D DC Resistivity Inversion with and for Metallic Infrastructures using Face and Edge Conductivity Dikun Yang, Southern University of Science and Technology	
09:45	10:15	BREAKOUT SESSION FOR POSTER PRESENTERS - 30 MIN	
10:15	10:35	COFFEE BREAK - 20 MIN	
SESSION 11A: TECHNOLOGY AND METHODOLOGICAL ADVANCES III SESSION CHAIRS: TBC		SESSION 11B: TECHNOLOGY ADVANCEMENTS IV SESSION CHAIRS: TBC	
10:35	10:45	PRODUCT DEMONSTRATION - 10 MINS	
10:45	11:05	Inverting Seismic Data for High-resolution Near-surface Tomograms Sherif M. Hanafy, King Fahd University of Petroleum and Minerals (KFUPM)	Advances in Spectral Electrical Impedance Tomography (sEIT) Towards Accurate Imaging in the mHz to kHz Frequency Range Haoran (Henry) Wang, Institute of Bio and Geosciences
11:05	11:25	TBC TBC	Slowness Vector, Ray-velocity Vector, Traveltime and Raypath of Seismic Body Waves in Viscoelastic Anisotropic Media Bing Zhou, Khalifa University
11:25	11:45	Towards the Assessment of Passive Seismic Horizontal-to-Vertical Spectral Ratio (HVSR) Surveying for Bedrock Depth Estimation in Texas Mohamed Abdrabou Radwan Mousa, Texas A&M University-Corpus Christi	Feasibility Study of Surface-to-Borehole Electromagnetic Monitoring in Horizontal Wells using Numerical Simulation Taqi Alyousuf, Saudi Aramco
11:45	12:05	Development of a New DAS Sensor for Recording Full Strain Components Ryoga Kani, Kyoto University	Application of Microgravity Measurements in Urban Underground Space Exploration Zhongkun Qiao, Zhejiang University of Technology
12:05	12:25	TBC TBC	
12:25	13:25	LUNCH BREAK - 1 HR	
SESSION 12: TECHNOLOGY AND METHODOLOGICAL ADVANCES V (SESSION CHAIRS: TBC)			
13:25	13:50	SESSION KEYNOTE: AUTOMATION OF SEISMIC SCOUTING WITH ROBOTICS AND MACHINE LEARNING PAVEL GOLIKOV, SAUDI ARAMCO	
13:50	14:10	High-resolution Directional Passive Surface Wave Dispersion Imaging Based on Multiple Signal Classification Qi Liang, China University of Petroleum-Beijing	
14:10	14:30	Structure and Stratigraphy of Al Jaww Plain, Southeastern Al Ain, United Arab Emirates: Implications for Aquifer Systems and Mantle Thrust Sheets Saif Ullah, Khalifa University	
14:30	14:50	Research on Seismic Data Compensation Method Based on Micro-Logging Q Estimation: A Case Study in Desert Area Wang Deying, Research Institute of Petroleum Exploration & Development-Northwest (NWGI)	
14:50	15:10	Improved Full-waveform Inversion based on Sparse Relaxed Regularized Regression Processing of Seismic Data Jiahang Li, Kyoto University	
15:10	15:40	BREAKOUT SESSION FOR POSTER PRESENTERS - 30 MIN	
16:00	16:00	COFFEE BREAK - 20 MIN	
SESSION 13: GEOHAZARDS TO INFRASTRUCTURE (SESSION CHAIRS: TBC)			
16:00	16:20	High-resolution Geophysics for Geohazards Ersan Turkoglu, Saudi Aramco	
16:20	16:40	TBC TBC	
16:40	17:00	Initial Development of Continuous Volcano Monitoring System Rezkiya Dewi Andajani, The University of Tokyo	
17:00	17:20	TBC TBC	
17:20	17:30	Closing Remarks by Committee Chairs	

October 16-19
أكتوبر 2023



المؤتمر العالمي السابع
للجيوفيزياء الهندسية
Seventh International Conference
on Engineering Geophysics

DATE	ACTIVITY
Sunday, 15 October 2023	Icebreaker at UAEU Business Center
Monday, 16 October 2023	Visit to Bait Mohammed Bin Khalifa
Tuesday, 17 October 2023	
Wednesday, 18 October 2023	Tour of Al Jahli Fort followed by Gala Dinner at Al Ain Rotana Hotel
Thursday, 19 October 2023	Field trip to explore the Geo-Engineering Properties of Carbonate Bedrocks of Al-Ain, UAE

CONFERENCE PARTNERS



COFFEE BREAK SPONSOR



SUPPORTING PARTNER



MEDIA PARTNER

