



SAGEEP 2023

2nd Munitions Response Meeting

New Orleans | Louisiana | April 2 - 6

**2nd Munitions
Response Meeting**

**35th Symposium on with the
Application of Geophysics
to Engineering and
Environmental Problems**

www.EEGS.org/SAGEEP 2023-MRM



SAGEEP 2023 • Munitions Response Meeting Schedule at a Glance

Sunday April 2	SAGEEP SESSIONS		MUNITIONS RESPONSE SESSIONS	
Short Course 8:00am-5:00pm Workshop 8:00am-5:00pm	SC-1: 3D Geophysical Sensor Mapping in GPS-denied Areas with Kaarta Stencil 2 SLAM-based mobile mapping system Instructor: David Duggins W-1: Biogeophysics: Improving Understanding of Geophysical Signatures of Microbial Processes for Environmental & Engineering Problems Instructors: Estella Atekwana, Dimitrios Ntarlagiannis, Lee Slater			
Monday April 3				
8:30-10:00am	Awards and Keynote Speakers Jordan Adelson, Navy's Laboratory Quality and Accreditation Office and the Chair of the DoD Environmental Data Quality Workgroup (EDQW) (River/Port/Starboard)			
10:00-10:20am	Coffee Break (River/Port/Starboard)			
	River/Port/Starboard		Churchill B2	
10:20-11:40am	Best of EAGE's Near Surface 2022 - Belgrade, Serbia		Munitions Response (MR) Perspectives	
12Noon-1:30pm	EEGS Foundation Fundraiser Luncheon: Brad Arcement, Chief USACE Levee Safety Center (River/Port/Starboard)			
	Churchill B1	Churchill A1/A2	Churchill B2	Charts B and Chart C
1:30-3:10pm	Archaeology and Forensics I	Geophysical Methods I	Root Cause Analysis (RCA) Panel	
3:10-3:30pm	Posters and Coffee in Exhibit Hall (Churchill C/D)			
3:30-5:10pm	Archaeology and Forensics II	Geophysical Methods II	Root Cause Analysis (RCA) Panel	Root Cause Analysis (RCA) Breakout Sessions
5:10-6:30pm	Ice Breaker in Exhibit Hall (Churchill C&D)			
6:45-10:00pm	Student-Industry Networking Event: Walking the Devil's Empire - An interactive tour of New Orleans' haunted past			
Tuesday April 4				
	Churchill B1	Churchill A1/A2	Churchill B2	
8:00-10:00am	Dams/Levees I	Biogeophysics	Munitions Response (MR) Project Planning and Decision Making	
10:00-10:20am	Posters and Coffee in Exhibit Hall (Churchill C/D)			
10:20-12:00Noon	Dams/Levees I	Geophysical Site Characterization I	Munitions Response (MR) Data Usability	
12Noon-1:30pm	NAOC's Fundraiser Luncheon for the EOD Warrior Foundation (EODWF) Speaker: Greg Mittelman, EODWF Chair			
1:30-3:10pm	Airborne Geophysics/ Unmanned Vehicles and Drones	Geophysical Site Characterization II	Munitions Response (MR) Innovative and Emerging Technologies I	
3:10-3:30pm	Posters and Coffee in Exhibit Hall (Churchill C/D)			
3:30-6:10pm	Cold Regions Geophysical Site Characterization	Geophysical Site Characterization III	Munitions Response (MR) Case Studies I	
6:30-9:30pm	Conference Evening at the Sidecar Patio in the Warehouse District of New Orleans			
Wednesday April 5	Churchill B1		Churchill B2	
8:00-10:00am	EEGS Annual Business Meeting		Munitions Response (MR) Underwater Session I	
	Bruce Smith Memorial Session			
10:00-10:20am	Posters and Coffee in Exhibit Hall (Churchill C/D)			
10:20-12:00Noon	Hydrogeophysics and Hydrological Investigations		Munitions Response (MR) Landmines and Burial Pits	
12Noon-1:30pm	Lunch On Own			
1:30-3:10pm	Hydrogeophysics and Hydrological Investigations II		Munitions Response (MR) Innovative and Emerging Technologies II	
3:10-3:30pm	Posters and Coffee in Exhibit Hall (Churchill C/D)			
3:30-5:30pm	Electrical Methods		Munitions Response (MR) Case Studies II	
Thursday April 6				
Short Course 9:00am-5:00pm	SC-2: Seequent UX-Analyze: Dynamic Data Processing and One-pass Classification Instructors: Laura Quigley, Darren Mortimer, Seequent			
Short Course 8:00am-4:30pm	SC-3: Ground Penetrating Radar - Principles, Practice and Processing Instructor: Greg Johnston, Sensors & Software, Inc.			

TABLE OF CONTENTS

Registration	4	Exhibition Floorplan	10
Emergency Procedures	4	SAGEEP 2023/MRM Exhibitor List	10
Name Badges	4	Exhibition Schedule	11
Speaker Information	4	SAGEEP 2023/MRM Mobile App	11
Proceedings	4	Awards and Keynote Speaker	12
Job Posting Board	4	Special Events	13
EEGS Information	4	Ice Breaker, Student Event & Conference Evening	13
Evaluation Forms	4	Bruce Smith Memorial Session	13
Special Meetings	4	Luncheons	13
Corporate Members	4	Short Courses at SAGEEP 2023/MRM	15
SAGEEP 2023/MRM Planning Committee	5	Exhibitors Directory	16
SAGEEP 2023 Session Chairs/Co-Chairs	5	Technical Program	21
Welcome to SAGEEP 2023	6	Sponsors	
Hilton Hotel Floorplan	9		



SAGEEP/MRM Registration Desk

The SAGEEP REGISTRATION DESK will be open in the registration area (Churchill Corridor) during the following hours:

Sunday, April 2	7:00 am – 5:00 pm
Monday, April 3	7:00 am – 6:00 pm
Tuesday, April 4	7:00 am – 6:00 pm
Wednesday, April 5	9:00 am – 3:30 pm
Thursday, April 6	7:00 am – 9:00 am (outside the Short Course meeting rooms, Charts A and B for on-site registrations)

Emergency Procedures

Should an emergency arise while at SAGEEP/MRM, please go to the SAGEEP/MRM registration counter or contact the hotel operator at the nearest telephone.

Name Badges

Name badges are your admittance to any part of the Conference and Exhibits and some social events. Attendees without a badge will be asked to confirm their registration and be issued another badge at a charge of \$20. There will be no exceptions. Exhibitor personnel badges are restricted to use in the Exhibition Hall only.

PLEASE BE SURE TO WEAR YOUR BADGE AT ALL TIMES.

Speaker Information

Keynote, Featured and Luncheon speakers are encouraged to check in at the SAGEEP/MRM registration desk and their presentation room 30 minutes prior to their scheduled speaking engagement. Please visit the SAGEEP/MRM registration counter to request further assistance.

Proceedings

Conference Proceedings will be made available to participants post conference. SAGEEP/MRM registrants will be given instructions about online access at the conclusion of the conference.

Job Posting Board

The job posting board, located in the registration area outside the Churchill session rooms, is available to all attendees who want to advertise a job opening or post resumes for review.

EEGS Information / Evaluation Forms

Your evaluation of both the oral and poster presentations is important. Please make certain that you take a moment to fill out the forms. Evaluation boxes will be available outside each session room, in the exhibition hall and at the registration counter. Student Volunteers will also be available during the sessions to collect your completed evaluations. EECS information such as membership forms will also be available.

Special Meetings

EEGS Board Meeting

Sunday, April 2	8:00 am – 5:00 pm (Continental Breakfast 7 am) Location: Compass Chair: Michael Kalinski, President-Elect
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Corporate Members

The following organizations generously support EECS and its programs through their corporate membership. We wish to extend our gratitude for their support.

Advanced Geosciences, Inc. (<https://www.agiusa.com/>)

Exploration Instruments LLC (<http://www.exiusa.com/>)

Fugro (<https://www.fugro.com/>)

Geogiga Technology Corporation (<https://www.geogiga.com/en/index.php>)

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HydroGeophysics, Inc. (HGI) (<https://hgiworld.com>)

HydroGeoLogic, Inc. (HGL) (<https://www.hgl.com/>)

Intelligent Resources, Inc. (<https://www.rayfract.com/>)

IRIS Instruments (<http://www.iris-instruments.com/>)

Mount Sopris Instrument Company, Inc. (<https://mountsopris.com/>)

Seequent (<https://www.seequent.com/products-solutions/geosoft-software/>)

Sensors & Software, Inc. (<https://www.sensoft.ca/>)

Silixa LLC (<https://silixa.com/>)

Spotlight Geophysical Services (<http://www.spotlightgeo.com/>)

The R.T. Clark Companies Inc. (<https://www.rtclark.com/>)

USA Environmental, Inc. (<https://usatampa.com>)

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Vice President SAGEEP

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Conference Evening Chair

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EEGS Managing Director

Jackie Jacoby
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Jayma File
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SAGEEP 2023/MRM SESSION CHAIRS

Jordan Adelson	Michele Maxson
Micki Allen	Alastair McClymont
Estella Atekwana	Jonathan Miller
Esben Auken	Darren Mortimer
Esther Babcock	Craig Murray
Stuart Bancroft	Dimitrios Ntarlagiannis
Matt Barner	Jeffrey Paine
Dave Bradley	Peeter Pehme
Lynelle Brode	Andi A. Pfaffhuber
Brian Brunette	Meghan Quinn
Bethany Burton	Dale Rucker
Trever Ensele	James Salisbury
T. Jeffrey Gamey	Steve Saville
Andy Gascho	Gregory Schultz
Dan Glaser	Andrew Schwartz
Lewis Hunter	Paul Schwering
Trevor Irons	Bob Selfridge
Michael Kalinski	Jacob Sheehan
Kevin Kingdon	Sandra Takata
Richard Krahenbuhl	Jonathan Thomle
Jeffery Leberfinger	Harry Wagner
Karen Lemley	Jennifer Weller
Jim LoCoco	



Welcome to SAGEEP/MRM 2023

EEGS wishes to welcome you to SAGEEP 2023, the 35th Symposium on the Applications of Geophysics to Engineering and Environmental Problems. And in collaboration with NAOC and the US Army Corps of Engineers, we also welcome you to the 2nd Munitions Response Meeting (MRM). To our attendees, sponsors, staff, and volunteers, we appreciate having you here and your contributions to making this a successful and memorable SAGEEP/MRM.

Our keynote speaker on Monday morning will discuss the importance of quality in meeting geophysical objectives and providing data that provides defensible conclusions and recommendations.

We have an outstanding agenda this year with over 160 oral and poster presentations discussing a wide variety of applications, methodologies, and case histories. In addition to the oral and poster presenters, our exhibitors and corporate sponsors are part of the foundation of this meeting. Be sure to visit the Exhibit Hall and learn more about the newest geophysical sensors, software, products,

and services. Join us at the Exhibitor Ice Breaker on Monday evening to talk to exhibitors and network with other SAGEEP/MRM attendees. After the icebreaker, if you dare, join us for the Student-Industry event, a guided haunted tour of New Orleans.

We have four outstanding short courses book ending the conference/meeting (two on Sunday and two on Monday). Also don't miss the Fundraiser Luncheons Monday and Tuesday - have a great meal, hear interesting speakers, and support the EEGS Foundation (Monday) and the EOD Warrior Foundation (Tuesday)! Our Invited Luncheon and Keynote Speakers are superb highlights within the program. We hope you will have an opportunity to connect with the speakers themselves. Our conference evening will be on Tuesday night at a local establishment where you can catch up with old contacts and make some new ones all while enjoying the New Orleans food, drink, and music experience. Check with the registration desk for tickets to these events or to short courses if you haven't already signed up.



Have a wonderful time at the conference and thank you for being a part of the SAGEEP 2023/2nd MRM experience!



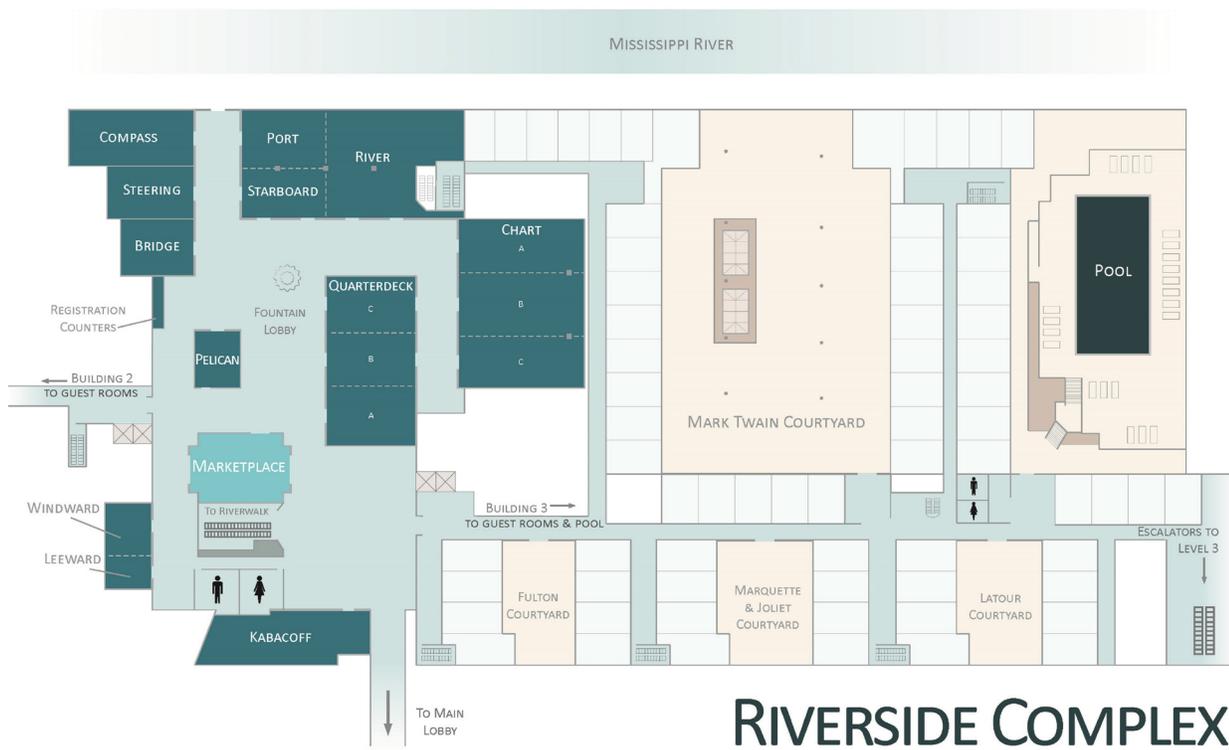
Darren Mortimer
VP SAGEEP
General Co-Chair



Jeff Leberfinger
General Co-Chair

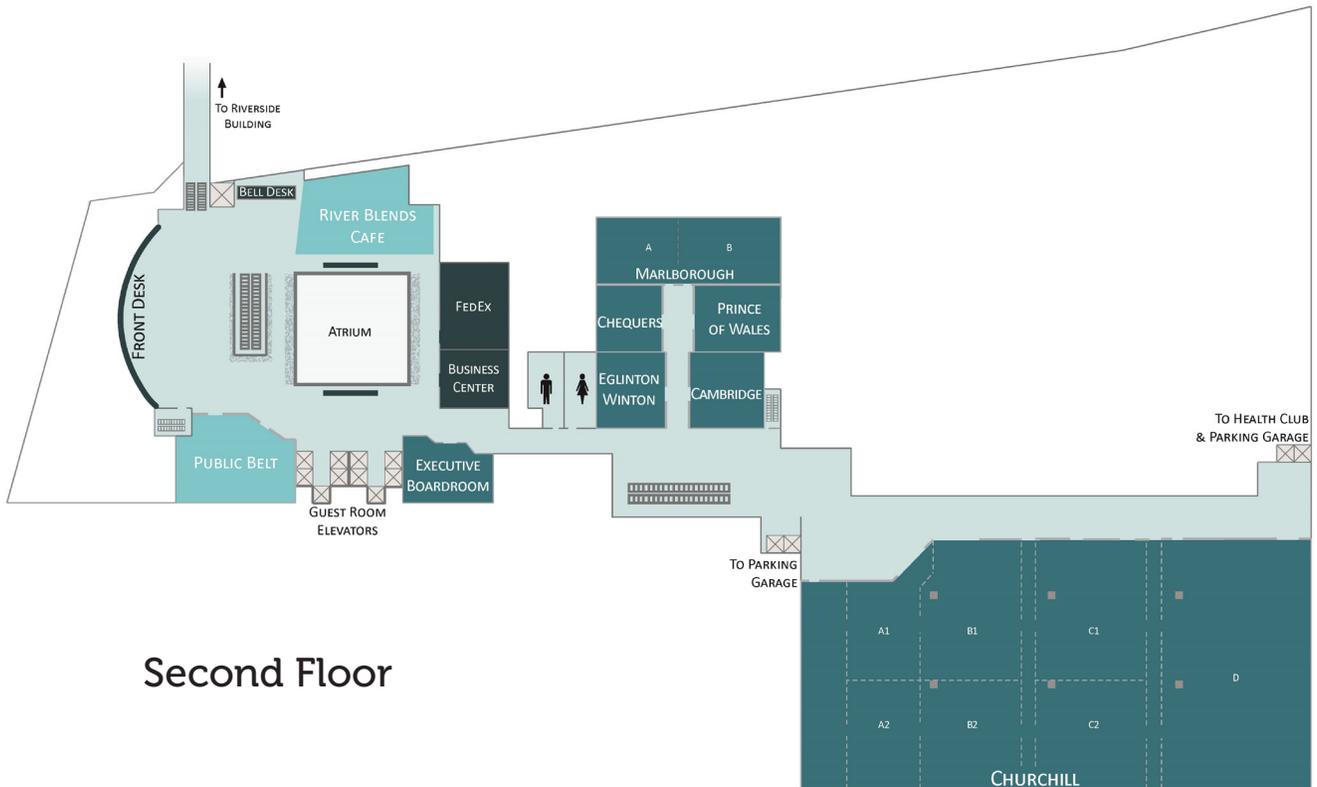


VENUE FLOORPLAN



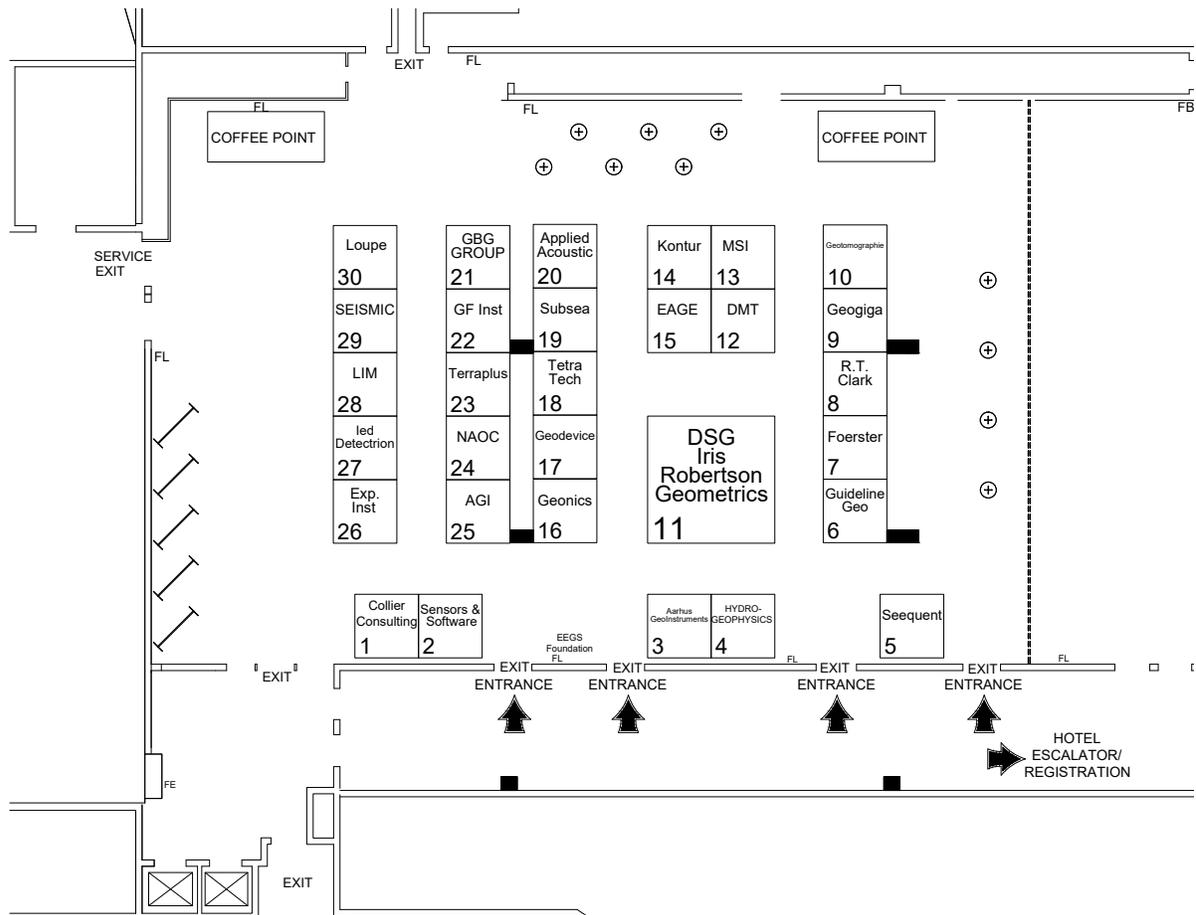
RIVERSIDE COMPLEX

Main Level



Second Floor

EXHIBITION FLOOR PLAN



FLOOR PLAN SUBJECT TO CHANGE BY SHOW MANAGEMENT

SAGEEP 2023 Exhibitor List

Exhibitors - Booth

Aarhus GeoInstruments	3	Guideline Geo Americas	6
Advanced Geosciences, Inc.	25	HydroGEOPHYSICS, Inc.	4
Applied Acoustic Engineering, Ltd.	20	iED Detection Systems Inc.	27
Collier Geophysics	1	Iris Instruments	11
DMT GmbH & Co. KG	12	Kontur	14
Dam Safety Group (DSG)	11	LIM Logging	28
EEGS Foundation	0	Loupe Geophysics	30
European Association of Geoscientists & Engineers (EAGE)	15	Mount Sopris Instruments	13
Exploration Instruments	26	National Association of Ordnance Contractors (NAOC)	24
Foerster Instruments	7	Robertson Geologging (USA), Inc.	11
GBG Group	21	The R.T. Clark Companies Inc.	8
Geodevice Inc.	17	Sequent	5
Geogiga Technology Corporation	9	Seismic Source Company	29
Geometrics, Inc.	11	Sensors & Software Inc.	2
Geonics Limited	16	Subsea Technologies, Inc.	19
Geotomographie GmbH	10	Terraplus, Inc.	23
GF Instruments	22	Tetra Tech	18

EXHIBITION SCHEDULE

Exhibition Schedule

Monday, April 3, 2023

3:10 pm - 6:30 pm	Exhibit Floor Open
5:00 pm - 6:30 pm	Ice breaker

Tuesday, April 4, 2023

9:00 am - 5:00 pm	Exhibit Floor Open
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Wednesday, April 5, 2023

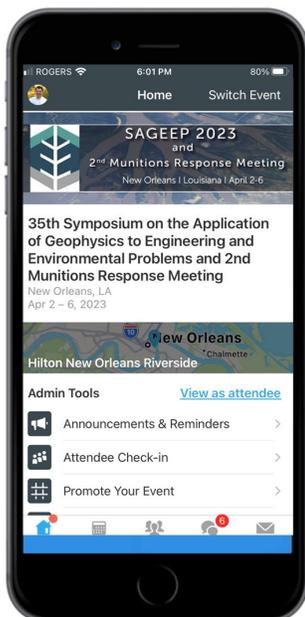
9:00 a.m. - 3:30 pm	Exhibit Floor Open
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Get *Whova* for

35th Symposium on the Application of
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Environmental Problems/2nd Munitions
Response Meeting

Official Event App

- Explore the **professional profiles** of event speakers and attendees
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- **Network and find attendees** with common affiliations, educations, shared networks, and social profiles
- Receive **update notifications** from organizers
- Access the **event agenda**, GPS guidance, maps, and parking directions at your fingertips



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Awards and Keynote Presentation

Opening Session

Awards

EEGS' John Nicholl Memorial Award

Monday, April 3, 2023 | 8:30 - 9:15 am

Opening Session – River/Port/Starboard



The 2023 John Nicholl Award Recipient: Charles H. Stoyer, Ph.D.

The impact of Charles in exploration, environmental and engineering geophysics in particular, extends well beyond his many scientific papers on inversion techniques for electromagnetic and potential field methods, development of hardware and software for deep electromagnetic exploration, and his leadership and support in the early days of SAGEEP and EEGS. His major contribution is making the advances in geophysics readily available to civil, ground water, and environmental engineers.

Some highlights of his career include being awarded the Alexander von Humboldt Award for work in TEM methods and the Harold Mooney Award for technical excellence and innovation leading to the advancement of Near-Surface Geophysics. His career has encompassed not only his research and publication of many key papers on inversion, but also teaching at Colorado School of Mines and leading the development of hardware and software for deep EM sounding systems that included some of the first use of portable microcomputers in EM data acquisition.

He served several times as the vice president and technical chair of SAGEEP and was a key figure in the establishing the collegiality of SAGEEP and its unique mix of academic, research and consulting contributors.

The latter part of Charles' career was at Interpex, Ltd- a company he co-founded. It involved the development of sophisticated inversion software that ran on some of the first IBM PCs. This included software for electromagnetic, electrical, gravity, magnetic and seismic processing and inversion. In a time when programmers couldn't take advantage of sophisticated libraries for performing complicated mathematical operations and creating user interfaces, Dr. Stoyer's combination of programming skill, theoretical and practical geophysical knowledge enabled the creation of ground-breaking software.

Prior to the development of the Interpex software, almost all geophysical inversion software ran on computers only available on college campuses and research institutions. Interpex software significantly broadened the number of geoscientists who could acquire, process and interpret geophysical data. It created opportunities for geoscience consultants to use newly developed hardware designed for near surface investigations to provide useful information to their customers in a timely manner. As PCs became portable and could be brought into the field, Interpex software

provided the means to perform improved data QC in the field, increasing the efficiency of field crews. The result of Dr. Stoyer's software and equipment advances was a significant expansion of the use of near surface geophysics for a wide variety of application. The foresight Dr. Stoyer had in developing and marketing high quality software that ran on PCs resulted in an enduring legacy of his and many careers benefitted from his work.

EEGS' John Nicholl Memorial Award recognizes an individual who has made exceptional contributions to the engineering and environmental geophysics community and to EEGS. EEGS will also take the opportunity to recognize and thank those who contributed to the development of this year's 35th SAGEEP and the 2nd Munitions Response Meeting.

Keynote Speakers:

Jordan Adelson

Monday, April 3, 2023 | 9:15 am - 10:00 am

Opening Session – River/Port/Starboard

As Chair of the DoD Environmental Data Quality Workgroup



(EDQW), Dr. Adelson is tasked with promoting the generation of data of environmental of the appropriate quality. With an emphasis on establishing minimum standards for geophysical investigations used for munitions response, EDQW has overhauled how DoD and regulators look at geophysics and related quality control and project records. Dr. Adelson will be presenting his view on the importance of establishing criteria for environmental data quality in the munitions response world, providing repeatable and documentable metrics, and how DoD wants to look at data usability moving forward.

Dr. Jordan Adelson has a Ph.D. in environmental analytical chemistry, and currently serves as the Director of the Navy's Laboratory Quality and Accreditation Office (SEA 04Q(LQAO)) and as the Chair of the DoD Environmental Data Quality Workgroup (EDQW). Dr. Adelson has been working with the Navy since 2000. Prior working with the Navy, Dr. Adelson worked for the New York City Department of Environmental Protection.

SPECIAL EVENTS

Ice Breaker

Monday, April 3 | 5:10 – 6:30 PM | Churchill C&D

Enjoy food and drinks, catch up with old friends, make new acquaintances and visit our exhibitors' booths in the Exhibit Hall (Churchill C&D). Don't forget to have your badge's QC code scanned if you'd like to learn more about the exhibitors or to connect later.

SAGEEP 2023/MRM Student-Industry Networking Event

Monday, April 3 | 6:45 - 10:00 PM

Following the Ice Breaker, a walking tour - "Walking the Devil's Empire - An interactive tour of New Orleans' haunted past" ending at a nearby pub for continued networking between students and industry professionals. Everyone's welcome! Meeting at the registration desk where details and directions will be provided.

Conference Evening

**Tuesday, April 4 | 6:30 – 9:30pm | Sidecar Patio
1100 Constance St., New Orleans, LA 70130**

Conference Evening at the Sidecar Patio in the Warehouse District of New Orleans is the urban setting for our SAGEEP and Munitions Response Meeting networking event. Lush patio, hors d'oeuvres, New Orleans jazz band and a complimentary drink – don't miss out on this evening!

Thank you to our Sponsors:



Exploration Instruments, Inc. for those quintessential New Orleans jazz sounds



Mount Sopris Instruments, Inc. for this unique, outdoor SAGEEP/MRM networking event

EEGS' Annual Business Meeting

Wednesday, April 4 | 8:00 - 8:40 a.m. | Churchill B1

Come out and learn all about the operations of EEGS.

Bruce Smith Memorial Session

Wednesday, April 4 | 8:40 - 10:00 a.m. | Churchill B1

LUNCHEONS

EEGS Foundation Fundraiser Luncheon

Speaker: Brad Arcement, Chief - USACE Levee Safety Center

Monday, April 3, 2023

Time: 12:00 Noon - 1:30 pm

Location: River

The U.S. Army Corps of Engineers (USACE) has conducted inspections and risk assessments on all levees in the USACE portfolio. This information has been instrumental in identifying failure modes that drive risk to projects, develop plans to mitigate these failure modes, and to prioritize actions to reduce risk. However, in many cases there remains uncertainty for geotechnical failure modes regarding top-stratum clay blanket thickness. USACE partnered with USGS to conduct airborne resistivity surveying along the majority of the mainline MS River levees from Cape Girardeau, MO to Baton Rouge, LA to evaluate clay blanket thickness to evaluate uncertainty more efficiently along hundreds of miles of levee. The presentation will use these efforts to highlight the importance of geophysics to assist in evaluating the nation's levee infrastructure.

Mr. Arcement is a licensed Professional Engineer in the State of Mississippi and has over 24 years of experience as a geotechnical engineer, including 13 years with USACE. He currently serves as Levee Safety Branch Chief with USACE Levee Safety Center (LSC). Before joining USACE, Mr. Arcement worked as a consulting engineer with various geotechnical and materials testing firms performing design and construction monitoring on a wide range of projects in LA and MS. He has a Bachelor's Degree in Civil Engineering from Louisiana Tech University and a Master's Degrees in Civil Engineering from the University of Texas at Austin.

NAOC's EOD Warrior Foundation (EODWF) Fundraiser Luncheon

Speaker: Greg Mittelman, Chairman EODWF

Tuesday, April 4, 2023

Time: 12:00 Noon - 1:30 pm

Location: River

"Disarming Challenges and Life as a Tech in Range Clearance"
Greg Mittelman, a former Army EOD Technician, will deliver this presentation on how their lives in EOD, in particular with range clearance work, affects their lives at home and overseas; as well as how that changes as a civilian/contractor doing range clearance work.

Greg K. Mittelman is a veteran of the Air Force Explosive Ordnance Disposal and Munitions community and a retired Lieutenant Colonel. He has served on the Board of Directors since the EOD Warrior Foundations inception in 2013. Prior to that he served on the Board of Directors of the EOD Memorial Foundation. He is passionate about all EOD personnel, veterans, and their families. He has a wide breadth of USAF, Joint, and Combined levels of EOD operations experience in Conventional, Nuclear, Biological,

Chemical, and IEDs. He is a former USAF Commander at Naval School EOD and was a key team member in the transition and opening of the school to Eglin AFB, FL from Indianhead, MD and in commemorating the EOD Memorial there. He states one of his proudest moments is laying the first wreath for the USAF cenotaph at the Eglin EOD Memorial. He also serves on, and is the EODWF liaison to, the National Defense Industrial Association EOD Advisory Committee. Greg is also an entrepreneur as the former Co-Owner and President of Studio 14b LLC, a training services VA CVE verified service-disabled veteran owned small business.

SHORT COURSES AT SAGEEP 2023/MRM

EEGS is pleased to offer Short Courses on Sunday and Thursday, with the cooperation of the Course Presenters. We encourage you to consider updating your knowledge by attending one or more of the courses as part of your SAGEEP 2023/MRM experience. Check at the registration desk for last-minute spots!

Short Course 1: 3D Geophysical Sensor Mapping in GPS-denied Areas with Kaarta Stencil 2 SLAM-based mobile mapping system

Sunday, April 2, 2023, 8:00 AM - 5:00 PM Chart A

Instructor: David Duggins

This course will familiarize you with the basic operations of Kaarta's Stencil 2 SLAM (simultaneous mapping and location) system including building a reference map, geo-registering that map, then using that map to generate GPS data in real time. This allows the operation and geo-location of geophysical sensors in environments such as wooded or urban areas where GNSS is intermittent, denied, or less accurate without needing a GNSS device.

W 1: Biogeophysics: Improving Understanding of Geophysical Signatures of Microbial Processes for Environmental & Engineering Problems

Sunday, April 2, 2023, 8:00 AM - 5:00 PM Chart B

Organizers: Estella Atekwana, Dimitrios Ntarlagiannis, and Lee Slater

'Biogeophysics' is an Earth science discipline that spans the established disciplines of Geomicrobiology, Biogeochemistry and Geophysics and advances understanding of how subsurface microbial processes modulate geophysical signature changes. Over the last two decades, biogeophysics research has confirmed the potential for conventional geophysical techniques to measure not simply the subsurface physical and chemical properties of the subsurface, as geophysical methods are conventionally used, but also the detection of microbial cells, microbe-mineral transformations, biogeochemical cycling, and redox transformations. Thus, geophysical datasets have provided the opportunity to improve understanding of biogeochemical processes in natural and anthropogenic environments.

This one-day short course will examine recent advances in biogeophysics and the current state of the science. The course will be a combination of short lectures and discussions. At the end of the day, participants will understand how microbial processes drive geophysical property changes and which geophysical methods are best suited for assessing these transformations.

Instructors will present overview talks setting the stage for discussions. Discussions will include:

1. An overview of microbial redox processes and associated geophysical signatures

2. Geophysical signatures of microbial cells and biofilms
3. Geophysical signatures of microbe-mineral transformations
4. Implications for environmental characterization and remediation monitoring

Presentations will culminate in case studies examining different geophysical signatures (electrical resistivity, spectral induced polarization, magnetics, seismic, self-potential, nuclear magnetic resonance) at the laboratory and field-scale in different environments and applications to hydrocarbon and metal contaminated sites, groundwater and soil remediation studies, phytoremediation, peatlands/climate change, CO2 sequestration and critical zone studies. Future directions will also be discussed.

Short Course 2: Seequent UX-Analyze: Dynamic Data Processing and One-pass Classification

Thursday, April 6, 2023, 9:00 AM - 5:00 PM Chart A

Instructor: Laura Quigley, Darren Mortimer, Seequent

Join Seequent in this instructor-led course where we will walk through how to process dynamic AGC data, including the newly added Classify and Rank tool, which now allows you classify dynamic AGC survey data. This addition to the Dynamic workflow will allow you to do one-pass classification, for those sensors which are validated for such, providing you with a ranked source list. This course will also include how to process your dynamic data, include IVS data, data QC, and informed source selection for target picking.

Short Course 3: Ground Penetrating Radar - Principles, Practice and Processing

Thursday, April 6, 2023, 8:00AM - 4:30 PM Chart B

Instructors: Greg Johnston, Sensors & Software, Inc.

This 1 day course covers a bit of everything about GPR. The classroom agenda covers basic GPR theory, instrumentation and survey design. The field portion takes the class outside to collect some GPR data including cross-sections integrated with GPS and a grid survey over an area of about 10x10 meters. Afterwards, we will return to the classroom and analyze the data as well as will discuss principles of interpreting GPR data and how to present GPR data effectively for scientific papers and reports. Attendees who bring a Windows-based PC laptop will work with the collected data using the EKKO_Project GPR data analysis software (supplied). GPR data visualizations includes cross-sections, 2D depth slices and 3D cubes. GPS integration and displaying data in Google Earth is also covered. Case studies are presented to expose students to data from other application areas.

EXHIBITORS

EEGS wishes to acknowledge and extend its gratitude to the following companies and associations for exhibiting at SAGEEP/ MRM 2023. It is through their support that we are able to keep the cost of attending SAGEEP affordable. We ask that you take a few moments and visit with each of the exhibitors listed below.



Aarhus Geoinstruments

Vester Søgaardsvej 22, Abyhøj
Denmark

Website: www.aarhusgeoinstruments.dk

Aarhus Geoinstruments provide geophysical instrumentation for large scale subsurface imaging. Our vision is to seamlessly integrate hardware and software into one package for non-experts, and to create an easy to use tool for making images of the subsurface for mapping of groundwater resources, raw materials, pollution, geotechnical applications and more.



Advanced Geosciences, Inc.

2121 Geoscience Dr., Austin, TX 78726
United States

Website: www.agiusa.com

Advanced Geosciences, established in 1989, is the manufacturer of the SuperSting WiFi® resistivity/IP/SP system with Android App allowing remote control and realtime data display. The AGI EarthImager software suite, PowerSting and PowerSting Node high power systems and numerous other systems and accessories are manufactured by AGI in Austin, Texas USA.



Applied Acoustic Engineering, Ltd.

Marine House, Marine Park, Gaptown Hall Room, Great Yarmouth, NR30 ONB
United Kingdom

Website: www.appliedacoustics.com

Applied Acoustics are the leaders in the design and manufacture of shallow marine seismic survey systems. Based in the UK, the company specializes in the manufacture of UHD surface towed boomer and sparker systems, capable of generating high resolution geophysical datasets and used extensively in the offshore renewable energy industry and marine construction projects.



3 Collier Geophysics

1590 E South Loop, Stephenville, TX 76401
United States

Website: www.colliergeophysics.com

Collier Geophysics is a SDVOSB with offices in Texas, Colorado, Georgia, Massachusetts, North Carolina, Tennessee, and Wisconsin. Collier Geophysics has assembled one of the most respected and experienced teams of geophysicists and hydrogeologists in the industry. We possess a depth of experience in surface, borehole, and marine geophysics throughout the US and internationally.



25 DMT GmbH & Co. KG

Industry Engineering Division, Am Technologiepark 1, 45307 Essen
Germany

Website: www.dmt-group.com

DMT group provides independent services in the fields of Exploration, Engineering, Consulting and Geotechnics. It develops products and offers solutions for industrial metrology and testing with emphasis on natural resources, safety and infrastructure. We exhibit on our booth the seismic system SUMMIT X One which combines extremely flexible field layout with excellent data quality at lowest weight.



Dam Safety Group (DSG)

Yuji Taresawa

Website: www.damsafetygroup.com

The Dam Safety Group brings together a group of member companies, both instrument OEMs and service contractors, ideally positioned to use proven geophysical technologies, services and products for Dam site investigation and monitoring together with seismic monitoring via earthquake early warning and evaluation systems.



EEGS Foundation

1391 Speer Blvd., Suite 450, Denver, CO 80204

United States

Website: www.eegsfoundation.org

The EEGS Foundation is a 501(c)(3) charitable organization chartered to encourage the use of geophysical technologies and to aid those who endeavor to learn more about them. The Foundation was formed in 2007 to support, and as an extension of, the Environmental and Engineering Geophysical Society (EEGS).

EAGE

EUROPEAN
ASSOCIATION OF
GEOSCIENTISTS &
ENGINEERS

European Association of Geoscientists & Engineers (EAGE)

Kosterijland 48, 3981 AJ Bunnik

The Netherlands

Website: www.eage.org

The near surface geoscience community plays a key role in the EAGE (19,000+ members worldwide) with its own annual conference and exhibition (Edinburgh in 2023) and a dedicated journal Near Surface Geophysics. It is at the forefront of the Association's mission to meet the emerging challenges of the energy transition.



Exploration Instruments

2808 Longhorn Blvd., Suite 304, Austin, TX 78758

United States

Website: www.exiusa.com

Exploration Instruments is the best-known geophysical equipment rental firm in North America specializing in near-surface applications. We maintain a diverse inventory including seismic, radar, EM, gravity, magnetics, resistivity, hydrologic, marine and drone tools. Offices in Austin, Texas and Harrisburg, PA are ideally situated to service your projects worldwide.



Foerster Instruments

140 Industry Ave., Pittsburgh, PA 15275

United States

Website: www.foerstergroup.com

FOERSTER's FEREX is a fluxgate magnetometer based field computer that is designed for geophysical, military and archeological use. It can be used as a hand-held instrument or in an array with up to four probes. It is available with data analysis software designed to organize, retain and evaluate mapped data.



GBG Group

28/7 Salisbury Rd. Castle Hill, Australia

Australia

Website: www.gbg-group.com.au/

GBG Group is a specialist earth sciences consultant providing a range of geophysical, geological, environmental, and engineering services. GBG has multiple specialists working within many sectors of Earth Sciences. Our specializations include mining pre-feasibility studies, through expansion projects, and onto lifetime tailings management campaigns.



Geodevice Inc.

29 Auburn Springs Place SE, Calgary, Alberta T5J0N3

Canada

Website: www.geodevice.com

GEODEVICE develops, manufactures, supplies equipment and software for geophysical surveys on land, at sea, in boreholes and on rock samples. The key development areas are HR & UHR marine seismic, borehole seismic, resistivity, IP and EM surveying, magnetic, gamma radiation detection. Several offices provide sales and support for our products worldwide.



Geogiga Technology Corporation

396 11th Ave, SW, Suite 1030, Calgary, Alberta T2R 0C5

Canada

Website: www.geogiga.com

Geogiga Technology Corp. produces user-friendly, full-featured, and high-performance software for near-surface geophysics. Our software is used by leading institutions and clientele from over 70 countries. This show will highlight the latest release of RImager 7 and Seismic Pro 10.



Geometrics, Inc.

2190 Fortune Dr., San Jose, California 95131-1815

United States

Website: www.geometrics.com

Geometrics Inc., a subsidiary of OYO Corporation, has over 50 years of experience in manufacturing magnetic, seismic and EM instruments for a variety applications. From our land-based geophysical systems to our UAV-mounted MagArrow magnetometer, we manufacture equipment to meet our clients' ever-changing needs. Ask us how to Simplify your search.



Geonics Limited

1745 Meyerside Drive, Suite 8, Mississauga, Ontario L5T 1C6

Canada

Website: www.geonics.com/

Geonics Limited manufactures a broad range of surface and downhole electromagnetic (EM) geophysical instrumentation including industry-standard Ground Conductivity Meters for environmental / geotechnical site characterization, EM61 near-surface Metal Detectors, and PROTEM time domain electromagnetic (TDEM) systems for high-resolution resistivity sounding to depths of 5 m to 1000 m. New Developments include the UAV based EM61Lite metal detector & multi-coil EM38-4.



geotomographie
manufacturer of seismic borehole equipment

Geotomographie GmbH

Am Tonnenberg 18, Neuwied, Germany 56567

Germany

Website: www.geotomographie.de

Geotomographie provides complete solutions for borehole and near-surface seismic surveys to geophysical, engineering and mining companies. We design seismic borehole sources and borehole receivers and develop specifically tailored software. Seismic equipment can be purchased or rented. Training in seismic borehole technology, from data acquisition and processing, to visualization and final interpretation, is available for our customers. Our service is tailored to meet your individual requirements, with lifetime support being central to our customer relationship.



GF Instruments

4280 Old Wm Penn Hwy, Murrysville, Pennsylvania 15668

United States

Website: www.thggeophysics.com/gf-instruments

GF Instruments manufactures a suite of innovative geophysical tools including gamma-ray spectrometers and dose rate meters, DC resistivity systems, electromagnetic conductivity meters, magnetic susceptibility meters, laboratory instruments and special equipment designed upon the user's request. THG Geophysics serves as the authorized North American representative for the sale and service of GF Instruments geophysical equipment.



ABEM | MALÅ

Guideline Geo Americas

1120 Washington Avenue, Suite 200, Golden, Colorado 80401

United States

Website: www.guidelinegeo.com

Guideline Geo Is your guide to the subsurface. We are a world-leader in geophysics and geo-technology offering sensors, software, services and support necessary to map and visualize the subsurface. We provide complete solutions and applications expertise around the globe in four key growth areas: detecting and mapping groundwater, environmental and geological risk assessments, infrastructure site investigations and mineral exploration.



HydroGEOPHYSICS, Inc.

3450 S. Broadmont Dr., Ste. 100, Tucson, AZ 85713

United States

Website: www.hgiworld.com

hydroGEOPHYSICS, Inc. (HGI) has over 30 years of experience providing geophysical services to environmental, engineering, mining, and natural resource exploration industries. We specialize in 2D & 3D geophysical methods, time-lapse subsurface monitoring of fluid flow through geologic materials, leak detection & leak location, subsurface characterization, and plume mapping.



iED Detection Systems Inc.

516 Ridge Road, Spring City, PA 19475

United States

Website: www.ieddetect.com

iED Detection Systems LLC is the US representative and reseller for Vallon GmbH metal detection systems, data recording, and evaluation software. We are currently promoting Vallon's easy to use Android-based EVA4Mobile data recording software, the full PC evaluation software EVA4ALL, and the VX1 with new upgraded VSM4 differential magnetometer sensors.



Iris Instruments

1 Avenue Buffon, Orleans, 45100

France

Website: www.IRIS-instruments.com

IRIS Instruments is one of the world's leading geophysical equipment manufacturers with Resistivitymeters, Induced Polarization, ElectroMagnetic and Magnetic Resonance. We provide highly engineered solution for solving most critical challenges. Our instruments can be used in much contrasted environment, from low to high temperature, in wet or very dry climate.

KONTUR

Kontur

1 Pequot Ave., 2nd Floor, Port Washington, New York 11050

United States

Website: www.kontur.tech

Kontur manufactures the premiere ground penetrating radar system available. Our pioneering step frequency, multi-channel arrays allow for the fastest collection and analysis of subsurface data, and offers the best resolution for any given depth point.



LIM Logging

1 rue de l'Industrie - BP 48, L-4801

Rodange, (Luxembourg)

Website: www.lim.eu

LIM Logging is developing and manufacturing slimhole geophysical logging equipment such as Optical and Acoustic Televiewers for borehole imaging but also a full range of probes for hydrogeology and exploration: Sonic, resistivity, conductivity, etc. LIM Logging is represented by LIM Technology in Americas.



Loupe Geophysics

PO. Box 102, Cottesloe, 6011

Australia

Website: www.loupegeophysics.com.au/

Loupe Geophysics developed the Loupe portable system for near-surface TEM surveys. Loupe is a modern, safe TEM system operated from two backpacks - one transmitter and one receiver backpack. Loupe is designed to deliver high quality and high spatial resolution TEM data in all environments, including urban areas and industrial sites.



11 Mount Sopris Instruments

13

4975 E. 41st Ave., Denver, Colorado 80216

United States

Website: www.mountsopris.com

Mount Sopris will display new generation digital borehole video on single-conductor "PathFinder" mini-winch at SAGEEP 2023, latest WellCAD attributes, and data from our new QL40-nGEN, non-chemical source neutron porosity tool.



14 National Association of Ordnance Contractors (NAOC) 24

1320 N. Courthouse Road, Suite 600, Arlington, VA 22201

United States

Website: www.NAOC.org

The National Association of Ordnance Contractors (NAOC) was established in 1995 as a non-profit organization. NAOC's objective is to act as a unified industry voice representing the issues facing its membership in the rapidly expanding business of military munitions response services. The 21 founding members were UXO service companies. Over the years, our membership has expanded to include companies that provide and perform ancillary services to include geophysical services, detection equipment, analytical laboratories, regulatory support and related environmental/engineering services. NAOC currently consists of 67 member organizations.

28



Robertson Geologging (USA), Inc.

11

1809 N. Helm Ave., Suite 4, Fresno, CA 93727

United States

Website: www.robertson-geo.com

Robertson Geo has over 40 years of experience developing geophysical logging technologies and techniques. It provides open hole solutions for the geotechnical, water, mining, oil/gas and renewables sectors. Key products include geophysical probes, winches, surface interface units and GEOCAD log processing software. The company is UK based and operates a QMS certified to ISO9001.

30



The R.T. Clark Companies Inc.

PO Box 20957, Oklahoma City, Oklahoma 73156-0957
United States

Website: www.rtclark.com

R.T. Clark Companies Inc. is your #1 SOURCE for Sales of New & second-hand Geophysical and Geotechnical Equipment. Our Products range from Energy Sources, Recording Systems, Seismographs, Geophones, Cables, and Connectors, Gravity and Resistivity Meters, EM's, Magnetometers to Ground Penetrating Radar, and much more. Celebrating 40 years of serving you.

8



Subsea Technologies, Inc.

1323 Price Plaza Drive, Katy, Texas 77499
United States

Website: www.subseatechnologies.com

Subsea Technologies, Inc. offers the latest in advanced underwater technology and GPS/GNSS positioning products. Based in Katy, Texas, Subsea Technologies provides equipment sales, rental, and service to the marine geophysical, oceanographic, hydrographic survey, diving, ROV, and offshore construction markets with products from Applied Acoustics, Hemisphere GNSS, AML Oceanographic, Handheld, Juniper, and Tritech.

19



Seequent

207 Queens Quay West, Suite 810, Toronto, Ontario M5J 1A7
Canada

Website: www.seequent.com

Seequent builds world-leading subsurface software, a better understanding of the Earth creates a better world for all. Our integrated earth modelling, geo-data management, and team collaboration software enables geo-professionals to see a more complete picture of the earth: because with more understanding comes better decisions for people and the planet. Seequent is the subsurface software company within Bentley Systems. Together, we are helping build a more resilient world.

35



Terraplus, Inc.

120 West Beaver Creek Rd., Unit #15, Richmond Hill, Ontario L4B 1L2
Canada

Website: www.terrapius.ca/

Terraplus has been in business for more than 30 years and has become one of the world's largest suppliers of geophysical instruments. We have a wide range of products available for sale, a comprehensive rental inventory, and an in-house technical department, making us a one-stop source for your geophysical needs.

23



Seismic Source Company Inc.

2391 E. Coleman Road, Ponca City, Oklahoma 74604
United States

Website: www.seismicsource.com

We build hardware and software systems for near-seismic investigations and event/vibration monitoring. Hardware: DAQlink4 (a general-purpose seismograph); Sigma 3+ and 4+ (nodal digitizers); DX-6 (cabled seismograph); Force 3, BB3, and RTM3 (for source control). Software: Vscope (data acquisition); Event Monitor (attended monitoring) and Event Monitor Cloud (remote monitoring).

29



Tetra Tech

1301 Automation Way, Ste. 600, Fort Collins, Colorado 80525
United States

Website: www.tetrattech.com

Tetra Tech is a global provider of consulting, engineering, and munitions response services. We are Leading with Science® to deliver innovation to project challenges. We focus on environment, sustainable infrastructure, energy, and international development for commercial and government clients. With 21,000 associates worldwide, Tetra Tech provides clear solutions to complex problems.

18



Sensors & Software Inc.

1040 Stacey Court, Mississauga, L4Z2X8
Canada

Website: www.sensoft.ca

Sensors & Software is an innovative manufacturer of ground penetrating radar (GPR) instrumentation and software for many applications, including geotechnical and environmental investigations, geological mapping, pavement thickness, bridge deck deterioration, utility locating, concrete and structural assessment, sinkhole/void detection, unexploded ordnance detection, and ice thickness for winter road safety.

2

Oral Presentations - Monday, April 3, 2023

RIVER/PORT/STARBOARD				
8:30 am	OPENING SESSION			
9:00 am	AWARDS CEREMONY			
9:15 am	KEYNOTE JORDAN ADELSON, NAVY'S LABORATORY QUALITY AND ACCREDITATION OFFICE AND THE CHAIR OF THE DOD ENVIRONMENTAL DATA QUALITY WORKGROUP (EDQW)			
10:00 am	COFFEE BREAK (River/Port/Starboard)			
	RIVER/PORT/STARBOARD		CHURCHILL B2	
10:20am -11:40am	BEST OF EAGE'S NEAR SURFACE 2022 - BELGRADE, SERBIA Session Chairs - Micki Allen, Marac Enterprises and Andi A. Pfaffhuber, Emerald Geomodelling		MUNITIONS RESPONSE PERSPECTIVES Session Chairs - Harry Wagner, MMRP Geophysicist, Weston Solutions Inc.; Andrew Schwartz, US Army Corps of Engineers	
10:20 am			NAOC PERSPECTIVE ON MUNITION RESPONSE	
10:40 am			MUNITION RESPONSE PROGRAM	
11:00 am			USACE PERSPECTIVE ON MUNITIONS RESPONSES	
11:20 am			2023 ADVANCED GEOPHYSICAL CLASSIFICATION (AGC) SENSOR UPDATE	
12:00 pm	EEGS FOUNDATION FUNDRAISER LUNCHEON: BRAD ARCEMENT, CHIEF USACE LEVEE SAFETY CENTER (RIVER/PORT/STARBOARD)			
	CHURCHILL B1	CHURCHILL A1/A2	CHURCHILL B2	CHARTS B AND CHART C
1:30 pm - 3:30 pm	ARCHAEOLOGY AND FORENSICS I Session Chairs: Alastair McClymont (Speaker) BGC Engineering Inc., Richard Krahenbuhl (Speaker) Colorado School of Mines, Director: Humanitarian Engineering & Science program	GEOPHYSICAL METHODS I SAGEEP 2 Session Chairs: Jacob Sheehan, Schnabel Engineering; Michele Maxson, US Army Corps of Engineers, ERDC / CRREL	ROOT CAUSE ANALYSIS (RCA) PANEL Session Chairs: Craig Murray(Speaker) Parsons, Geophysicist Jordan Adelson(Speaker)DoD Environmental Data Quality Workgroup (EDQW), Chair	
1:30 pm	WARWICK FURNACE WEAPONS-LOST AND FOUND USING UAS MAGNETOMETER AND 3D ELECTROMAGNETICS	PRACTICAL GUIDANCE FOR ELECTRICAL RESISTIVITY SURVEYING IN THE PRESENCE OF METALLIC INFRASTRUCTURE		
1:50 pm	SEARCHING FOR CIVIL WAR ERA BOMB SHELTERS USING SHALLOW SEISMIC METHODS	ACTIVE BUCKING USING A SYSTEM ON A CHIP FIELD PROGRAMMABLE GATE ARRAY FOR GEOPHYSICAL INVESTIGATIONS		
2:10 pm	A RETROSPECTIVE OF 22 YEARS OF ARCHAEOGEOPHYSICAL INVESTIGATIONS WITH RICHARD FREUND	TRAVELTIME TOMOGRAPHY, EARLY ARRIVAL WAVEFORM INVERSION, AND SURFACE WAVE INVERSION TO IMAGE NEAR-SURFACE GEOLOGY		
2:30 pm	ARCHAEOLOGICAL INVESTIGATION BY GROUND PENETRATING RADAR IMAGING OF WIANG KAEW PALACE WALL IN CHIANG MAI CITY MOAT, NORTHERN THAILAND-CURVELET ANALYSIS AND ATTRIBUTES	STUDYING IRRIGATION USING THE HF-MASW METHOD		
2:50 pm	GEOPHYSICAL INVESTIGATIONS FOR REDISCOVERING THE OLD MERCER COLLEGE CAMPUS	MAGNETIC SIGNATURES OF BIOGEOCHEMICAL PROCESSES		
3:10 pm	POSTERS AND COFFEE IN EXHIBIT HALL (CHURCHILL C/D)			
3:30pm -5:10pm	ARCHAEOLOGY AND FORENSICS II Session Chairs: Alastair McClymont(Speaker) BGC Engineering Inc., Richard Krahenbuhl(Speaker)Colorado School of Mines, Director: Humanitarian Engineering & Science program	GEOPHYSICAL METHODS II SAGEEP 2 Session Chairs: Jacob Sheehan, Schnabel Engineering; Michele Maxson, US Army Corps of Engineers, ERDC / CRREL		
3:30 pm	FROM IMAGING TO EXCAVATION- ARCHAEOGEOPHYSICAL INVESTIGATIONS WITHIN THE WARSAW GHETTO	STUFF THEY DON'T TEACH IN TEXTBOOKS ABOUT COLLECTING GEOPHYSICAL DATA		
3:50 pm	MAPPING ANCIENT STRUCTURES AND DEMONSTRATING ARCHAEOLOGICAL GEOPHYSICS AT HUACAS DE MOCHE, PERU	LATERAL AND VERTICAL MAPPING OF SALINITY ALONG THE COAST OF GHANA USING ELECTRICAL RESISTIVITY TOMOGRAPHY-THE CASE OF CENTRAL REGION	ROOT CAUSE ANALYSIS (RCA) PANEL Session Chairs: Craig Murray(Speaker) Parsons, Geophysicist Jordan Adelson(Speaker)DoD Environmental Data Quality Workgroup (EDQW), Chair	ROOT CAUSE ANALYSIS (RCA) BREAKOUT SESSIONS Session Chairs: Craig Murray, Geophysicist, Parsons; Jordan Adelson, Chair, DoD Environmental Data Quality Workgroup (EDQW)
4:10 pm	GROUND PENETRATING RADAR TO DETECT GRAVES AND ASSESS CONDITIONS IN THE AFRICAN-AMERICAN SECTION OF OAKLAND CEMETERY, GEORGIA	DISCRETIZATION-FREE DEBYE DECOMPOSITION OF SPECTRAL INDUCED POLARIZATION DATA		
4:30 pm	TESTING THE USEFULNESS OF GROUND PENETRATING RADAR TO DEFINE BOUNDARIES OF DNAPL CONTAMINATION	ADVANCEMENTS AND CONSIDERATIONS FOR DEEPER PENETRATION OF TOWED TEM INSTRUMENTS		
4:50 pm	WHAT'S THE PROBLEM WITH GEOPHYSICS	EVOLUTION OF BOREHOLE CAMERA TECHNOLOGY		
5:10 pm	ICE BREAKER IN EXHIBIT HALL (CHURCHILL C&D)			
6:45 pm	STUDENT-INDUSTRY NETWORKING EVENT: WALKING THE DEVIL'S EMPIRE - AN INTERACTIVE TOUR OF NEW ORLEANS' HAUNTED PAST			

Oral Presentations - Tuesday, April 4, 2023

	CHURCHILL B1	CHURCHILL A1/A2	CHURCHILL B2
8:00 am - 10:00 am	DAMS AND LEVEES I SAGEEP 2 Session Chair: Meghan Quinn, Lewis Hunter, US Army Corps of Engineers	BIOGEOPHYSICS I SAGEEP 1 Session Chairs: Estella Atekwana, University of California, Davis, Dean, College of Letters and Science, Distinguished Professor, Earth & Planetary Sciences; Dimitrios Ntarlagiannis, Rutgers University, Associate Professor	MR PROJECT PLANNING AND DECISION MAKING Panel Chairs: Andy Gascho, AECOM; James Salisbury, US Army Corps of Engineers, EM CX
8:00 am	NEW TECHNOLOGY IN MOBILE TEM - THE LOUPE SYSTEM	A CASE STUDY ON LOW FREQUENCY SPECTRAL INDUCED POLARIZATION RESPONSES DURING BACTERIAL GROWTH AND BIOFILM FORMATION IN SANDS UNDER A HIGH SALINITY CONDITION	WHAT THE BLUE TEXT DOESN'T TELL YOU-THINGS THE MR-QAPP DOES *NOT* ADDRESS
8:20 am	NOISE SIGNATURE OF MICROSEISMIC MONITORING SYSTEMS OF TAILINGS DAMS	A BIOGEOCHEMICAL APPROACH FOR ASSESSMENT OF MICROBIAL-ROCK INTERACTIONS	WHERE'S THE MQO
8:40 am	GEOPHYSICAL CHARACTERIZATION IN SUPPORT OF LEVEE FLOOD PROTECTION AREA SEEPAGE EVALUATION	EFFECT OF SOFT VISCOUS BIO-INCLUSIONS ON SEISMIC RESPONSES OF SEDIMENTS	USE OF DIGITAL GEOPHYSICAL MAPPING DATA IN THE APPLICATION OF THE RISK MANAGEMENT METHODOLOGY (RMM) TO UNDERWATER RANGES
9:00 am	ANALYZING HVSR TO IDENTIFY POSSIBLE LOW-VELOCITY ZONES WITHIN AN EARTH EMBANKMENT DAM	CAN BIOGEOPHYSICS YIELD RELIABLE BIOGEOCHEMICAL INFORMATION UNDER COMPLEX NATURAL CONDITIONS	DYNAMIC AGC METHODS FOR COST-EFFECTIVE QUALITY ASSURANCE AND CONTROL
9:20 am	USING MULTIPLE GEOPHYSICAL METHODS TO EVALUATE A DISTRESSED EARTHEN DAM	HEAP LEACHING CHALLENGES-GEOPHYSICAL SOLUTIONS	PUTTING THE HORSE BEFORE THE CART IN MUNITIONS RESPONSE FEASIBILITY STUDIES
9:40 am	TOWARDS QUANTITATIVE, SPATIALLY RESOLVED ESTIMATES OF DAM SEEPAGE BY TIME-LAPSE ELECTRICAL RESISTIVITY IMAGING (ERI)	MAGNETIC MEASUREMENT AS A PROXY FOR INVESTIGATING MICROBIAL ANAEROBIC OXIDATION IN A HYDROCARBON-CONTAMINATED AQUIFER	WHY WE SHOULD CARE ABOUT INSTITUTIONAL ANALYSES
10:00 am	POSTERS AND COFFEE IN EXHIBIT HALL (CHURCHILL C/D)		
10:20 am - 12:00 pm	DAMS AND LEVEES II SAGEEP 2 Session Chairs: Meghan Quinn; Lewis Hunter, US Army Corps of Engineers	GEOPHYSICAL SITE CHARACTERIZATION I SAGEEP 1 Session Chairs: Trever Ensele, Jim LoCoco, Mount Sopris Instrument Company, Inc., Company Co-Owner and Global Business Development	MR DATA USABILITY Session Chairs: Matt Barner TetraTech Steve Saville, Jacobs
10:20 am	APPLICATION OF HVSR TO LEVEE COMPOSITION AND THICKNESS ASSESSMENTS	GEOTECHNICAL AND GEOPHYSICS - BRIDGING THE GAP	YOU MISSED A QC SEED, NOW WHAT - MAKING THE MOST OF YOUR QC PROGRAM
10:40 am	LEVEE ASSESSMENT IN THE SACRAMENTO DELTA USING SEISMIC AND ELECTRICAL RESISTIVITY METHODS	PERFORMANCE OF THE MASWAI DEEP LEARNING ALGORITHM FOR PREDICTING THE SHEAR WAVE VELOCITY PROFILE ON A WIDE RANGE OF GEOLOGICAL SETTINGS	ARE CUED AGC SURVEYS NECESSARY
11:00 am	GEOPHYSICAL EVALUATION OF ERODIBILITY FROM OVERTOPPING AT BULL SHOALS DAM, MARION COUNTY, ARKANSAS	ON THE INTERPRETATION OF HIGH RESOLUTION INDUCED POLARIZATION DATA OBSERVED ON A GRAPHITE ANOMALY IN THE BAVARIAN FOREST, GERMANY	A CHRONOLOGY OF RCAS WITH NEW AGC TECHNOLOGY IN CHALLENGING ENVIRONMENTS
11:20 am	EVALUATION OF MISSISSIPPI RIVER VALLEY GRAVEL BAR EXTENTS AND COMPOSITION FROM AIRBORNE ELECTROMAGNETIC DATA	HVSR FOR MAPPING A TUNNEL VALLEY INCISED INTO BEDROCK IN KALAMAZOO COUNTY, MICHIGAN	COMPLEX SEED SCENARIOS - DOES AGC WORK AS ASSUMED IN MULTISOURCE SCENARIOS
11:40 am	EVALUATION OF MISSISSIPPI RIVER VALLEY LEVEE CLAY BLANKET THICKNESS USING CLUSTER ANALYSIS ON AIRBORNE ELECTROMAGNETIC DATA	COMPARING DOWNHOLE CHEMICAL SOURCE NEUTRON POROSITY TOOL CALIBRATIONS WITH A NEW DEUTERIUM-DEUTERIUM DOWNHOLE NEUTRON GENERATOR TOOL	PLANNING FOR DESKTOP REMEDIAL INVESTIGATIONS
12:00 pm	NAOC'S FUNDRAISER LUNCHEON FOR THE EOD WARRIOR FOUNDATION (EODWF) SPEAKER: GREG MITTELMAN, EODWF CHAIR		
1:30 pm - 3:10 pm	AIRBORNE GEOPHYSICS / UNMANNED VEHICLES AND DRONES Session Chairs: Paul Schwering, Sandia National Laboratories, Geophysicist; Trevor Irons, Montana Technological University	GEOPHYSICAL SITE CHARACTERIZATION II Session Chairs: Jeffrey Paine, University of Texas at Austin, Bureau of Economic Geology; Dale Rucker, hydroGEO-PHYSICS, Inc, CTO	MR INNOVATIVE AND EMERGING TECHNOLOGIES I Session Chairs: Jonathan Miller, White River Technologies; Kevin Kingdon, Black Tusk Geophysics
1:30 pm	THE USE OF DRONES TO LOCATE PORPHYRY DEPOSITS UNDER GLACIAL COVER IN BRITISH COLUMBIA	EXPLORING OF CONDUCTIVE BLACK SHALES USING THE RADIOMAGNETOTELLURIC METHOD	ROBOT-MOUNTED ULTRA-LIGHT ELECTROMAGNETIC ARRAY FOR UNMANNED UNEXPLODED ORDNANCE DETECTION AND CLASSIFICATION
1:50 pm	UNMANNED VEHICLE-BASED EMI SENSING FOR UNDERGROUND UTILITIES DETECTION AND MAPPING	INVESTIGATING TIME DOMAIN ELECTROMAGNETIC INDUCTION SIGNATURES IN POROUS MEDIA FOR EVIDENCE OF MACRO-SCALE RELAXATION	WHAT WE HAVE LEARNED FROM USING SLAM IN CHALLENGING ENVIRONMENTS
2:10 pm	AN EM61LITE SURVEY TO DETECT AND DELINEATE A BURIED PIPELINE-PRELIMINARY RESULTS	IMPROVED CONCEPTUAL SITE MODELING FOR ENVIRONMENTAL REMEDIATION USING A MULTI-STAGE GEOPHYSICAL APPROACH	APPLICATION OF VARIOGRAM TO DETECT BURIED OBJECTS USING A LASER DOPPLER VIBROMETER
2:30 pm	GEOPHYSICAL EXPLORATION OF A SHALLOW GEOTHERMAL OUTFLOW AT HAWTHORNE ARMY DEPOT, NEVADA, USA	MASW AND MICROGRAVITY - A NOVEL APPROACH TO INVESTIGATING KARSTIC FEATURES IN A LARGE TAILINGS STORAGE FACILITY	APPLICATION OF INSTRUMENTED SURROGATE MUNITIONS FOR MUNITIONS MOBILITY AND BURIAL AT MUNITIONS RESPONSE SITES
2:50 pm	COMPARISON OF TOWED TRANSIENT ELECTROMAGNETIC (TTEM) WITH AIRBORNE ELECTROMAGNETIC AND ELECTRICAL RESISTIVITY TOMOGRAPHY	BOREHOLE YIELD ESTIMATION FROM ELECTRICAL RESISTIVITY MEASUREMENTS - A CASE STUDY OF GARU TEMPANE AND BAWKU WEST DISTRICTS, UPPER EAST REGION, GHANA	EFFICIENT DATA COLLECTION PRACTICES USING THE APEX ONEPASS SENSOR WITH STENCIL SLAM AND RTK-GNSS TECHNOLOGIES FOR A REMEDIAL ACTION
3:10 pm	POSTERS AND COFFEE IN EXHIBIT HALL (CHURCHILL C/D)		

Oral Presentations - Tuesday, April 4, 2023 Continued

	CHURCHILL B1	CHURCHILL A1/A2	CHURCHILL B2
3:30 pm 5:50 pm	COLD REGIONS GEOPHYSICAL SITE CHARACTERIZATION SAGEEP 2 Session Chairs: Dan Glaser, US Army Corps of Engineers, ERDC / CRREL; Esther Babcock, Logic Geophysics & Analytics LLC	GEOPHYSICAL SITE CHARACTERIZATION III SAGEEP 1 Session Chairs: Jeffrey Paine, University of Texas at Austin, Bureau of Economic Geology; Dale Rucker, hydroGEO-PHYSICS, Inc, CTO	MR CASE STUDIES I Session Chairs: Karen Lemley, NAEVA Geophysics; Sandra Takata, ARCADIS
3:30 pm	GROUND PENETRATION RADAR OVER GLACIAL TILL - TEST CASE STUDY IN CANADA	APPLYING BATHYMETRIC GPR, BOREHOLE LOGGING, PASSIVE SEISMIC, LIDAR, AND STRUCTURE-FROM-MOTION METHODS IN HYDROGEOLOGIC STUDIES OF THE DEVILS RIVER, SOUTHWESTERN TEXAS	TRADEOFFS BETWEEN DYNAMIC MAPPING WITH METAL MAPPER AND THE EM61
3:50 pm	CONTINUOUS GEOPHYSICAL MONITORING OF AN ARCTIC GLACIAL FOREFIELD	SUBSURFACE EXPLORATION USING THE 2D MULTI-CHANNEL ANALYSIS OF SURFACE WAVES METHOD FOR A PLANNED AIRPORT ON THE CARIBBEAN ISLAND OF BARBUDA	LESSONS LEARNED AT AG-1 MRS REMEDIAL ACTION AT CAMP BLANDING, CLAY COUNTY, FL
4:10 pm	WHERE GRAVEL IS GOLD: USING CAPACITIVELY COUPLED RESISTIVITY TO EXPLORE FOR GRAVEL DEPOSITS IN NORTHERN ALASKA	MONITORING OF A CO2 INJECTION AT THE SVELVIK TEST-SITE IN NORWAY USING CROSS-HOLE SEISMIC METHODS	UPDATE ON NOVEL APPLICATION OF AGC AT REDSTONE ARSENAL MSFC-003 - ACHIEVING SUCCESS WHEN THINGS DON'T GO AS PLANNED
4:30 pm	GEOPHYSICAL INVESTIGATION OF PERMAFROST CONDITIONS IN THERMOKARST-PRONE AREAS FAIRBANKS, ALASKA	QUANTIFYING STYLES OF POROSITY USING BOREHOLE NMR LOGGING IN SEDIMENTARY BEDROCK OF ONTARIO, CANADA	UAS MOUNTED EMI SENSOR FOR UXO DETECTION AND CLASSIFICATION
4:50 pm	WHAT LIES BENEATH-EXAMPLES FROM GROUND PENETRATING RADAR MAPPING OF BEDROCK SURFACES	DETECTION OF POTENTIAL ZONES OF HIGH PORE PRESSURE BENEATH A LEVEE USING TEM TECHNIQUES	ESTIMATING SITE-SPECIFIC EFFECTIVE CLASSIFICATION DEPTHS USING THE UX-ANALYZE BACKGROUND VALIDATION TOOL FOR CUED AGC DATA
5:10 pm	COLLOCATION OF TIME LAPSE 2.5D ERT, TEMPERATURE, SNOW DEPTH, AND ACTIVE LAYER THICKNESS MEASUREMENTS FOR GROUND TEMPERATURE FORECASTING	GEOPHYSICAL INVESTIGATION OF A MICROPLAYA LANDSCAPE OF THE DESERT SOUTHWEST, USA	MAXIMIZING THE QUALITY OF YOUR AGC DATA AND EFFECTIVENESS OF YOUR QC PROCESS
5:30 pm	VERTICAL ELECTRICAL SOUNDING FOR IDENTIFICATION OF PERMAFROST TABLE AND ACTIVE LAYER DEPTH IN ARCTIC CRYOGENIC ENVIRONMENTS	INTEGRATION OF ELECTROMAGNETIC AND ELECTRICAL RESISTIVITY FOR GROUNDWATER EXPLORATION IN KINTAMPO SOUTH DISTRICT, BRONG-AHAFO REGION IN GHANA	A TALE OF TWO SENSORS-A SIDE BY SIDE COMPARISON OF TWO AGC SENSORS ACROSS CHALLENGING TERRAIN
6:30 pm	CONFERENCE EVENING AT THE SIDECAR PATIO IN THE WAREHOUSE DISTRICT OF NEW ORLEANS		

Oral Presentations - Wednesday, April 5, 2023

	CHURCHILL B1	CHURCHILL B2
7:40 am - 8:40 am	<p>EEGS ANNUAL MEETING President-Elect Michael Kalinski, University of Kentucky, Dept. of Civil Engineering</p> <p>BRUCE SMITH MEMORIAL SAGEEP 1 Session Chair: Bethany Burton, Geophysicist, US Geological Survey</p>	<p>MR UNDERWATER SESSION I Session Chairs: Gregory Schultz, White River Technologies; Dave Bradley, SERDP/ ESTCP</p>
8:00 am		SEDIMENT VOLUME SEARCH SONAR-SYSTEM AND DATASET DEVELOPMENT
8:20 am		SEDIMENT VOLUME SEARCH SONAR-AUTOMATED DETECTION AND CLASSIFICATION ALGORITHMS
8:40 am		SUB-BOTTOM PROFILING PROVIDES CRITICAL INFORMATION FOR UNDERSTANDING MUNITIONS BURIAL
9:00 am		ULTRATEMA-4 MARINE CLASSIFICATION RESULTS FROM ESTCP DEMONSTRATION
9:20 am		GENERATING UNDERWATER SYNTHETIC EMI DATA USING PHYSICALLY COMPLETE EMI MODELS
9:40 am		EMI DETECTION AND CLASSIFICATION OF UNDERWATER MUNITIONS-STUDY AT SEQUIM BAY TEST SITE
10:00 am	POSTERS AND COFFEE IN EXHIBIT HALL (CHURCHILL C/D)	
10:20 am - 12:00 pm	<p>HYDROGEOPHYSICS AND HYDROLOGICAL INVESTIGATIONS I Session Chairs: Peeter Pehme, Morwick G360 Groundwater Research Institute / Waterloo Geophysics, Jonathan Thomle, Pacific Northwest National Laboratory</p>	<p>MR LANDMINES AND BURIAL PITS Session Chairs: Lynelle Brode, NAKUPUNA; Bob Selfridge, USACE</p>
10:20 am	SYNTHESIZING SURFACE GEOPHYSICAL INVESTIGATIONS TO EVALUATE SUBSURFACE, HYDROGEOLOGY, STRUCTURE, AND GROUNDWATER MOVEMENT AT EDWARDS AIR FORCE BASE, CALIFORNIA	RECENT DEVELOPMENTS IN LASER-ACOUSTIC DETECTION OF BURIED LANDMINES
10:40 am	THE G360 FRACTURED ROCK OBSERVATORY FOR COLLABORATIVE GROUNDWATER RESEARCH & BOREHOLE TECHNOLOGY DEVELOPMENT	DATA-DRIVEN DEMINING USING DRONES, PHOTOGRAMMETRY, AND 3D MODELING TECHNOLOGIES IN OLD MOSUL, IRAQ
11:00 am	AERIAL AND ON-THE-GROUND GEOPHYSICAL METHODS FOR DETECTING SUBSURFACE ANOMALIES OF ANTHROPOGENIC ORIGIN	TOWARD MULTI-MODAL, UAV-BASED UXO AND LANDMINE DETECTION-DEVELOPMENT OF A TETRAHEDRAL MAGNETIC GRADIOMETER
11:20 am	THE ROLE OF GEOPHYSICS FOR HYDROGEOLOGICAL ASSESSMENT OF A CONTAMINATED SITE IN QUEBEC, CANADA	APPLICATION OF ERT AND IP FOR IMAGING BURIAL PITS AT MUNITIONS REMEDIATION SITES
11:40 am	GROUNDWATER TRAINING IN NICARAGUA	ADVANCED GEOPHYSICAL CLASSIFICATION FOR DEEPLY BURIED ORDNANCE IN URBAN ENVIRONMENTS
12:00 pm	LUNCH ON OWN	
1:30 pm - 3:10 pm	<p>HYDROGEOPHYSICS AND HYDROLOGICAL INVESTIGATIONS II Session Chairs: Peeter Pehme, Morwick G360 Groundwater Research Institute / Waterloo Geophysics, Jonathan Thomle, Pacific Northwest National Laboratory</p>	<p>MR INNOVATIVE AND EMERGING TECHNOLOGIES II Session Chairs: T. Jeffrey Gamey, Tetra Tech Inc.; Stuart Bancroft, Jacobs</p>
1:30 pm	A MODEL OF TRANSMISSIVITY AND HYDRAULIC CONDUCTIVITY FROM ELECTRICAL RESISTIVITY DISTRIBUTION DERIVED FROM AIRBORNE ELECTROMAGNETIC SURVEYS OF THE MISSISSIPPI RIVER VALLEY ALLUVIAL AQUIFER, MIDWEST USA	3D SEISMIC SIMULATION FOR DETECTION OF SHALLOW SMALL-SIZE HIGH-CONTRAST BURIED OBJECTS
1:50 pm	AN INVESTIGATION OF THE SUBSURFACE FRESHWATER-SALTWATER DISTRIBUTION IN AN ESTUARINE ENVIRONMENT USING TOWED TIME DOMAIN ELECTROMAGNETIC METHODS	APPLICATION OF ACOUSTIC AND SEISMIC EXCITATIONS FOR BURIED TARGET CHARACTERIZATION-VARIATIONS IN TARGET RESPONSE DUE TO BURIAL DEPTH AND SOIL TYPE
2:10 pm	A TOWED MARINE TIME-DOMAIN ELECTROMAGNETIC METHOD FOR EVALUATING THE CONTINUITY OF AN AQUITARD	A CONVOLUTIONAL NEURAL NETWORK FOR THE CLASSIFICATION OF UXO FROM ELECTROMAGNETIC DATA IN MARINE SETTINGS
2:30 pm	SMALL COIL SURFACE NUCLEAR MAGNETIC RESONANCE FOR SHALLOW RESOLUTION OF RIVERS IN NEW ZEALAND	UNDERWATER TARGETS DETECTION AND CLASSIFICATION USING ENHANCED EMI MODELS
2:50 pm	GRADIENT-BASED SURFACE NMR FOR IMPROVED DETECTION AND RESOLUTION OF SHALLOW GROUNDWATER	USING SMALL UNMANNED AERIAL SYSTEMS TO CHARACTERIZE MEC CONTAMINATION AT THE HURRICANE MESA TEST SITE
3:00 pm	POSTERS AND COFFEE IN EXHIBIT HALL (CHURCHILL C/D)	
3:30 pm - 5:30 pm	<p>ELECTRICAL METHODS SAGEEP 1 Session Chairs: Dale Rucker, CTO, hydroGEOPHYSICS, Inc.; Esben Auken, Aarhus University, Department of Geosciences</p>	<p>MR CASE STUDIES II Session Chairs: Brian Brunette, GSI; Jennifer Weller, Jacobs</p>
3:30 pm	A DATA DRIVEN APPROACH FOR ROBUST INVERSION OF INDUCED POLARIZATION EFFECTS IN TRANSIENT ELECTROMAGNETIC DATA	GEOPHYSICAL DATA MANAGEMENT AND AUTOMATION WITHIN THE CONTEXT OF A LARGE SCALE MMRP PROJECT
3:50 pm	A VERSATILE PLATFORM FOR NEW ADVANCED TRANSIENT ELECTROMAGNETIC INSTRUMENTS	DYNAMIC AGC DATA FILTERING FOR SELECTION OF GEOLOGICALLY SUITABLE BACKGROUND LOCATIONS
4:10 pm	USE OF ELECTRICAL RESISTIVITY TOMOGRAPHY (ERT) AS A TOOL TO CHARACTERIZE A CLALEY SUBSOIL IN URBAN AREAS AT RISK-CASE STUDY IN MEXICO CITY	A CASE STUDY FOR GEOPHYSICS IN DIFFICULT ENVIRONMENTS-THIRD-PARTY VALIDATION SEEDING AND POTENTIAL BENEFITS OF IN-PERSON SITE VISITS AT FORMER FORT HUACHUCA
4:30 pm	ELECTRICAL RESISTIVITY MONITORING OF REINFORCED CONCRETE COLUMNS DURING CURING	A CASE STUDY FOR GEOPHYSICS IN DIFFICULT ENVIRONMENTS-ADVANCED GEOPHYSICAL CLASSIFICATION AT THE FORMER VIEQUES NAVAL TRAINING RANGE WITH A FOCUS ON LESSONS LEARNED
4:50 pm	GEOELECTRIC MONITORING OF THE ELECTRIC-POTENTIAL FIELD OF THE LOWER RIO GRANDE BEFORE, DURING, AND AFTER INTERMITTENT STREAMFLOW, MAY-OCTOBER, 2022	CASE STUDY-THE IDENTIFICATION OF A HIGH USE AREA USING ANALOG SENSORS WHERE DIGITAL GEOPHYSICAL MAPPING DID NOT
5:10 pm		SPRING VALLEY: ADVANCED GEOPHYSICAL CLASSIFICATION PROJECT AT URBAN WILDERNESS AND RESIDENTIAL SITES

Poster Presentations - Monday, April 3, Tuesday, April 4 & Wednesday, April 5, 2023

CHURCHILL C AND D (EXHIBIT HALL)

Poster Session - Monday, April 3, 2023 3:00 pm to 6:30 pm

A COMPARATIVE ANALYSIS OF FOUR OPTIMIZATION ALGORITHMS FOR SELF-POTENTIAL INVERSION - Peter Adetokunbo
INTERPOLATION OF SPARSE DYNAMIC CONE PENETROMETER INDEX USING ELECTROMAGNETIC INDUCTION DATA ON A CLAYEY SILT TEST SITE AT FULL SCALE - Cecile Finco
SEISMIC IMAGING FOR MINING APPLICATIONS-A CASE STUDY - Amr Ibrahim
INTEGRATED GEOPHYSICAL METHODS APPLIED TO SUBMERGED ARCHAEOLOGICAL REMAINS DETECTION IN NOVIODUNUM ROMAN ARCHAEOLOGICAL SITE - Anghel Sorin
MULTICONFIGURATION ELECTROMAGNETIC INDUCTION SURVEY FOR CHARACTERISING A FORMER URBAN LANDFILL IN THE MARQUESAS ISLANDS (FRENCH POLYNESIA) - Faycal Rejiba
APPLICATION OF SUPERVISED MACHINE LEARNING TO AVS30 ESTIMATION BASED ON HORIZONTAL-TO-VERTICAL SPECTRAL RATIO - Koichi Hayashi
MACHINE LEARNING - A NOVEL APPROACH UTILIZED TO PREDICT LITHOFACIES AND THEIR SIMILARITY BASED ON SYNCHRONIZATION MEASURES TO PREDICT SYNTHETIC LOG - Muhammad Ali
DRONE VS GROUND VLF-EM TEST CASE IN CANADA - Amir Radjaee

CHURCHILL C AND D (EXHIBIT HALL)

Poster Session - Tuesday, April 4, 2023 9:00 am to 5:00 pm

GEOMORPHOLOGICAL FEATURE ENGINEERING AND DEEP LEARNING TO DETECT CRATERS IN LIDAR AND AERIAL IMAGERY, CASE STUDY - Darrell Hall
LESSONS LEARNED FROM NON-DGPS POSITIONING SYSTEM USE AT MUNITIONS RESPONSE SITES - Luke Burds
USING GROUND PENETRATING RADAR TO MAP SOIL THICKNESS AND QUANTIFY WEATHERING RATES ON THE ISLAND OF HAWAII - Ron Counts
PRISM-3D PREDICTIVE IMAGING OF WATER SURFACE FOR MUNITIONS MOBILITY AND BURIAL - Shawn Harrison
APPLICATION OF SHALLOW SHEAR-WAVE REFLECTION PROFILING FOR GEOTECHNICAL INVESTIGATIONS-A CASE STUDY - Taylor Willick
SEISMIC INTERPRETATION OF A 2D HIGH-RESOLUTION SURVEY IN THE PROTEROZOIC CAPE SMITH BELT - Jeremy Gendreau
CHARACTERIZATION OF IMPOUNDMENTS OF COAL COMBUSTION PRODUCTS USING TOWED WATERBORNE AND GROUND-BASED TIME DOMAIN ELECTROMAGNETICS - Piyosh Jaysaval
THE INFLUENCE OF MAGNETIC MINERALS ON INDUCED POLARIZATION MEASUREMENTS IN SEDIMENTARY ROCKS - Klaudio Peshtani
INVERTING SEISMIC PROPERTIES OF SUBSEA PERMAFROST ZONES USING DEEP LEARNING-LESSONS LEARNED FROM FOUR DIFFERENT DOMAINS - Jefferson Bustamante

CHURCHILL C AND D (EXHIBIT HALL)

Poster Session - Wednesday, April 5, 2023 9:00 am to 3:30 pm

ESTABLISHING A BASELINE OF COASTAL WETLANDS RESPONSE TO CLIMATE CHANGE USING COUPLED GEOPHYSICAL AND ISOTOPIC SURVEYS - David Rey
DRILLING DEPTH ESTIMATION AND AQUIFER MAPPING USING ELECTRICAL RESISTIVITY TOMOGRAPHY - Md Alim
ELECTRICAL RESISTIVITY TOMOGRAPHY (ERT) SURVEY FOR FOUNDATION STUDY OF SUSPENSION BRIDGE ON BLUE NILE RIVER, ETHIOPIA - Yigrem Dingo
SUBSURFACE LEVEE MONITORING WITH DISTRIBUTED FIBER OPTIC SENSING - Richard Costley
ASSESSING THE VULNERABILITY OF TEXAS COASTAL WATERSHEDS TO CLIMATE CHANGE AND HUMAN INTERVENTIONS - Ramadan Abdelrehim
A LOW-COST EARTH'S FIELD NMR SENSOR PROTOTYPE FOR HYDROGEOPHYSICAL APPLICATIONS - Trevor Irons
PER AND POLYFLUOROALKYL SUBSTANCE (PFAS) UTILIZATION IN ORDNANCE MANUFACTURING - Dana Schmidt
APPLICATION OF GEOPHYSICAL METHODS FOR MAPPING AQUIFERS-A STUDY AT THE UNIVERSITY OF MISSISSIPPI FIELD STATION - Elsie Buskes





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