



## Near-Surface Geophysics

### Newsletter: February 2019

Dear Colleagues:

The latest Near-Surface Geophysics (NSG) section newsletter is now available. Please follow this link to see the [full version online](#).

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## Near-Surface Geophysics (NSG) Section February 2019 Newsletter

Recent announcements of interest to the NSG community (conferences, academic positions, graduate student opportunities, etc.) can be found on the [AGU Near-Surface Geophysics section website](#).

**Early-career scientists:** Check out the [NSG early-career website](#).

**Follow NSG on [Facebook](#) and Twitter [@NS\\_AGU](#)!**

Best regards,

Xavier Comas  
President, Near-Surface Geophysics Section, AGU

### 1. UPCOMING MEETINGS

MEETING	LOCATION	DATES	SUBMISSION	REGISTRATION
<a href="#">SAGEEP</a>	Portland, Ore.	17–21 March 2019	Closed	Open
<a href="#">EGU</a>	Vienna, Austria	7–12 April 2019	Closed	Open
<a href="#">GEM</a>	Xi'an, China	19–22 May 2019	Closed	Open
<a href="#">AGU-SEG</a>	Davie, Fla.	9–10 June 2019	Closed	TBA
<a href="#">ICEG</a>	Al Ain, United Arab Emirates	21–24 October 2019	Open	TBA

### 2. AGU UPDATES

- **AGU Honors Program: 2019 AGU Honors Nominations Now Open**

The AGU Honors Program recognizes colleagues for their outstanding contributions to the advancement of the geophysical sciences, for service to the community, and for contributions to the public's understanding. Nominations for 2019 AGU Union medals, Fellows, awards and

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prizes, and section awards and lectures are now open. We urge you to take this opportunity to nominate a student, a colleague, a peer, or a mentor whose achievements have made a difference in the Earth and space sciences. Visit the [AGU Honors Program home](#) for more information.

- **Section Incentive Program: Please Consider Donating!**

AGU launched the Section Incentive Program in 2015 to reward the sections that had at least 5% of their primary affiliated members make financial contributions of \$50 or more to any AGU fund, including the Austin Endowment for Student Travel. More details on the Section Incentive Program thresholds can be found here: <http://sites.agu.org/leadership/sections-focus-groups/section-and-focus-group-incentive-program/>.

AGU will be extending the program in 2019, and in the Near-Surface section we are currently at 3.15% of primary affiliates making a contribution of \$50 or more, so we need just 1.85% more to start receiving incentives that will go toward our section events and student initiatives. That means that we need only 11 more NS primary affiliates to contribute \$50 (or more) to start qualifying for this incentive. Please help our section! And remember that your contribution can go toward our section or toward any AGU fund.

- **NSG Student Spotlight**

[Kristen Marberry](#) is currently a graduate student at Colorado School of Mines (CSM) where she is working on an M.S. degree in the Hydrologic Science and Engineering Program under Dr. John Bradford. Her research is focused primarily on characterizing the natural debris dam formed by the 18 May 1980 Mount St. Helens eruption, which blocks Spirit Lake from its natural outlet, the Toutle River system. In this project, Kristen has been tasked with using geophysical methods (e.g., seismic, ground-penetrating radar) to characterize the subsurface layering of the pyroclastic flow material, the debris avalanche, the



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preeruption surface, and the location of the water table. This work is motivated by recent risk analyses regarding the potential for dam failure, and she hopes that her research will help to improve the current geologic and hydrogeologic models used in the risk management decision-making process.

Geophysics is a second career for Kristen. Previously, she and her husband, Shane, owned a construction company where she worked as a job-site foreman. Unfortunately, the Great Recession was not kind to the construction industry and led Kristen to pursue a new career. While researching options, she found geophysics through an Everett Community College geology teacher named Steve Grupp, who had previously graduated from CSM with an M.S. in geophysics. Once Kristen learned more about what geophysics is and the wide variety of career paths available, she knew that this was the path she wanted to pursue. As a result of her hard work and determination, Kristen completed her B.S. degree in geophysics from CSM in May 2018!

Outside of her research, Kristen is an active member of CSM's Society of Student Geophysicists (SSG). Between 2017 and 2018, Kristen served as president of this group and was awarded a 2018 SEG/Chevron Student Leadership Symposium grant for her leadership in organizing youth outreach events where the group members taught elementary-aged children some basics about geophysics and how it can be used to "see" inside the Earth. Over the past two summers, Kristen has also interned with the geophysics group at [Olson Engineering Inc.](#), where she worked on numerous field-based projects and deployed various geophysical techniques like seismic, EM, resistivity, and magnetics. Finally, as a mother, Kristen is often presented with the unique challenge of balancing her education and parenting her two daughters, Dez and Paige. While she often wishes there were more hours in a day, the fact that she has such a loving, patient, and supportive family has helped to propel her to where she is today.

With her expected graduation in December 2019, Kristen has already begun to consider her postgraduation plans. On the basis of her internship experiences, Kristen is interested in pursuing work in the consulting industry. Because Kristen is particularly passionate about water access, quality, and remediation, she hopes to find a career in which she can work on water-related problems and use geophysical methodologies.

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For more information about near-surface applications of hydrogeophysical methods or to learn more about her research, please contact [Kristen Marberry](#).

*Interested in being highlighted, or know a student who should be? Please email [Matthew Sirianni](#) for more information about the Student Spotlight. We are also seeking research highlights that showcase use of near-surface geophysics in other [AGU sections and focus groups](#). If you are interested in writing a short, one-page highlight, please contact [Kisa Mwakanyamale](#).*

- **Congratulations to the Near-Surface OSPA Winners!**

Congratulations to **Adrian Mellage** from University of Waterloo and **Matthew Griffiths** from Carleton University for winning the 2018 Outstanding Student Presentation Award (OSPA) during Fall Meeting 2018. Abstract details are below. We also congratulate all student participants for such a great job. It was particularly difficult this year to choose the two winners with so many great presentations. We also thank all the judges and volunteers for their help and hard work. This would not have been possible without your help.

Adrian Mellage, University of Waterloo: *Characteristic Relaxation Time and Chargeability of Polarizing Subsurface Microbes: In Situ Estimation of Microbial Abundance and Inferences on Metabolic State*; abstract ID: NS13C-0610

Matthew Griffiths, Carleton University: *Velocity Independent Imaging in the Near Surface Using a Novel Local Slope Calculation in the Time-Frequency Domain*; abstract ID: NS14A-02

- **AGU–SEG Airborne Geophysics Workshop**

The AGU–SEG Airborne Geophysics Workshop will be held at Florida Atlantic University in Davie, Fla., on 11–13 June 2019. The workshop will be held to share advancements and applications of airborne geophysics for groundwater, mineral, petroleum, geotechnical, and hazards investigations. Preconference short courses are also available 9–10 June 2019. For more information, visit [AGU–SEG 2019](#). The abstract submission period has closed.

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### 3. Near-Surface Geophysics Position Announcement

- **Geologist/Department Chair**

The Department of Geology and Geophysics on the beautiful campus of Louisiana State University is searching for an outstanding research-oriented geologist to serve as department chair. We request your assistance in identifying candidates for this position, or you may want to consider this position yourself. If you know of someone who would likely have an interest, we ask that you forward the attached advertisement. We believe that this is an excellent opportunity for a dedicated scholar who can be appointed at the full professor level, or having the equivalent experience in the field of geosciences to lead a demographically and topically diverse group of faculty along with the talented students and research staff that make up our department.

We are searching for a person with strong administrative experience, leadership ability, and research capacity. Responsibilities include leadership in the planning and administration of graduate and undergraduate academic programs in geology and geophysics, coordination with the entire faculty in developing a viable strategic vision and establishing new initiatives, guidance of the promotion and tenure process, selected course instruction (at a reduced load), maintenance of an externally funded research program, and coordination with the LSU Foundation in fund-raising to maintain and build upon our strong traditional relationships with the energy and environmental industries. This position reports to Cynthia Peterson, dean of the College of Science.

The full ad and application form can be found here:

[https://lsu.wd1.myworkdayjobs.com/LSU/job/LSU---Baton-Rouge/Department-Chair-of-Geology-and-Geophysics\\_R00029477](https://lsu.wd1.myworkdayjobs.com/LSU/job/LSU---Baton-Rouge/Department-Chair-of-Geology-and-Geophysics_R00029477)

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More information about the department is here: <https://www.lsu.edu/science/geology/>

The department would greatly appreciate your help in bringing this opportunity to the attention of your colleagues. We will start full review of applications on 1 March 2019.

#### 4. FYI

##### I. Paper Request: SEG Near-Surface Geophysics Technical Section

The SEG Near-Surface Geophysics Technical Section is recruiting papers for the technical sessions listed below. **Submit your abstracts from 1 February to 1 April 2019.** To submit abstracts and access the abstract kit, please click [here](#). If you have questions, please contact [ns@seg.org](mailto:ns@seg.org).

#### Session Topic

Hydrogeophysics

Karst

Void and Tunnel Detection

Near-Surface Geophysics Integrated Remote Sensing for Agriculture

Engineering Geophysics

Near-Surface Geophysics to Support Infrastructure

Shallow Geophysics for Utility and Communications Construction Applications

Near-Surface Geophysics for Archaeological and Forensic Applications

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Surface Wave Method Applications

**Geohazards**

GWB® and Humanitarian Geophysics

**Near-Surface Geophysics for Impacts from O&G E&P**

Near-Surface Geophysical Methods Applied to Mining Geophysics and Environmental Issues

**Borehole Geophysics**

Near-Surface Geophysics Applied to Dam and Levee Siting, Monitoring, Rehabilitation

**Full Waveform Inversion**

Imaging and Tomography

**Near-Surface Airborne Geophysics**

Near-Surface Geophysics in the Dynamic Coastal Environment: Crossing the Land/Sea Interface

**Multiple Method Modeling Applied to Solve Near-Surface Geophysics Problems**

Smart Cities: Near-Surface Geophysics Challenges for Urban Geophysical Exploration

**Texas Water Resource Challenges**

Near-Surface Geophysics in Challenging Environments

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### II. International Workshop on Gravity, Electrical & Magnetic Methods and Their Applications

The International Workshop on Gravity, Electrical & Magnetic Methods and Their Applications (GEM 2019) will take place in Xi'an, China, from 19 to 22 May 2019. GEM 2019 is targeted to be an international forum for geophysicists to communicate the latest developments and exchange ideas in potential fields and electromagnetics. Specifically, the goal of GEM 2019 Xi'an is to bring together geophysics researchers and practitioners from academia, government agencies, resource companies, and contractors to share the latest technological and methodological advancements and their successful applications to practical problem solving, and to inspire discussions among the participants about the best practices of turning electromagnetic, gravity, and magnetics data into value-added information. For more information, visit [GEM 2019 Xi'an](#).

### III. 5th International Conference on Engineering Geophysics (ICEG)

The United Arab Emirates University (UAEU) and Al Ain City Municipality (AAM), in partnership with the Society of Exploration Geophysicists (SEG), are proud to announce the fifth edition of the **International Conference on Engineering Geophysics (ICEG)**. This edition will take place 21–24 October 2019 in the Conference Auditorium of the Crescent Building on the grounds of UAEU.

The objectives of ICEG 2019 will concentrate on global innovation, creativity, advances, and new approaches in the field of engineering/environmental geophysics and related fields. In addition to the core engineering/environmental and geotechnical focuses of this coming event, special sessions in related applications of archaeology, energy, and forensic geophysics will be included. Furthermore, international experts at the very cutting edge of their disciplines will deliver keynote presentations on their latest research, experiences, future goals for engineering/environmental geophysics, and raising public awareness on the critical role of near-surface geophysics. To submit your abstract, visit <https://iceg2019.abstractcentral.com>. The submission program is now open. There is a 10-megabyte file size limit per uploaded abstract. Abstract submissions must be complete before 5:00 p.m. U.S. central daylight time on 22 April 2019. For more information, visit [ICEG 2019](#).

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To contribute material to the NSG newsletter, send an email to [Kisa Mwakanyamale](#).

**Deadline:** Material must be received 5 full business days before the first of the month.

**Guidelines for submissions:** All members are welcome to submit content of interest to the near-surface community. Please keep messages brief, and provide contact information and (if available) a web address for additional information.

**Get your message out to NSG members faster.**

You no longer need to wait until the end of the month to share an important or time-sensitive contribution via the newsletter. Appropriate contributions to the newsletter will also be shared ASAP via Twitter. Please note that only NSG members who follow [@NS AGU](#) will receive Twitter announcements, so make sure that you sign up!