



Near-Surface Geophysics Section

Newsletter: April 2018

Dear Colleagues:

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

In this month's newsletter:

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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 [NSFG early-career website](#).

Follow NSFG on [Facebook](#) and Twitter [@NS_AGU!](#)

Best regards,

Sarah Kruse

President, Near-Surface Geophysics Section, AGU

Near-Surface Geophysics Section April 2018 Newsletter

Upcoming Meetings at a Glance

Meeting (click to go to website)	Location	Meeting Dates	Submission	Registration
<u>AOGS</u>	Honolulu, Hawaii	3–8 June 2018	Closed	Early registration deadline: 20 April 2018
<u>ICEEG2018</u>	Hangzhou, China	10–13 June 2018	Closed	Starting 1 January 2018
<u>80th EAGE Conference and Exhibition</u>	Copenhagen, Denmark	11–14 June 2018	Closed	Early registration deadline: 15 March 2018
<u>24th European Meeting of Environmental and Engineering Geophysics</u>	Porto, Portugal	9–13 September 2018	15 April 2018	TBD
<u>5th International Workshop on Induced Polarization</u>	Newark, N.J.	3–5 October 2018	TBD	TBD
<u>SEG</u>	Anaheim, Calif.	14–19 October 2018	By 1 April 2018	TBD

AGU Updates

- **Seeking Co-organized Session Proposals for 2018 Fall Meeting!**

The collaborative Fall Meeting session format "Co-organized Session" includes chairs from at least two sections and provides the most visibility to both communities. Using this format will benefit your session by increasing abstract submissions and in-person attendance. It will also benefit the NSG section by increasing our visibility and building cross-disciplinary bridges. Please propose a co-organized session with Near-Surface Geophysics and another section for the 2018 Fall Meeting. **The deadline is 18 April.** See the following PDF for more info.

Contact Andy Parsekian at aparseki@uwyo.edu if you have any questions.

Do You Have a Collaborative Session Proposal?

Co-organized • Cross-listed • Co-sponsored

Does the proposal apply to AGU Sections other than the primary one to which it is being submitted? (Don't forget about the new GeoHealth Section!)



Is this proposal being submitted with co-conveners from the other applicable Section?



Then select "Yes" to being **co-organized** during the submission process and select up to four applicable Sections.



Truly Collaborative

Note: **Co-organized** sessions have to be approved by the Program Committee (PC) representatives of all Sections involved. If approved, this session will be listed under all **co-organizing** Sections during the abstract submission process.



Then select "Yes" to being **cross-listed** during the submission process and select up to four applicable Sections.



Used Only for Reference

Note: **Cross-listed** Sections will be used only for indexing purposes. If the proposal is approved, these **cross-listings** do not need to be approved by the PC but will be on the session for reference during the abstract submission process and in the program book.



Would the proposal be applicable to the membership or mission of other societies?



Then select the applicable **co-sponsoring** society when asked during the session submission process.



Does the session proposal fall under the below Sections and **co-sponsoring** societies? These requests will be reviewed by the **co-sponsoring** society. (For a complete list of Sections click on chart below.)

Society	Section
AMS	A, NG
EGU-GD	DI, NG
EGU-GMPV	VGP, NG
EGU-TS	T
GS	VGP
IAS	O, PP
JpGU	All S/FG
MSA	VGP, MR
SEPM	EP
SEG	NS



Then select "No" when asked for **co-organized**, **cross-listed**, and **co-sponsored** during the session submission process.

The 2018 SWIRL themes will be determined by the Fall Meeting Program committee, based on common cross-cutting themes that emerge from accepted sessions.

SWIRL themes will not be selected by conveners during the session proposal phase. More information will be available in May.

fallmeeting.agu.org/2018/swirls/

- ESSOAr—A New Earth and Space Science Server for preprints and conference presentations

AGU is developing a server for the international Earth and space science community to accelerate the open dissemination of Earth and space science preprints and rich conference presentations with an advisory board of other international Earth and space sciences societies. Sign up for updates at www.essoar.org.

- **AGU Approaches Its Centennial**

In 2019, AGU will celebrate its Centennial and will focus on worldwide events and programming that recognize the value and contributions of Earth and space science over the past century and how the science will continue to add value in everyday life in the future. As we approach this milestone, AGU wants to reflect on the past 100 years of achievement and discovery and look forward to the impacts to come. We're excited to announce that the oral history group StoryCorps will be at the Fall Meeting to help us record and capture the scientific and personal stories of our sciences. The nonprofit podcast focuses on stories about humanity, and they are coming to the meeting to help you tell your stories! If you know of a personal story that should be shared, we want to hear about it. Nominate someone today by visiting centennial.agu.org/.

NSFG Student Spotlight and Research Highlights

[Meredith Goebel](#) is currently a fifth-year Ph.D. candidate in the geophysics department at Stanford University studying under Dr. Rosemary Knight. Meredith's primary research uses electrical resistivity tomography (ERT) and airborne electromagnetics (AEM) to better characterize and manage saltwater intrusion into coastal aquifers.



As is the case for many of us, Meredith was drawn to geophysics as the logical combination of her passion for Earth science and her love of math and physics. Meredith was first exposed to near-surface geophysics when she participated in the National Science Foundation's Research Experiences for Undergraduates Summer of Applied Geophysics (SAGE).

The SAGE program really excited her about all of the different applications and possibilities of geophysics and also introduced her to the idea of pursuing academic research rather than going directly into industry.

Prior to starting her Ph.D., Meredith worked with microseismic data for enhanced geothermal systems at Lawrence Livermore National Laboratory. This application of geophysics excited Meredith because of its ability to benefit society, which in turn motivated her to pursue other geophysical methods with wider-ranging applications. She was particularly drawn to electrical methods because they can be used to investigate a variety of societally and environmentally relevant problems and can be deployed over a wide range of scales.

Outside of her research, Meredith is an active and proud volunteer with GeoKids, a program at Stanford University where fourth-graders from local elementary schools are brought to campus and taught about Earth science. In addition to helping teach fourth-graders, Meredith also enjoys teaching undergraduates and was awarded Stanford University's Centennial Teaching Assistant Award for Geophysics. Meredith's clear passion for science education and communication is evident through her being a runner-up in AGU's 2016 Data Visualization and Storytelling Contest.

Meredith has been to AGU's Fall Meeting a number of times ([2012](#), [2013](#), [2014](#), [2015](#), and [2016](#)) and loves that there is such a wide range of research topics covered during the meeting and that so many members of the academic community attend. She finds it a great way to meet people, learn about their research, and get their feedback on her own work. While she has no set plans yet for after her Ph.D., Meredith is interested in further pursuing geophysics for groundwater monitoring and management, likely through a postdoc.

For more information about near-surface applications of electrical methods in coastal environments, please contact [Meredith Goebel](#).

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 [Chi Zhang](#).

FYIs

Employment Opportunities

- **Postdoctoral Research Fellow in Geophysics**

The Geophysics Unit within the Department of Earth Sciences at Uppsala University intends to recruit a new junior coworker on a 2-year postdoctoral contract. Applications are invited in any area of solid Earth physics.

Uppsala University is a comprehensive research-intensive university with a strong international standing. Its mission is to pursue top-quality research and education and to interact constructively with society. Its most important assets are all the individuals whose curiosity and dedication make Uppsala University one of Sweden's most exciting workplaces. Uppsala University has 42,000 students, 7,000 employees, and a turnover of SEK 6.7 billion.

The Department of Earth Sciences at Uppsala University is one of the most complete such academic departments in Europe and includes geophysics, geology, paleontology, hydrology, meteorology, and natural resource science. Its research focuses on subjects that range from the Earth's core to the atmosphere, on scales from submicroscopic structures in minerals to the formation of mountains and oceans. It has teaching at undergraduate and graduate levels. Its courses offer a wide range within the geoscience area, and several of the department's programs have received the highest rating in evaluations by the Swedish National Agency for Higher Education (Högskoleverket) and the Swedish Higher Education Authority (Universitetskanslersämbetet). For more information, please visit www.geo.se.

The Geophysics Unit is Sweden's leading solid Earth physics research environment and consists today of about 50 coworkers, including about 15 Ph.D. students and 10 junior coworkers with recent Ph.D.s. The unit runs the Swedish National Seismic Network, consisting of about 70 permanent broadband stations, and has an extensive equipment pool for passive and controlled-source seismic and electromagnetic field studies. Current and recent activities include, for example, induced seismicity related to mining and underground construction, geothermal heat extraction, and injection of fluids, including carbon dioxide. Other significant areas of research are the development of innovative processing procedures for reflection seismic data, multidimensional inversion methods for seismic tomography and electromagnetic data, joint inversion methods, and numerical modeling. For more information about the Geophysics Unit, please visit www.geo.uu.se/research/geophysics/.

Research profile and duties:

The postdoc is a research position. The research direction of the postdoc will be defined together with the successful candidate. Some information on the profile of the Geophysics Unit is given above.

Qualifications:

The holder of a postdoctoral researcher position must have a Ph.D. degree in geophysics, or the equivalent. The Ph.D. degree must have been obtained at the start of employment and be no more than 3 years prior to the application deadline; however, periods of, for example, sick leave or parental leave are deducted from this 3-year period.

How to apply:

The application should contain a cover letter mentioning the applicant's research area, a CV, a brief research statement, and a publication list. The applicant should arrange to have two letters of recommendation, and contact information for the letter writers should be included.

In an overall assessment of the applicant's qualifications, parental leave, part-time work relating to care of children, union assignments, military service, or the like will be regarded as work experience and should therefore be mentioned in the CV.

Uppsala University strives to be an inclusive workplace that promotes equal opportunities and attracts qualified candidates who can contribute to the university's excellence and diversity. It welcomes applications from all sections of the community and from people of all backgrounds. Within this category, a majority of the employed are men, and therefore it particularly encourages women to apply.

- **Geotech Ltd., a world leader in geophysical airborne surveys, is seeking candidates for the following positions:**

1. Technical Manager, who will be responsible for managing and directing all technical aspects including design, manufacturing, research and development, and intellectual property. This position requires a degree in engineering along with 7+ years of leadership experience at a management level within an R&D/engineering environment. Specific experience within airborne geophysical surveying is highly desired.
2. Technical Support Engineer, to support troubleshooting, maintenance, and repair of our proprietary surveying systems, both in-house and in the field. We are looking for someone who is task driven and career oriented and who will work well within an engaging, fast paced, team-based environment.
3. Project Manager, who will be responsible for the planning, management, and coordination of logistics for multiple airborne geophysical projects. Within this position, you will be responsible for all aspects of field operations, including but not limited to survey planning, scheduling, supplier sourcing, field crew administrating, logistical planning, and budgeting. Regular communication within the organization and with external stakeholders is required.

If you meet the above criteria and are interested in working for an industry-leading organization, please send your resume to amber.wood@geotechairborne.com. We thank all candidates for their interest in this role; however, only those being considered for an interview will be contacted. No telephone calls, please.

8th International Conference on Environmental and Engineering Geophysics

- The Chinese Central Government put forward the goal of the construction of urbanization in China in an effort called “Three 100 Million People.” In the next 10 years, China’s urbanization process will run at the highest speed in the history of China. The near surface is the most complex, sensitive, and fragile part of the Earth. The near surface furnishes the vast majority of necessary materials for human living. As a result, China’s urbanization relies on a “healthy” and sustainable near surface. Because of the broad applications of geophysical techniques in the environmental and engineering fields, these materials are of great significance for the sustainable development of human society. To promote the communication of environmental and engineering geophysical problems, and to provide a world-class forum for new technical advances, developments, and applications in environmental and engineering geophysics, the 8th International Conference on Environmental and Engineering Geophysics (ICEEG2018) will be held on the campus of Zhejiang University in Hangzhou, the most beautiful city in China, from 10 to 13 June 2018. The conference sincerely welcomes leading experts, international media, young professionals, and students to contribute and attend the meeting. This conference will offer an opportunity to all geophysicists and engineers to present recent achievements including case studies and theoretical studies in related techniques, software, and instruments. Expanded abstracts should not exceed six pages (including figures) and should be in the format of abstracts for the SEG annual meeting. The deadline for submission of abstracts is 31 December 2017. Please send abstracts and papers to [email box](#).

5th International Workshop on Induced Polarization

- The [5th International Workshop on Induced Polarization \(IP\)](#) will take place 3–5 October 2018 at Rutgers University Newark, located just 10 miles outside of New York City. The workshop will consist of a series of invited-only talks by experts in the field, poster sessions, roundtable discussions, and presentations and demonstrations on instrumentation from the sponsors.

The workshop will be organized around six themes:

1. Petrophysics
2. Biogeophysics
3. Modeling

4. Field applications
5. Data processing/inversion
6. Instrumentation

The submission window for short, 250-word abstracts on poster presentations will open on 30 April and close 1 July. Registration for the workshop will open on 15 July with an early bird deadline of 1 September. Owing to the generosity of its sponsors, the meeting expects to offer the low registration fee of approximately \$200 (\$150 for students). The registration fee will include a conference dinner, a dinner/river cruise around Manhattan, lunches, an icebreaker, and a happy hour. Two local hotels will provide discounted rates from \$109 to \$169 per room per night.

The 5th workshop will follow in the tradition of previous IP workshops:

Bonn, Germany (2009): latest developments and applications of the IP method for near-surface hydrogeological and environmental investigations

Golden, Colorado, USA (2011): understanding of the mechanisms generating IP signals in the Earth

Île d'Oléron, France (2013): developments of the method within the geophysical community and across scientific communities

Aarhus, Denmark (2016): narrowing the gap between theory, laboratory findings in controlled environments, and field experiments

The focus of the 5th workshop is to critically evaluate the information content of induced polarization data based on the past decade of theoretical, laboratory, and field-scale developments. The workshop will assess key questions pertaining to the implementation of IP as a robust geophysical technology for subsurface characterization. Example questions include the following: (1) How well can permeability be predicted from IP measurements? (2) Is it possible to extract any reliable biogeochemical information from time-lapse IP monitoring of biogeochemical processes? (3) How much broadband information can be extracted from data

acquired outside of the laboratory? The technical committee will work to organize sessions around these and other such questions.

The proximity of Rutgers University Newark to New York City provides outstanding opportunities for social activities that will be incorporated into the workshop and provide attendees with a flavor of the “Big Apple,” including a scenic river cruise. Newark has a vibrant university neighborhood and a Portuguese community that will be visited for the conference dinner.

Further details on the 5th International Workshop on Induced Polarization (IP) will be announced on this site as the technical program is developed. For now, please mark your calendars and hold the date.

We look forward to seeing you in Newark!

Lee Slater, Dimitrios Ntarlagiannis, Judy Robinson, and Kristina Keating

The 5th International Workshop on Induced Polarization is currently sponsored by Ontash & Ermac, Mount Sopris Instruments, Iris Instruments, Advanced Geosciences Inc. (AGI), and Aarhus Geosoftware (AGS).

To contribute material to the NSFG newsletter, send an email to [Chi Zhang](#).

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 NSFG 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 NSFG members who follow [@NS_AGU](#) will receive Twitter announcements, so make sure that you sign up!