Dear Colleagues:

The latest Near-Surface Geophysics focus group (NSFG) newsletter is now available. Please follow this link to see the full version online.

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Recent announcements of interest to the NSFG community (conferences, academic positions, graduate student opportunities, etc.) can be found on the AGU Near-Surface Geophysics focus group 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 Focus Group, AGU
Near-Surface Geophysics Focus Group (NSFG) September 2017 Newsletter

Upcoming Meetings at a Glance

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<thead>
<tr>
<th>Meeting (click to go to website)</th>
<th>Location</th>
<th>Meeting Dates</th>
<th>Submission</th>
<th>Registration</th>
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<tbody>
<tr>
<td>SEG 2017</td>
<td>Houston, Texas</td>
<td>24–29 September 2017</td>
<td>Closed</td>
<td>Early registration ends: Closed</td>
</tr>
<tr>
<td>4th ICEG</td>
<td>Al Ain, United Arab Emirates</td>
<td>9–12 October 2017</td>
<td>Closed</td>
<td>Early registration ends: Closed</td>
</tr>
<tr>
<td>GELMON 2017</td>
<td>Vienna, Austria</td>
<td>22–24 November 2017</td>
<td>18 September 2017</td>
<td>Early registration ends: 18 September 2017</td>
</tr>
<tr>
<td>AGU 2017</td>
<td>New Orleans, La.</td>
<td>11–15 December 2017</td>
<td>Closed</td>
<td>Early registration ends: 3 November 2017</td>
</tr>
</tbody>
</table>

AGU Updates

• JpGU–AGU Joint Sessions at 2018 JpGU Meeting
Planning for joint sessions at the next JpGU meeting, to be held 20–24 May 2018, is under way. This partnership with JpGU offers a great opportunity to further advance the geosciences and foster participation and engagement more globally. JpGU call for session proposals for 2018 will begin on 1 September 2017 (2:00 p.m. Japan standard time). AGU’s section and focus group leaders (or their reps) and JpGU section presidents will lead the development of the joint session proposals, with a goal of 50 cosponsored sessions for the 2018 meeting. Session proposal submission deadline is 12 October, 5:00 p.m. Japan standard time.

We are looking forward to another successful and collaborative partnership in 2018, and we ask your continued support on this important endeavor. Building on the success of the JpGU–AGU Joint Meeting in 2018, we are planning the next joint meeting in 2020. Please contact Beth Paredes at eparedes@agu.org with any questions.

• Abstracts Open Soon for Fall 2017 Virtual Poster Showcase
Abstract submissions open 4 July for the fall Virtual Poster Showcase (VPS) for undergraduate and graduate students. Encourage your students to submit abstracts at virtualposter.agu.org. To learn more about the benefits of participating in VPS, watch this video in which a student and a faculty member share their experiences about the program. Abstract submission deadline: 30 September.

• Consider Volunteering for AGU—Tell Us About Your Interests Now
AGU relies on volunteers to achieve its mission. A variety of opportunities are available over the next few years with a range of time commitments. Diverse perspectives are needed. To help AGU identify opportunities that match your skills and interests, fill out an online profile. Not everyone will be matched, and there's no obligation to accept opportunities offered to you. Sign up now!

• AGU’s Open API Challenge
AGU has launched the Open API Challenge to improve the exchange of ideas within the scientific community and support integrated, interdisciplinary Earth and space science information. This year we invite you to develop a Web-based tool that adds value to an API containing data from the Fall Meeting scientific program. Submission Deadline: 2 October, 11:59 p.m. eastern time.
Prizes:
1st Prize: $15,000
2nd Prize: $10,000
3rd Prize: $5,000
Each winning team will also receive up to four complimentary 1-day passes to Fall Meeting to attend the award ceremony. Learn more.

• Judges Needed: AGU’s Open API Challenge
Want a preview of the future of scientific discovery? Apply to be a judge for AGU’s Open API Challenge where online tools use data from the Fall Meeting scientific program. Judges will need to be available early to mid-October. Email openapi@agu.org with a copy of your CV or to request more details.

• Fall Meeting Housing and Registration Are Now Open
You can now reserve housing via AGU’s Housing Bureau. Hotels sell out quickly, so book early to reserve your preferred accommodation. Book housing here. Fall Meeting registration is also now open. Save more than $100 by registering by 3 November. AGU members receive up to $145 in additional discounts. Register at this website.

• AGU Webinars Launch
The newly launched AGU Webinars channel is a great informational source for the Earth and space sciences. Each week will feature guest speakers from the Earth and space science community presenting topics important to you! Tune in Thursdays at 2:00 p.m. eastern time, and visit webinars.agu.org for the schedule of upcoming webinars and to watch past webinars.

The AGU Webinars team is always on the lookout for great topics and speakers. Feel free to send your ideas and feedback to webinars@agu.org.

• Tell Us What You Think of the Near-Surface Focus Group
We’d like your input this month for our self-assessment, particularly on the topics of
- enabling the advancement of leading-edge science and innovation
- ability to bring a sense of community
- providing professional development and support to early-career scientists and students
- increasing and supporting the talent pool
- providing networking opportunities
- international engagement
- improving equity and diversity engaging with inter-/intra-/trans-disciplinary groups relevant to your group
- promoting and supporting emerging leaders in your group through AGU honors and awards
- communicating your science to a broad audience including the general public and policy makers
- identifying talent for volunteer leadership opportunities and developing it
- other things related to AGU’s mission and vision
Please send comments to Sarah Kruse by 20 September. Thanks!

• AGU Near-Surface Geophysics and Hydrogeophysics Social Event
Please join the Near-Surface Geophysics focus group and the Hydrogeophysics Technical Committee for this year’s Fall Meeting social!

Location: The Avenue Pub, 1732 St. Charles Ave., New Orleans, LA 70130 (1 mile from the Convention Center)
When: 13 December @ 6:00 p.m.

After a day filled with meetings and talks, come relax and join us for a night of good friends, good food, and good beer in the Big Easy. Laissez les bon temps rouler! Located in the historic Lower Garden District of New Orleans, The Avenue Pub offers over 40 craft brew taps, an extensive whiskey list, and tantalizing pub fare. To
ensure enough space, our group has reserved the outside back patio area, and in case of rain we will be moved inside to the upstairs bar. We hope to see you there!

For any additional information or for questions, please contact Matthew Sirianni.

- **Suggestions for a joint AGU–SEG workshop at the 2018 SEG meeting in Anaheim, Calif.**
  Please contact Sarah Kruse if you are interested in helping organize a joint workshop, or simply if you have suggestions for a topic. Current topics being planned by SEG include surface wave methods, near-surface seismic processing, science communication, geophysical tomographic methods, hydrogeophysics, and petrophysical relationships.

**NSFG Student Spotlights and Research Highlights**

**Feng Cheng, China University of Geosciences**

Feng Cheng is currently a second-year Ph.D. student at China University of Geoscience’s Institute of Geophysics and Geomatics, where he researches near-surface applications of passive seismic methods. Geophysics has always had a strong appeal to Feng, which led him to concentrate on physics while attending high school. During his undergraduate studies, Feng discovered that he preferred near-surface to solid Earth geophysics because of the wide-ranging real-world applications and the relative ease of testing and verifying methods. Feng’s dedication to academic and research excellence is apparent, having been awarded the Liuguangding Geophysics Scholarship (the highest award for undergraduates in geophysics) and being a two-time winner of a national Ph.D. scholarship for research performance.

Recent work by Feng has focused on developing and testing new methodologies for seismic hazard assessment in large urban areas. To solve problems posed by traditional seismic methods in complex urban environments, Feng et al. [2016] introduce a hybrid method of seismic interferometry and roadside passive multichannel analysis of surface waves (MASW), called multichannel analysis of passive surface waves (MAPS). This study found that MAPS was superior to roadside passive MASW based on three factors: (1) validity of azimuth detection, (2) feasibility of combing active MASW and MAPS, and (3) accuracy in determining dispersion energy trends at a low-frequency range in urban areas. This work, and work by others in his research group, has led to the development of several software packages, including AmbiSeis©. AmbiSeis© is a powerful tool for passive surface wave processing and includes other dispersion analysis methods such as Refraction Microtremor (ReMi), Spatial Auto-Correlation (SPAC), and MAPS.

Feng has been a member of AGU since 2015 and has presented work at the 2015 and 2016 Fall Meetings. The 2015 Fall Meeting was particularly beneficial for him because the constructive criticism he received during the meeting contributed to his publication in Geophysics. More generally, the AGU Fall Meetings are important to him because they encourage scientific curiosity and personal and professional development through a strong sense of community and acceptance. Feng describes the
Fall Meeting as akin to a large family party where old and new friends gather from all over the world; he particularly enjoys catching up with his friends and colleagues over a cold beer.

Although still considering his postgraduation plans, Feng is interested in pursuing his research at a postdoctoral position in the United States.

For more information about near-surface applications of passive seismic methods or AmbiSeis© software, please contact Feng Cheng.

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 the 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
2017 SEG Annual Meeting Near-Surface Technical Section Activities

<table>
<thead>
<tr>
<th>Near-Surface Geophysics Technical Sessions</th>
<th>Session ID/Room No.</th>
<th>Date</th>
<th>Session Title</th>
<th>Cochairs</th>
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<tbody>
<tr>
<td>SS1/360C</td>
<td>Monday p.m.</td>
<td>Near-Surface Geophysical Methods for Archeologic Research</td>
<td>Blair Schneider and George Tsoflias</td>
<td></td>
</tr>
<tr>
<td>SS3/370C</td>
<td>Monday p.m.</td>
<td>Development and Application of Surface-Wave Methods</td>
<td>Choon Park and Shan Dou</td>
<td></td>
</tr>
<tr>
<td>SS6/370C</td>
<td>Tuesday a.m.</td>
<td>Geoscientists Without Borders®</td>
<td>Robert Merrill and Richard Nolen-Hoekeusa</td>
<td></td>
</tr>
<tr>
<td>NS P1/Station 13</td>
<td>Tuesday a.m.</td>
<td>Characterization</td>
<td>Marvin Speece and Sarah Morton</td>
<td></td>
</tr>
<tr>
<td>SS8/370C</td>
<td>Tuesday p.m.</td>
<td>AGU–SEG Hydrogeophysics</td>
<td>John Lane and Chi Zhang</td>
<td></td>
</tr>
<tr>
<td>NS1/370C</td>
<td>Wednesday a.m.</td>
<td>Looking Shallow to See Deep</td>
<td>Andrey Bakulin and Carlos Calderon-Macias</td>
<td></td>
</tr>
<tr>
<td>NS2/370C</td>
<td>Wednesday p.m.</td>
<td>Applied Near-Surface Seismology: Refractions, Reflections, and Surface Waves</td>
<td>Steve Sloan and Shelby Peterie</td>
<td></td>
</tr>
<tr>
<td>NS3/370C</td>
<td>Thursday a.m.</td>
<td>Statics, Tomography, and Inversion</td>
<td>Charles Diggins and Matthew Ralston</td>
<td></td>
</tr>
<tr>
<td>SS9/360C</td>
<td>Thursday a.m.</td>
<td>Engineering Geophysics</td>
<td>Koya Suto and David Valentine</td>
<td></td>
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<thead>
<tr>
<th>Committee Meetings of Interest to Near-Surface Technical Section Members</th>
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<th>Date</th>
<th>Time</th>
<th>Meeting Title</th>
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<tbody>
<tr>
<td>Hilton Room 337AB</td>
<td>Tuesday</td>
<td>3:00–4:00 p.m.</td>
<td>SEG Women’s Network Committee Meeting</td>
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<tr>
<td>Hilton Room 377AB</td>
<td>Tuesday</td>
<td>5:30–6:30 p.m.</td>
<td>Near-Surface Technical Section Business Meeting</td>
<td></td>
</tr>
<tr>
<td>Hilton Room 337AB</td>
<td>Wednesday</td>
<td>12:00–1:00 p.m.</td>
<td>SEG–NGWA Collaboration Committee Meeting</td>
<td></td>
</tr>
<tr>
<td>Hilton Room 344A</td>
<td>Wednesday</td>
<td>5:00–6:00 p.m.</td>
<td>AGU–SEG Collaboration Committee Meeting</td>
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Near-Surface Technical Section Evening Reception is free to all SEG Near-Surface Technical Section members. Even though this event is free, you must register to attend to ensure that food and beverage determinations are correct.
SEG Annual Meeting Near-Surface Postconvention Workshop: Drones Applied to Geophysical Mapping

Date: Friday, 29 September 2017
Time: 8:00 a.m. to 5:00 p.m.
This is a ticketed event.

Applying small unmanned airborne systems (sUAS) to the acquisition of geophysical data will inevitably change the manner in which geophysical surveys are accomplished. However, there are many challenges that need to be addressed, including aircraft performance limitations and the lack of geophysical sensors suitable for use with sUAS. Nevertheless, the promise of more data in less time at lower cost will drive innovation that will result in the widespread use of drones for geophysical mapping.

This workshop brings together experts in the design and operation of small UAS and experts in the acquisition of magnetic, gravity, and seismic data to present and discuss the application of drones to geophysical mapping as a means to reduce risk, improve data quality, and lower the cost of acquisition. The primary emphasis for this workshop is on providing every attendee with new insights into the current state of the art pertaining to using drones for geophysical mapping while simultaneously fostering interaction between the experts currently using drones for mapping and those seeking to integrate drones into their geophysical mapping workflows.

SAGEEP Updates

Call for Abstracts: SAGEEP 2018 Abstract Submission Site Open—Due by 20 October 2017!
Geoscientists from all over the world are invited to submit abstracts to SAGEEP 2018. The 31st SAGEEP will be held 25–29 March 2018 in Nashville, Tenn., USA, a region of North America with numerous attributes of interest to near-surface geophysicists. Be sure to view session topics here. Technical program cochairs Andrew D. Parsekian, Ph.D., and Oliver Kuras, Ph.D., are still accepting special session proposals and session chair/cochair volunteers. Online abstract submission site link.

For the past 31 years, SAGEEP has been held over a 5-day period at locations throughout the United States, with more than 200 oral and poster presentations, several educational short courses and workshops, numerous vendor presentations, and a commercial exhibition. A set of proceedings, composed of technical presentations, is distributed on USB memory drive (ISSN 1554-8015) and accessible online via the EEGS website.

Employment Opportunities

- Two Airborne Electromagnetic (AEM) geophysicist positions at Geoscience Australia
Geoscience Australia (GA) is an Australian government listed entity within the Industry, Innovation, and Science portfolio. The Groundwater Branch (GWB) is responsible for providing geospatial, geoscientific, and hydrological information and knowledge to support Australia government policies and decision making. The branch undertakes a range of strategic and regional applied science activities in collaboration with state/territory and other Commonwealth government agencies, aimed at improving understanding of groundwater systems and processes across Australia.

The branch is seeking an Airborne Electromagnetic (AEM) geophysicist who, in close collaboration with the Groundwater Branch Senior Leadership Team and other senior geophysical staff in the agency, will be responsible for AEM contract development and management for the Groundwater Branch. As part of a multidisciplinary team, the candidate will be responsible for the geophysical elements of AEM-based projects in
the Groundwater Branch. The successful applicant will work collaboratively with a range of internal and external partners and communicate effectively in a range of forums.

Another position is senior AEM geophysicist, who will provide strategic geophysical leadership, including the development and implementation of AEM inversion codes and interpretations together with other hydrogeophysical techniques, for groundwater investigations. As a senior scientist within the branch, the candidate will develop and lead aspects of strategic and regional groundwater projects, work collaboratively with a range of internal and external partners, mentor team members, and communicate effectively in a range of forums.

Further information and an application can be found here. Applicants will be asked to provide a brief statement (fewer than 1000 words) outlining how your skills, knowledge, experience, and qualifications make you the best person for the job.

Position contact: Dr. Ken Lawrie, (02) 6249 9847, ken.lawrie@ga.gov.au
For assistance, call the recruitment team at (02) 6249 9777 or email hr@ga.gov.au.

**Plant/Soil Postdoctoral Fellow at Lawrence Berkeley National Laboratory**

The Climate and Ecosystem Sciences division within the Earth and Environmental Sciences area of Lawrence Berkeley National Laboratory is seeking applications for a postdoctoral Fellow to develop novel approaches to study plant–root–soil interactions under dynamic and future climatic conditions using a combination of belowground (geophysics, hydrology, and geochemistry) and aboveground remote sensing technologies (e.g., hyperspectral imaging). The postdoctoral Fellow will work with a multidisciplinary group of scientists to improve understanding of the interactive feedback between plant growth, root development, and changes of soil and climatic conditions. Specifically, this postdoc will play a major role in (1) developing the scientific basis for an advanced plant root phenotyping technology using geophysical methods and (2) understanding the link between belowground root development/adaption and aboveground plant growth and productivity under a range of soil and climatic conditions.

This position requires an outstanding record of original and high-quality research and demonstrated experience and enthusiasm for understanding the dynamics of plant–soil biomes. Essential for this position is expertise in soil, plant, or environmental sciences with a particular emphasis on at least one of the following domains: near-surface geophysics, soil–plant interaction, lab and field-scale soil biogeochemistry and hydrology, and surface–subsurface interactions. Also desired is a familiarity with hydrogeophysical methods, geochemistry, soil physics and mechanics, plant genetics and physiology, remote sensing, statistical methods, and an interest and spirit in working with a multidisciplinary team.

The Climate and Ecosystem Sciences division within the Earth and Environmental Sciences area of Lawrence Berkeley National Laboratory takes advantage of multidisciplinary research expertise to understand, predict, and advance stewardship of Earth’s climate and ecosystems. Berkeley Lab is located in an environment recognized for offering a high quality of life, having both abundant natural beauty and exciting urban surroundings.

For more information about the LBNL Earth and Environmental Sciences area and the Climate and Ecosystem Sciences division, please visit [http://eesa.lbl.gov/](http://eesa.lbl.gov/). To apply, please visit [http://jobs.lbl.gov](http://jobs.lbl.gov) and reference Earth Science Postdoc Fellow posting #83451.

**Wellbore Integrity Postdoctoral Fellow at Lawrence Berkeley National Laboratory**

Wellbore integrity is of paramount importance to subsurface resource extraction, energy storage, and waste disposal. The Energy Geosciences division within the Earth and Environmental Sciences area of Lawrence Berkeley National Laboratory is seeking applications for a postdoctoral Fellow to develop novel geophysical approaches to characterizing and monitoring wellbore integrity for subsurface energy and environment applications.
The postdoctoral Fellow will work with a multidisciplinary group of scientists to develop novel electromagnetic, electrochemical, and seismic methods for monitoring subsurface stress and corrosion-induced borehole degradation. Specifically, this postdoc will play a major role in (1) conducting laboratory and field studies to develop the scientific basis for utilizing EM, seismic, and electrochemical signals for steel casing corrosion monitoring, (2) quantifying the impact of signal attenuation, ambient noise, and geological heterogeneity on signal quality and sensitivity, and (3) working with the rest of the team to demonstrate the technologies at field scales.

This position requires an outstanding record of original and high-quality research in the application of geophysical methods for subsurface energy studies. Essential for this position is expertise in electromagnetic and seismic wave propagation experiments, and demonstrated experience in conducting laboratory and field-based studies with a particular emphasis on at least one of the following domains: electromagnetism/seismic theory and applications, time or frequency domain wave-based reflectometry, and corrosion electrochemistry. Also desired is a familiarity with electrical engineering, rock mechanics, and reservoir engineering. A strong interest and spirit in working with a multidisciplinary team is required.

The Energy Geosciences division within the Earth and Environmental Sciences area of Lawrence Berkeley National Laboratory takes advantage of multidisciplinary research expertise to create basic and user-inspired knowledge, methods, and capabilities for sustainable utilization and management of the Earth’s subsurface. Berkeley Lab is located in an environment recognized for offering a high quality of life, having both abundant natural beauty and exciting urban surroundings.

For more information about the LBNL Earth and Environmental area and the Energy Geosciences division, please visit http://eesa.lbl.gov/. The position will stay open until filled. However, for full consideration, please apply before 30 September 2017 by visiting here.
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!