



Near-Surface Geophysics Focus Group

Newsletter: April 2017

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) April 2017 Newsletter

Upcoming Meetings at a Glance

Meeting (click to go to website)	Location	Meeting Dates	Submission	Registration
European Geosciences Union General Assembly	Vienna, Austria	23–28 April 2017	Closed	Early registration ends: 16 March 2017
NovCare 2017	Dresden, Germany	6–9 June 2017	Closed	Early registration ends: 1 April 2017
3rd AGU-SEG Hydrogeophysics Workshop	Stanford, Calif.	24–27 July 2017	Closed	Registration opens: April 2017 Early registration ends: 31 May 2017
IAPSO-IAMAS-IGA 2017 Joint Assembly	Cape Town, South Africa	27 August to 1 September 2017	Closed	Early registration ends: 16 March 2017
EAGE Near Surface Geoscience 2017	Malmö, Sweden	3–7 September 2017	15 April 2017	Early registration ends: 15 July 2017
SEG 2017	Houston, Texas	24–29 September 2017	Closed	Early registration ends: 20 July 2017
4th ICEG	Al Ain, United Arab Emirates	9–12 October 2017	1 May 2017	TBA

Upcoming Events

- [March for Science](#), 22 April 2017, in a City Near You

The March for Science is a celebration of science. It's not about scientists or politicians; it is about the very real role that science plays in each of our lives and the need to respect and encourage research that gives us insight into the world. Nevertheless, the march has generated a great deal of conversation around whether or not scientists should involve themselves in politics. In the face of an alarming trend toward discrediting scientific consensus and restricting scientific discovery, we might ask instead, can we afford not to speak out in its defense?

The application of science to policy is not a partisan issue. Science should neither serve special interests nor be rejected based on personal convictions. At its core, science is a tool for seeking answers. It can and should influence policy and guide our long-term decision-making.

The March for Science champions and defends science and scientific integrity, but it is a small step in the process toward encouraging the application of science in policy. The most effective way to protect science is to encourage the public to value and invest in it. The best way to ensure science will influence policy is to encourage people to appreciate and engage with science. That can only happen through education, communication, and ties of mutual respect between scientists and their communities—the paths of communication must go both ways. Reach out to your community; share your research and its impact on people's everyday lives. In turn, listen to communities and consider your research and future plans from the perspective of the people we serve. We must take science out of the labs and journals and share it with the world. AGU is a proud supporter of the March for Science! [Find a March near you.](#)



- **Volunteer Judges for Virtual Poster Showcase**

We need scientists and faculty to judge undergraduate and graduate student posters and their accompanying video presentations in the [Virtual Poster Showcase](#). The showcases enable students to practice preparing a poster and then presenting it online. We are looking for three good judges from each section and focus group. The total time commitment would be only about 2 hours. If you have any questions, please send them to [Pranoti Asher](#).

Upcoming Deadlines

- **15 April: 2017 AGU Honors Nomination Deadline**

Nominations for the 2017 AGU Union awards, Fellows, medals, and prizes and section and focus group awards are due 15 April 2017. We urge you to take this opportunity to nominate a student, colleague, peer, or mentor whose achievements have made a difference in the Earth and space sciences. As part of the section and focus group ownership and involvement in AGU's Honors program, you are urged to create honors nominating committees, if these committees are not yet in place. The charge of this group is to identify who in your community has not been recognized for any of AGU's honors and should be. The goal is to increase diverse nominations in AGU's Honors Program regarding the number of nominations for women, international members, and underrepresented groups. Visit the [AGU Honors Program online](#) and contact [George Tsoulias](#), NSFG Nominations Committee chair, for more information.

- **15 April: Abstract Submission Deadline for [23rd European Meeting of Environmental and Engineering Geophysics](#), 3–7 September 2017, in Malmö, Sweden.**

We heartily welcome you to Malmö for the Near Surface Geoscience Conference & Exhibition 2017 that will be held on 3–7 September. This edition will host the 23rd European Meeting of Environmental and Engineering Geophysics and two parallel events: the Second European Airborne Electromagnetics Conference and the Fourth Sustainable Earth Sciences Conference. It will be a 3-day scientific conference covering a wide array of issues related to near-surface geosciences, including plenary talks, oral and poster presentations, an exhibition, and field demonstrations. Furthermore, on the Sunday preceding the conference, two workshops and a short course will be offered. Different field trips will be organized immediately following the conference days. The event will provide excellent opportunities for experts from government, industry, consultancy, and academia to share experiences and discuss opportunities from current viewpoints to future needs.

The meeting will be an opportunity for a wide community of geoscientists (geophysicists, geologists, hydrogeologists, and engineers) to share technical and scientific issues on developments of shallow applied geophysics. The scientific program will focus on the advancement and integration of shallow geophysical methods for elucidating the geometry of subsurface structures and preventing associated problems. Special sessions will be devoted to geophysical methods applied to engineering geology and geotechnical investigations; hydrogeophysical and environmental studies; geohazards, including landslides, cryosphere, and arctics;

archaeological prospecting; assessment of industrial and mineral deposits; and mining and mineral exploration, as well as method-specific themes.

All abstracts must be submitted in standard format by 15 April 2017 and will be peer reviewed before final selection by the scientific committee.

- **19 April:** [AGU Fall Meeting](#) Session Proposal Deadline
2017 Fall Meeting [session proposals](#) are now being accepted. Session proposal deadline is 19 April, 11:59 p.m. Eastern Time. When submitting a proposal, Fall Meeting session conveners should consider four alternate session [format options](#) and whether the session fits into one of three collaborative [session options](#).
- **1 May:** Abstract Submission Deadline for the 4th International Conference on Engineering Geophysics ([ICEG](#)), 9–12 October 2017, in Al Ain, UAE.
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 fourth edition of the International Conference on Engineering Geophysics (ICEG). This conference will take place 9–12 October 2017 on the grounds of the UAEU in the conference auditorium of the Crescent Building.

The objectives of ICEG 2017 are to concentrate on global innovation, creativity, advances, and new approaches in the field of engineering/environmental geophysics and in related fields. In addition to the core engineering/environmental and geotechnical focuses of this coming event, special sessions in applications related to archaeology, energy, and forensic geophysics will be held. Furthermore, international experts at the very cutting edge of their science or engineering will be delivering 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.

AGU Updates

- [Fostering International Collaboration Amid Policy Challenges](#) by AGU President Eric Davidson and AGU director of meetings Lauren Parr
Changes in immigration and visa policies instituted by U.S. President Donald Trump are causing confusion and concern across many sectors—and are beginning to have a negative impact on international science collaborations. Many non-American scientists are rightfully concerned that they may be challenged when seeking entry into the United States. They could face barriers even if they have appropriate passports and visas, because of their nationality, religion, ethnicity, name, or recent travels.

Others who are not concerned about their own situations may still wish to show solidarity with their colleagues and may consider a boycott of U.S.-based scientific meetings as a statement of protest. The Trump administration's proposals and statements disregarding the value of science-based evidence to inform policy—including international policies on climate change, human health, and international security—add to the frustration and concern of many scientists throughout the world.

In the face of this shifting landscape of governmental support for and recognition of scientific contributions to society, AGU is more committed than ever to fostering collaboration and engagement in the global scientific community. We respect the diversity of opinions as well as the legitimate concerns of many travelers. At the same time, we sincerely hope that many of you will choose to join us at the upcoming AGU [Fall Meeting](#) in New Orleans from 11 to 15 December to advocate for and celebrate the importance of continued international scientific collaboration.

Toward those ends, we will make every effort to ensure that AGU meetings continue to bring the community together, in person and virtually, to advance Earth and space science. We are taking the following actions to maximize meeting opportunities and minimize travel risks.

- We will provide prospective travelers with regular updates from our communications with officials at the U.S. Transportation Security Administration and other agencies and organizations regarding entry to the United States for the Fall Meeting and other AGU-sponsored meetings.
- For those who feel unsafe traveling, we will increase virtual participation opportunities during and after Fall Meeting.
- For all who can join us for Fall Meeting, we will add programming focused on the importance of international collaborations in science.

We invite you to help us make a strong statement at Fall Meeting through your presence, participation, and voice, either in events that we are planning or in sessions that you might also [propose](#). These sessions will cover topics such as data security and access, scientific integrity and freedom for government-employed scientists, the emerging global field of geohealth, and scientific input regarding implementation of the Paris accords on climate change. It is essential that we have broad geographic and multidisciplinary representation in these sessions. We will report session outcomes beyond the meeting as part of our strategy.

Several other exciting innovations will be introduced at the New Orleans venue this December. Look for updates soon from Denis-Didier Rousseau, the Fall Meeting chair, and from Rick Murnane, chair of the AGU Meetings Committee.

Should you have specific travel or meeting-related concerns, please contact AGU Director of Meetings [Lauren Parr](#) at , or leave a comment [here](#). We also welcome your recommendations about how to ensure that Fall Meeting and other AGU-sponsored meetings can best continue to convene the world's Earth and space science community.

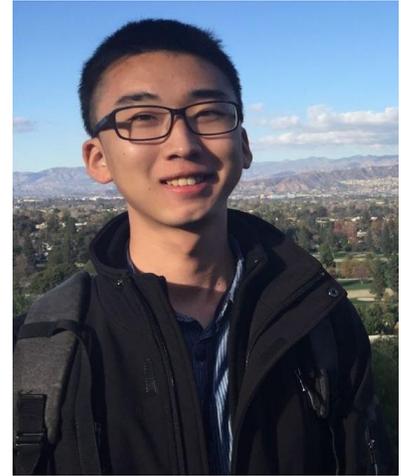
NSFG Student Spotlights and Research Highlights

Fan Zhang, University of Kansas

When the BBC released *Earth: The Power of the Planet*, Fan Zhang was captivated by the dramatic power of the events that shaped Earth's history. As he continued to work, his desire to gain more knowledge about geology flourished, which subsequently motivated him to pursue his undergraduate degree in isotope geochemistry from Nanjing University in 2011. Still inspired by the BBC miniseries, Fan undertook three different research projects, which allowed him to implement the various laboratory tools he studied for different petrophysical applications in Chinese paleoenvironments. As the group leader of a National USTI project, he revealed the shale pore structure using combined low-pressure gas adsorption, mercury intrusion, and nuclear magnetic resonance cryoporometry (NMRC), earning him second prize in a national technical innovative competition. Another project, designated as part of the School Innovation Program, focused on the sedimentology of the lower Silurian Fentou formation red beds in northern Chaohu. This specific work framed his interests in geochemical methods by allowing him to explore the diverse paleoenvironment using trace and rare earth elements for petrological analysis.

As a testament to his academic course achievements, Fan was awarded three more scholarships throughout his degree program as well as a Distinguished Graduate honor for his extensive undergraduate research career. Throughout his geochemistry degree, however, he was often discouraged by the disadvantages of conventional image analysis for characterizing heterogeneous pore attributes. It was not until Fan participated in a near-surface geophysics nuclear magnetic resonance (NMR) workshop that he discovered the enhanced capabilities for examining nanoscale pore size distributions. This experience created a turning point in his career, and his revitalized appreciation for NMR motivated him to change course and instead pursue a graduate degree in geophysics at the University of Kansas (KU).

Fan has trail blazed the near-surface geophysics program as the first geology graduate student to conduct NMR and spectral induced polarization (SIP) based research at KU. Upon his arrival in the United States, he swiftly jumped into a research collaboration with the Kansas Geological Survey focused on reservoir characterization in Kansas's Wellington Field. Although his degree in geochemistry did not provide him an adequate foundation for geophysics, these academic deficits did not restrict his research progress. While tackling his coursework during his first semester, he simultaneously conducted numerous experiments and data analyses for the KU G-Hawker Symposium. Since then, he has continuously demonstrated his highly driven temperament, which has brought him to four different conferences, including the European Geophysical Union General Assembly in Vienna, Austria, and the AGU Fall Meeting in 2016. Similar to his undergraduate institution, the KU Geology Department has also recognized Fan's research efforts with continual support from the Joseph M. Patterson Scholarship for his conference travels.



His 2016 oral AGU presentation titled "Quantification of Petrophysical Properties and Their Correlations with NMR and SIP Responses in Carbonate" ([H43L-03](#)) summarized his recent efforts to characterize carbonates in Wellington Field by correlating pore attributes, permeability, and NMR/SIP responses from T_2 relaxation and conductivity measurements. The goal for this work has been to advance carbonate reservoir characterization in areas where in situ geologic information may be limited. His research was recently included as a teaching tool for the KU Geology Department's environmental geophysics course, where he performed laboratory demonstrations and assisted undergraduate and other graduate students with their data interpretations. Although Fan has attended various conferences, AGU remains his ideal meeting thanks to the abundant opportunities for discussion with thousands of scientists and interdisciplinary platforms for research collaborations. As for the career perspective, Fan is going to finish his master's thesis this year and carry on perusing a geophysics doctoral degree at KU.

For more information about NMR and SIP applications to complex pore structure characterization of shale and carbonate, please contact [Fan Zhang](#).

**Interested in being highlighted, or know a student who should be? Please email [Sarah Morton](#) 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](#).*

FYI

Near-Surface Geophysics Position Announcement

- **M.Sc. Positions in Geophysics at University of Oklahoma**

Two M.Sc. positions in seismic exploration and monitoring are open at the ConocoPhillips School of Geology and Geophysics. One position aims at subsurface characterization from local and regional passive seismic data in south Kansas. Within the second position, a new deconvolution approach to model the near-surface structure from active seismic data will be studied. Candidates with a strong interest in exploration seismic and/or passive seismology are encouraged to contact [Dr. Michael Behm](#) for further details.

ConocoPhillips School of Geology and Geophysics at the University of Oklahoma is a leader in education and research in petroleum-related fields. It has graduated over 5000 practicing geologists and geophysicists. The school continues to rank among top universities nationwide in placement of graduates in the energy industry. Additional research programs in geochemistry and mineralogy, crustal-scale geophysics, diagenesis, paleoecology, and paleoclimate increase the scope of educational opportunities for our graduates and undergraduates.

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!