



**American Geophysical Union
Near-Surface Geophysics Focus Group (NSFG)
Newsletter: December 2016**

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Recent announcements of interest to the near-surface 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!](#)

1. AGU Updates

1.1 NSFG Luncheon at Fall Meeting

The NSFG focus group luncheon is Tuesday, 13 December, 12:30–1:30 p.m. at the Marriott Marquis Foothill C room. We hope to see many of you there!

1.2 Sign up to be an Outstanding Student Paper Award (OSPA) judge

The Outstanding Student Paper Awards need more judges. If you're attending Fall Meeting, [volunteer](#) your time and feedback to students regarding their presentations.

1.3 Student Breakfast at Fall Meeting

Wake up bright and early to enjoy [breakfast with AGU section and focus group leaders](#). All registered students are welcome to attend, but student seating is limited to 400 on a first-come, first-served basis. Meet the scientists who wrote your textbooks and blazed a trail before you!

1.4 Guide to NS sessions at Fall Meeting

Search the complete Fall Meeting schedule [online](#). NS sessions are listed below.

- MONDAY, 12 DECEMBER 2016
 - 13:40 - 15:40, [NS13A Advances in Exploration Geophysics I](#), *Moscone West–3024*
 - 16:00 - 18:00, [NS14A Advances in Exploration Geophysics II](#), *Moscone West–3024*
- TUESDAY, 13 DECEMBER 2016
 - 08:00 - 10:00, [NS21C Advances of Airborne Survey in Near Surface Geophysics: From Geologic Framework Studies to Hazard Investigation I](#), *Moscone West–3024*
 - 08:00 - 12:20, [NS21A Geophysical Characterization of Cold Regions Hydrology and Permafrost Dynamics I Posters](#), *Moscone South–Poster Hall*
 - 08:00 - 12:20, [NS21B Near Surface Geophysical Applications to Soil Processes, Dynamics, and Agriculture I Posters](#), *Moscone South–Poster Hall*
 - 10:20 - 12:20, [NS22A Advances in Exploration Geophysics III](#), *Moscone West–3024*
 - 13:40 - 15:40, [NS23B Geophysical Characterization of Cold Regions Hydrology and Permafrost Dynamics II](#), *Moscone West–3024*
 - 13:40 - 18:00, [NS23A Advances in Exploration Geophysics IV Posters](#), *Moscone South–Poster Hall*
 - 16:00 - 18:00, [NS24A Near Surface Geophysical Applications to Soil Processes, Dynamics, and Agriculture II](#), *Moscone West–3024*
- WEDNESDAY, 14 DECEMBER 2016
 - 08:00 - 10:00, [NS31B Frontiers of Uncertainty Estimation in Geophysical Inversion I](#), *Moscone West–3024*

- 08:00 - 12:20, [NS31A Near Surface Geophysics General Contributions I Posters](#), *Moscone South–Poster Hall*
 - 10:20 - 12:20, [NS32A Geophysical Methods for Groundwater Evaluation and Management I](#), *Moscone West–3024*
 - 13:40 - 18:00, [NS33A Advances of Airborne Survey in Near Surface Geophysics: From Geologic Framework Studies to Hazard Investigation II Posters](#), *Moscone South–Poster Hall*
 - 13:40 - 18:00, [NS33B Near Surface Geophysics General Contributions II Posters](#), *Moscone South–Poster Hall*
 - THURSDAY, 15 DECEMBER 2016
 - 08:00 - 12:20, [NS41A Frontiers of Uncertainty Estimation in Geophysical Inversion II Posters](#), *Moscone South–Poster Hall*
 - 08:00 - 12:20, [NS41B Geophysical Methods for Groundwater Evaluation and Management II Posters](#), *Moscone South–Poster Hall*
 - 13:40 - 18:00, [NS43A Geophysical and Geotechnical Constraint on Geomechanical Models of Hydraulic Fractures Posters](#), *Moscone South–Poster Hall*
 - 13:40 - 18:00, [NS43B Geophysics in Laboratory Meter-Scale Experiments Posters](#), *Moscone South–Poster Hall*
 - 13:40 - 18:00, [NS43C Integrating Surface Geophysical Methods into Multiscale Investigations of Surface and Groundwater Connectivity Posters](#), *Moscone South–Poster Hall*
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1.5 Student Spotlights and Research Highlights

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 [Burke Minsley](#).

2. Upcoming Conferences and Workshops

2.1 Meetings overview

Meeting (click to go to website)	Location	Meeting Dates	Submission	Registration
AGU Fall Meeting	San Francisco, California	12–16 December 2016	Closed	Open
SAGEEP 2017	Denver, Colorado	19–23 March 2017	Closed	TBA
European Geosciences Union General Assembly	Vienna, Austria	23–28 April 2017	11 January 2017	Early registration ends: 16 March 2017
NovCare 2017	Dresden, Germany	6–9 June 2017	27 February 2017	Early registration ends: 1 April 2017
3rd AGU-SEG Hydrogeophysics Workshop	Stanford, California	24–27 July 2017	23 February 2017	TBA
EAGE Near Surface Geoscience 2017	Malmö, Sweden	3–7 September 2017	15 April 2017	Early registration ends: 15 July 2017

2.2 SAGEEP 2017 to be colocated with the National Ground Water Association Hydrogeophysics and Deep Groundwater Conference

EEGS is excited to announce that SAGEEP will be colocated with the National Ground Water Association (NGWA) spring meeting, 20–21 March 2017.

SAGEEP 2017 will bring together a diverse audience from a wide range of backgrounds, including both EEGS and NGWA membership. All technical sessions will be open to both groups. In addition to the SAGEEP technical program, the NGWA conference will feature talks and posters with a focus on two topic tracks: Applications of Hydrogeophysics to Groundwater Characterization, Monitoring, and Management; and Deep Groundwater Applications.

SAGEEP is internationally recognized as the leading conference on the practical application of shallow geophysics. First held in 1988 at the Colorado School of Mines, the 30th anniversary SAGEEP will return to Colorado to celebrate this important milestone and is being held in Denver, Colorado, USA, 19–23 March 2017. We invite you to visit the [SAGEEP 2017](#) web pages for details on abstract submissions, hotel reservations, and conference registration as more information becomes available.

2.3 NovCare Conference 2017

The 2017 NovCare conference, Novel Methods for Subsurface Characterization and Monitoring: From Theory to Practice, which is the fifth conference of this type in a series, will take place 6–9 June 2017 in Dresden, Germany. The conference is jointly organized by the Institute for Groundwater Management,

Technische Universität Dresden, Germany; the Helmholtz Centre for Environmental Research–UFZ, Germany; and the Kansas Geological Survey, University of Kansas, United States.

Various topics on exploration and monitoring technologies, data assessment of natural and anthropogenic environmental impacts, and data integration into numerical models to improve process understanding will be presented to a broad audience of scientists, consultants, and decision makers at [NovCare 2017](#).

2.4 Invitation to submit abstracts for the 3rd AGU-SEG Hydrogeophysics Workshop: Imaging the Critical Zone

Join us at Stanford University on 24–27 July 2017.

We invite abstracts for the four following sessions: (1) Interfaces in the Critical Zone, (2) Hydro-bio-geo-chemical processes in the Critical Zone, (3) Critical Zone properties and rock physics, and (4) Scaling of Critical Zone data to address science questions. Each session will begin with two invited talks, by one hydrogeophysicist and one Critical Zone scientist. All other presentations will be as posters. Before the viewing of posters, there will be an oral session in which each presenter has 3 minutes to introduce his or her poster. To encourage the exchange of ideas and development of new collaborations, we will have all lunches and one dinner together. See full descriptions of sessions [here](#).

Abstract submission opens in December 2016, and closes at midnight, 23 February 2017, U.S. eastern standard time. Notification of abstract acceptance and final program will be published on 22 March 2017. The preliminary program can be found [here](#).

3. Position Announcements

3.1 Postdoctoral position at Oklahoma State University

The Near Surface Geophysics Group at Oklahoma State University has an immediate opening for a scientist with expertise in petrophysics at the postdoctoral level. The position is for 1 year with possibility for renewal depending upon funding. The objectives include integrating seismic and complex resistivity measurements for (1) developing fundamental relationships between petrophysical property changes and microbial-induced changes in porous media such as during microbial-induced calcite precipitation and (2) characterizing petrophysical properties of tight rocks.

The preferred candidate will have a Ph.D. in near-surface geophysics or relevant field (e.g., geotechnical/environmental engineering, hydrogeophysics, biogeophysics) with quantitative skills in the use of complex resistivity and/or seismic techniques. Laboratory and field experience is a plus. We seek to hire a highly motivated, enthusiastic, and creative individual who is capable of working and thinking independently. We have a new state-of-the-art biogeophysical laboratory and have collaborations with the petroleum geoscience research cluster with extensive ties to both the environmental and energy industries.

Candidates should submit a full CV, including the contact information of three referees, to [Prof. Estella Atekwana](#), Oklahoma State University, School of Geology, 105 NRC, Stillwater, OK 74078; 405-744-6358.

Review of applications will begin 1 December 2016 and will continue until position is filled.

More information can be found online about [Oklahoma State University](#) and the [Boone Pickens School of Geology](#). Committed to health and safety, Oklahoma State University maintains a tobacco-free work

environment. Oklahoma State University is an Affirmative Action/Equal Opportunity/E-Verify employer committed to diversity.

3.2 Ph.D. studentship in Bayesian borehole interpretation methods at University of Leicester

Applications are now open for a Ph.D. position in Bayesian borehole interpretation methods at the University of Leicester as part of the CENTA (Central England NERC Training Alliance) consortium.

More information and links to the application form can be found [online](#).

For any questions, please contact mm489@le.ac.uk.

Please note that the position is open only to U.K./EU citizens. The deadline for application is 23 January 2017.

3.3 M.Sc. student positions in geophysics at Laurentian University

Laurentian University is a recognized leader in mineral exploration research and is among the top Canadian universities in research funding for economic geology and in applied geophysics from the Natural Sciences and Engineering Research Council (NSERC). Laurentian University is the only university in Canada where geology and mineral exploration are integral components of the university's strategic plan.

With CAD \$104 million in funding provided by the Canada First Research Excellence Fund (CFREF) and through strategic partnerships with five Canadian universities, six government geological surveys, and three international research centers, Laurentian University will conduct Metal Earth, the largest mineral exploration research project ever undertaken in Canada.

Metal Earth will be led by the Mineral Exploration Research Centre (MERC) at the Harquail School of Earth Sciences (HSES), which is housed in the Willet Green Miller Centre at Sudbury. MERC is a semiautonomous research center at Laurentian established in 1997 and comprises an internationally recognized group of researchers from HSES, academia, industry, and government.

MERC is inviting applications for two M.Sc. positions starting in January of 2017:

We require two M.Sc. students to work on a research project collecting and interpreting gravity data and other physical property data along areas that span and go slightly beyond the seismic profiles that are being collected as part of the Metal Earth transects. The students will also incorporate the magnetic data into the interpretation and, if appropriate, incorporate the results of and/or work with those that are working on the seismic and magnetotelluric data. Interaction with geologists and others working on the project will also be required.

For additional information regarding Laurentian University, MERC, and Metal Earth, please visit merc.laurentian.ca/metalearth. To apply, please forward your resume complete with three references and cover letter to [Prof. Richard Smith](#), NSERC Industrial Research Chair in Exploration Geophysics.

Laurentian University is an equal opportunity employer and is strongly committed to employment equity and diversity within its community. Laurentian University especially welcomes and encourages applications from members of visible minorities, women, Aboriginal persons, members of sexual minorities, and persons with disabilities. Applicants may self-identify as a member of an employment equity group. All qualified candidates are encouraged to apply. However, Canadians and permanent residents will be considered first for these positions.

3.4 Two associate professor positions, University of Oxford

The [Department of Earth Sciences at the University of Oxford](#) is seeking applicants for two associate professorships (tenure-track).

[Geophysics](#): We welcome applications from scientists working in all aspects of geophysics including Earth observation, the cryosphere, planetary geophysics, and crustal processes.

[Solid Earth Geoscience](#): We welcome applications from scientists working in all aspects of the solid Earth sciences including solid Earth geophysics, igneous processes or petrology, planetary geology, and mineralogy.

3.5 Early-career research opportunities in deep Earth imaging at CSIRO

We seek up to 18 early-career scientists to join our team developing new Earth imaging methods with an emphasis on accurate subsurface imaging, natural resource prediction and targeting, and uncertainty quantification. We are building the next generation of Earth imaging tools using high-performance computing infrastructure and cloud technologies to guide future exploration, discovery, and management of Australia's mineral, energy, and water resources.

CSIRO scientists will attend the Fall Meeting in San Francisco and would be delighted to talk with you!

<https://jobs.csiro.au/job/Perth,-WA-CSIRO-Postdoctoral-Fellowships-Early-Career-Researchers-in-Deep-Earth-Imaging/373546900/>

3.6 Faculty opening in geophysics, Massachusetts Institute of Technology

The Department of Earth, Atmospheric, and Planetary Sciences at the Massachusetts Institute of Technology invites applications for a tenure-track position in the broad area of geophysics, including theory, observation, and experimentation. We seek an outstanding scientist with the potential to conduct innovative research and excel in teaching at the undergraduate and graduate levels. Applicants must hold a Ph.D. in geophysics or a related field by the start of employment. A complete application must include a curriculum vitae, one- to two-page descriptions of research and teaching plans, and three letters of recommendation.

Applications are being accepted at [Academic Jobs Online](#). To receive full consideration, complete applications must be received by 15 December 2016. Search contact: [Ms. Karen Fosher](#), HR Administrator, EAPS, 54-924, Massachusetts Institute of Technology, 77 Massachusetts Ave., Cambridge, MA 02139-4307.

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

Deadline: Material must be received five 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!