



## Near-Surface Geophysics Focus Group

Newsletter: October 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) October 2017 Newsletter

### Upcoming Meetings at a Glance

Meeting (click to go to website)	Location	Meeting Dates	Submission	Registration
<a href="#">4th ICEG</a>	Al Ain, United Arab Emirates	9–12 October 2017	Closed	Early registration ends: closed
<a href="#">GSA 2017</a>	Seattle, Washington	22–25 October 2017	Closed	Early registration ends: closed
<a href="#">GELMON 2017</a>	Vienna, Austria	22–24 November 2017	Closed	Early registration ends: closed
<a href="#">AGU 2017 Fall Meeting</a>	New Orleans, Louisiana	11–15 December 2017	Closed	Early registration ends: closed
<a href="#">SAGEEP 2018</a>	Nashville, Tennessee	25–29 March 2018	20 October 2017	TBA
<a href="#">EGU General Assembly</a>	Vienna, Austria	8–13 April 2018	10 January 2017	TBA

### AGU Updates

- **JpGU-AGU Joint Sessions at 2018 JpGU Meeting**

Planning for the next joint sessions at the Japan Geoscience Union (JpGU) Meeting to be held on 20–24 May 2018 is underway. This partnership with JpGU offers a great opportunity to further advance the geosciences and foster participation and engagement more globally. AGU's section and focus group leaders (or their reps) and JpGU section presidents will lead the development of the 2018 joint session proposals, with a goal of 50 cosponsored sessions for the 2018 meetings. Session proposal submission deadline is **12 October, 5:00 p.m. (JST)**.

- **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!

- **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 Application Program Interface (API) Challenge where online tools utilize data from the Fall Meeting scientific program. Judges will need to be available early to mid-October. Email [openapi@agu.org](mailto: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 over \$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. ET, and visit [webinars.agu.org](http://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](mailto:webinars@agu.org).

- **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 at 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, California**

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 the Society of Exploration Geophysicists (SEG) include surface wave methods, near-surface seismic processing, science communication, geophysical tomographic methods, hydrogeophysics, and petrophysical relationships.

## **NSFG Student Spotlights and Research Highlights**

### **Matthew McClellan, Florida Atlantic University**

[Matthew McClellan](#) is currently a fifth-year Ph.D. student at Florida Atlantic University's (FAU) Department of Geosciences. Matt is part of the Environmental Geophysics Lab at FAU, where his main research interest is the application of near-surface geophysical methods (i.e., ground-penetrating radar) to assess carbon stocks and quantify carbon cycling in the northern Everglades. Recently, Matt has worked with The Nature Conservancy and various other governmental and academic institutions at the [Disney Wilderness Preserve](#) near Orlando, Florida, to estimate the carbon stocks of depressional wetlands found throughout the landscape. The large scope of this project has allowed Matt to utilize other geophysical methods like seismicity and resistivity to further his understanding of the complexities associated with the site.



During his undergraduate studies at the State University of New York at Buffalo (SUNY Buffalo), Matt was particularly drawn to subdisciplines like geochemistry and glaciology. For much of his undergraduate career, Matt thought he wanted to be a geochemist, and it wasn't until he took an undergraduate class in geophysics that he knew where his true interests lay. After that class, Matt felt that he had become more focused and driven, now knowing he intended to pursue not only a career involving geophysics but an advanced degree as well.

Upon graduating from SUNY Buffalo, Matt was accepted into the Ph.D. program at FAU on a research assistantship. During his first year at FAU, Matt was awarded the Provost Fellowship, a \$2,500 prize given to outstanding and high-achieving incoming masters or doctoral students. Since his appointment as a research assistant, Matt has also spent time as a teaching assistant for introductory physical geology courses and an instructor for Senior Field Camp.

Matt has attended the AGU Fall Meeting three times ([2014](#), [2015](#), [2016](#)) and the AGU Joint Assembly once ([2015](#)). When asked what has drawn him back year after year, he conveyed it was “because of the many opportunities to become exposed to new areas of research as well as the pervasive enthusiasm by members of the community for collaboration and brainstorming.” He went on to say, “Since joining the community some 5 years ago, I have no doubts that I made the right decision. The research is challenging but rewarding, and the community is second to none.” Watch out for Matt at the [2017](#) Fall Meeting; he’s always happy to sit and talk about his research over a beer.

Matt is still considering his postgraduation plans and is interested in opportunities ranging from industry to academia.

For more information or questions concerning near-surface geophysical applications in wetland environments, please contact [Matthew McClellan](#).

*\*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](#).*

## FYI

### 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 the Symposium on the Application of Geophysics to Engineering and Environmental Problems ([SAGEEP 2018](#)). The 31st SAGEEP will be held **25–29 March 2018 in Nashville, Tennessee**, United States, a region of North America with numerous attributes of interest to near-surface geophysicists. Be sure to view session topics [here](#). The deadline to submit your abstract is **20 October 2017**. Technical cochairs Andrew Parsekian and Oliver Kuras are calling for abstracts and have opened the online abstract submission site. Geoscientists from all over the world are invited to submit abstracts to [SAGEEP 2018](#). Also, if you would like to help coordinate a session, please contact technical cochairs [Andrew Parsekian](#) and [Oliver Kuras](#). Questions or recommendations related to the conference can be sent to general chair [William Doll](#).

If you are from a country that requires a visa to enter the United States, please ensure that you start the process of obtaining any required travel documents sufficiently early so that you will be able to attend the meeting.

### Employment Opportunities

- **Ph.D. Studentship in Debris-Flow Susceptibility in Southern Germany Using Near-Surface Geophysical Tools, Institute of Earth and Environmental Sciences, University of Potsdam**

#### **Background**

In October 2015, the DFG Research Training Group “[Natural Hazards and Risks in a Changing World](#)” was established at the University of Potsdam, in cooperation with the Freie Universität of Berlin, the German Research Centre for Geosciences GFZ, and the Potsdam Institute for Climate Impact Research (PIK).

NatRiskChange aims to develop methods that improve hazard and risk analyses and quantifications based on the transient nonstationary nature of hazards and risks in response to changing natural and anthropogenically altered components of the Earth system. Key scientific aims are the development, testing, and pilot application of studies on the identification, quantification, and prediction of transient natural hazards and associated risks.

Funded by the Graduate School Scholarship Programme (GSSP) of the German Academic Exchange Service (DAAD), the NatRiskChange Research Training Group now offers a full DAAD Ph.D. scholarship at the Institute of Earth and Environmental Sciences of the University of Potsdam, Germany, for a period of 3 years (or up to 4 years for candidates from developing or emerging countries). The related Ph.D. project is entitled “Investigating debris-flow susceptibility in southern Germany using near-surface geophysical tools.” Further subject-specific information can be obtained from [Prof. Jens Tronicke](#) or from [Prof. Oliver Korup](#).

#### **The scholarship includes**

- a monthly rate of 1,000 euro
- travel support and potential support for studies and research
- combined insurance (health, accident, liability)
- potential support for rent or family allowance
- full funding for a German language course in Germany of up to 6 months, preceding the scholarship

The selected candidate will be fully integrated in the activities and the teaching curriculum of the NatRiskChange Research Training Group and will enjoy the vibrant international research environment in the Institute of Earth and Environmental Science at the University of Potsdam. The schedule and length of the language course will be determined after consultation with the selected candidates.

#### **The candidates are required to have**

- an excellent master’s degree in geophysics, geomorphology, geology, or closely related fields
- a demonstrated background in studies of natural hazards, Earth surface processes, and near-surface geophysics
- programming and data processing skills
- geoscientific and geophysical fieldwork experience
- good English language skills

#### **Application**

Handicapped applicants will be given preference in case of equal suitability. The NatRiskChange consortium strives to increase the proportion of women in research and specifically encourages females to apply for these positions. Applications should include the following components: a detailed CV, a letter of motivation, a brief research concept (~2 pages) for the Ph.D. project (focusing on a plan on how to quantify the susceptibility to debris flows in small catchments with near-surface geophysics and geomorphology), a record of studies, master and bachelor certificates, including a transcript of records, an English synopsis of the master’s thesis, a list of publications, oral and/or poster presentations at conferences, and two letters of recommendation. The files should be sent, by email, **in one single PDF document (<10 MB)** to Dr. Theresia Petrow (natrisk@uni-potsdam.de) by **1 December 2017**.

On the basis of the applications, the University of Potsdam will, in the first stage, nominate two to four candidates. These candidates will be required to submit a full application to the DAAD, which will then, in the second stage, be evaluated by DAAD. Candidates will be informed in detail about the second stage in case they are nominated after the first stage. The actual scholarship and the related Ph.D. study are envisaged to start in April 2018.

- **Postdoctoral Fellow at Virginia Tech**

The Department of Geosciences at Virginia Tech invites applicants for a postdoctoral position in near-surface geophysics. The successful candidate will conduct research on the “critical zone,” the upper ~100 m beneath Earth’s surface, using a combination of near-surface geophysical methods (seismic refraction, electromagnetic, and DC resistivity, among others). The successful candidate will be expected to conduct original research leading to publications, participate in geophysical field work, and contribute positively as a member of an interdisciplinary team.

The successful candidate must have a Ph.D. in geophysics or a closely related field at the time of appointment. Demonstrated competence in near-surface geophysical instrumentation and methods (seismic, electrical, and/or electromagnetic) is required. In addition, evidence of research productivity in the form of peer-reviewed journal publications is required. Willingness to participate in geophysical field work in support of team goals is required.

Preferred qualifications include (1) demonstrated capacity to work productively in collaborative and interdisciplinary teams; (2) knowledge of critical zone geophysics; (3) demonstrated history of applying geophysical techniques to problems in hydrology, chemical weathering, or surface processes at the watershed or hillslope scale; and (4) experience in analyzing airborne geophysical (electromagnetic) data.

Qualified applicants must electronically submit online an application, cover letter, resume/curriculum vitae, research statement, and a list of three professional references to [jobs.vt.edu](http://jobs.vt.edu). Apply to posting #SR0170340. Applicant screening will continue until the position is filled. Virginia Tech is committed to building a culturally diverse faculty and strongly encourages applications from women and minorities.

- **Environmental Geophysics Postdoctoral Fellow at Lawrence Berkeley National Laboratory**

The Earth and Environmental Sciences Area of Lawrence Berkeley National Laboratory is seeking applications for a postdoctoral fellow to develop and implement new methodologies for improved understanding and quantification of shallow subsurface processes, including fluxes across bedrock–soil–land surface–vegetation compartments, using geophysical and hydrological data sets. The postdoctoral fellow will work with a multidisciplinary group of scientists to improve predictive understanding of multiscale terrestrial system functioning, including hydrology-driven biogeochemical processes.

The position focuses on the development of advanced acquisition, processing, data assimilation, and inversion techniques for advanced monitoring and quantification of complex critical zone processes. These developments will be applied in a mountainous watershed in the Upper Colorado River Basin and in the Alaskan Arctic tundra. Essential for this position is expertise in geophysics, hydrology, and/or soil physics with a particular emphasis on geophysical and hydrological data inversion and assimilation approaches and/or quantification of surface-subsurface water-heat-gas fluxes. The position requires an outstanding record of original and high-quality research, demonstrated experience in the above fields, and an enthusiasm for working with a team to improve understanding and prediction of field-scale terrestrial system behavior. Desired is a familiarity with hydrogeophysical techniques, soil physics, remote sensing approaches, various geophysical methods (electrical resistivity tomography, electromagnetic, ground-penetrating radar, seismic), and statistical or inversion methods for data analyses.

The Earth and Environmental Sciences Area in Lawrence Berkeley National Laboratory is a premier Earth sciences research organization where scientists are tackling some of the most pressing environmental and energy challenges of the 21st century. Berkeley Lab is located in an environment recognized for offering a high quality of life, having both abundant natural beauty and exciting urban surrounds.

To apply, please visit [here](#) and follow the online instructions.

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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!