



Near-Surface Geophysics Focus Group

Newsletter: January 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: [full newsletter](#).

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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) January 2017 Newsletter

Upcoming Events

- **15 January:** Nomination site for *all* AGU honors nominations ([Union Fellows](#), [Section and Focus Group Awards](#), and [Union Medals, Awards, and Prizes](#)). [More info »](#)
- **30 January:** SEG Distinguished Instructor Short Course (DISC) by Doug Oldenburg.
Traveling worldwide, the SEG Distinguished Instructor Short Course (DISC) is an 8-hour, 1-day short course on a topic of current and widespread interest.
The 2017 DISC covers fundamentals and applications of electromagnetic (EM) geophysics. Local case histories pertaining to problems in resource exploration, including oil and gas, minerals, water, environmental,

and geotechnical areas, will be used as motivation for investigating fundamentals of electromagnetics. The aim of this course is to equip participants with sufficient fundamental understanding and resources about EM geophysics so that they can decide whether an EM technique can help solve their problem, select which type of survey to use, and set realistic expectations for what information can be gleaned.

Learn more about Doug and view his course materials [here](#).

Upcoming Deadlines

- **20 January:** Abstract submission deadline for the 38th Progress in Electromagnetics Research Symposium ([PIERS](#)) on 22–25 May 2017 in St. Petersburg, Russia.

The submission deadline for a one-page abstract has been extended to 20 January 2017. For this PIERS 2017 St. Petersburg, we had 1200 submitted abstracts by 20 December 2016. Online submission via web page is strongly recommended ([website](#)). A partial list of focus/special sessions at PIERS 2017 St. Petersburg can be found at <http://piers.org/piers2017StPetersburg/session.php>. Should you be interested in organizing a special session at PIERS 2017 in St. Petersburg, please fill out the survey form at <http://piers.org/piers/submit/survey.php>. PIERS general guidelines for authors and session organizers are available at <http://piers.org/piers/guidelines.php>. Programs for the past PIERS are available online at <http://piers.org/piers/>.

PIERS has provided an international forum since 1989 for reporting progress and recent advances in the whole electromagnetic spectrum. Topics include radiation, propagation, diffraction, scattering, guidance, resonance, power, energy and force issues, and all other modern developments, with frequencies covering the entire electromagnetic wave spectrum (including microwave and light wave, and beyond).

PIERS 2013 Stockholm (12–15 August) was a great success, with 1650 paper submissions and 1135 registered/paid participants from 67 countries and many top-notch keynote/invited speakers of the areas. Since the Stockholm event, PIERS has become a big conference where microwave and light wave communities meet. PIERS 2014 Guangzhou (25–28 August), PIERS 2015 Prague (6–9 July), and PIERS 2016 Shanghai (8–11 August) have over 2000 paper submissions and about 1400 registered/paid participants.

PIERS Proceedings since 2016 will be submitted for archiving in IEEE Xplore. Author of an accepted abstract is invited (but is not required) to submit an extended paper of two to eight pages.

At PIERS 2017 St. Petersburg, a dozen focus sessions will also be planned. Each focus session should be focused on a specific hot topic that must be timely and reflect the future trends or the latest scientific advances in the area. The leadership of the conference will select the topics of focus sessions and the responsible organizers. The organizers of a focus session should be active/leading scientists of the area and should make the best effort to ensure the high quality of the session by inviting high-profile keynote speakers and excellent invited speakers, etc. Some contributed oral talks are encouraged; however, quality must be very well controlled with a typical acceptance ratio of less than 50%.

PIERS 2017 in St. Petersburg has subcommittees for the following five subconference (SC) topics:

- SC 1. Computational Electromagnetics, Electromagnetic Compatibility, Scattering and Electromagnetic Theory
- SC 2. Metamaterials, Plasmonics and Complex Media
- SC 3. Optics and Photonics
- SC 4. Antennas and Microwave Technologies
- SC 5. Remote Sensing, Inverse Problems, Imaging, Radar, and Sensing

- **23 February:** Abstract submission deadline for the AGU-SEG Hydrogeophysics Workshop on 24–27 July 2017 at Stanford University

We invite abstracts for the four following sessions: (1) Interfaces in the Critical Zone, (2) Hydro-bio-geochemical 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: 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 at which each presenter will have 3 minutes to introduce his or her poster. In order 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 is open, 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](#).

- **27 February:** Abstract submission deadline for Novel Methods for Subsurface Characterization and Monitoring: From Theory to Practice ([NovCare 2017](#)) on 6–9 June 2017 in Dresden, Germany.

NovCare 2017 is the fifth edition of a successful biannual conference series and will focus on two main topics:

—Environmental sensors at all scales: How to combine information from remote sensing, ground-based geophysics, direct-push-based methods, and point sensor systems.

—Benchmarking models with real-world data: How to get high-quality data in the field and how to use these data for reliable model predictions.

NovCare 2017 will again provide an outstanding platform for researchers and practitioners from all over the world to share research on innovative methods for characterization and monitoring of aquifers, soils, and watersheds.

Confirmed Keynote Speakers:

- James Butler (Kansas Geological Survey)
- Johann Frank (JR-AquaConSol)
- Gudrun Massmann (University of Oldenburg)
- Uwe Meinberg (BTU Cottbus-Senftenberg)
- Henning Prommer (CSIRO)
- Kamini Singha (Colorado School of Mines)
- Lee Slater (Rutgers University)
- Albert Valocchi (University of Illinois)

- **12 March:** Abstract submission deadline for IAPSO-IAMAS-IAGA 2017 Joint Assembly on 27 August to 1 September 2017 in Cape Town, South Africa.

There is a session in near-surface electromagnetic geophysical studies that will be offered at the upcoming [IAGA meeting](#) in South Africa. This year it is a joint assembly with IAGA (Geomagnetism and Aeronomy), IAPSO (Physical Studies of the Oceans), and IAMAS (Meteorology and Atmospheric Sciences). The abstract deadline is 12 March 2017. We hope you will submit an abstract...and see you in Cape Town!

IAPSO-IAMAS-IAGA 2017 Joint Assembly, Cape Town, South Africa, 27 August to 1 September 2017.

IAGA Session A-37: Electromagnetic contributions to hydrological, archaeological, and other near-surface studies
Conveners: Gad El-Qady and Mark E. Everett

This symposium will host a presentation on the contributions of electromagnetic geophysical methods for near-surface applications. The electromagnetic technique is one of the most powerful tools for imaging the electrical conductivity and structure of the Earth. This method is being extensively used for exploration of the near surface for structures of interest related to groundwater, hydrocarbon, geothermal, earthquake hazard, waste characterization, and archaeological studies. The results derived from this method are controlled by the frequency/period of excitation and the resistivity/conductivity of the formations to arrive at well-constrained depth sections and models to guide drilling and/or excavations. On the other hand, developments in the past 2 decades in instrumentation, data processing, and interpretation methodologies (algorithms, etc.) and access to powerful computers have enabled innovation throughout all aspects of electromagnetic geophysics.

We are pleased to invite researchers to submit abstracts of their studies related to the above topics. Integration of these results with other information (for example, geophysical, geological, geochemical, and tectonic) is indeed interesting and encouraged. Contributions to any of the above subjects are particularly welcome.

- **1 April:** 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 related applications 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.

Upcoming Meetings at a Glance

Meeting (click to go to website)	Location	Meeting Dates	Submission	Registration
SAGEEP 2017	Denver, Colo.	19–23 March 2017	Closed	TBA
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	27 February 2017	Early registration ends: 1 April 2017
3rd AGU-SEG Hydrogeophysics Workshop	Stanford, Calif.	24–27 July 2017	23 February 2017	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	12 March 2017	Early registration ends: 16 March 2017
EAGE Near Surface Geoscience 2017	Malmö, Sweden	3–7 September 2017	15 April 2017	Early registration ends: 5 May 2017
4th ICEG	Al Ain, United Arab Emirates	9–12 October 2017	1 April 2017	TBA

AGU Updates

- **2016 AGU Fall Meeting Review**

The Near-Surface Geophysics Focus Group had 17 sessions and 217 abstracts with many excellent student presentations at the AGU Fall Meeting in San Francisco. The Outstanding Student Paper Award winners will be announced in the next newsletter. In 2016, the NSFG had 567 primary and 3078 secondary members. Generous contributions by the sponsors and donors have allowed free attendance of students to the Near Surface Business Luncheon, and a total of 109 tickets were sold or given to the students for this year.

- **AGU Honors Program: Nominations Open 15 January 2017**

The AGU Honors Program recognizes individuals who have made outstanding contributions to the advancement of the geophysical sciences, to service to the community, and to the public's understanding. Nominations for the 2017 AGU Union Awards, Fellows, Medals, Prizes, and Section and Focus Group Awards will open on 15 January. We urge you to take this opportunity to nominate a student, a colleague, a peer, or a mentor whose achievements have made a difference in the Earth and space sciences. Visit the [AGU Honors Program online](#) and contact [George Tsouflias](#), NSFG Nominations Committee chair, for more information.

- **AGU Membership Renewal and Contributions to NSFG**

NSFG members: If you have not renewed your AGU membership yet, this is the time to do it. Please make sure that Near Surface remains as one of your AGU affiliations (either primary or secondary) in order to continue receiving the newsletter.

This year, consider making a donation to NSFG; any amount is appreciated. You can make your contribution online. NS funds have been used to support student activities (subsidize the luncheon cost at the

annual meeting; give monetary awards to OSPA presenters). We would like to expand benefits to students, such as travel grants to attend the Fall Meeting. If 5% (just 18 people) of PRIMARY nonstudent members give \$50 or more, the NSFG would receive \$1000. Our focus has been on supporting students, and we envision that remaining a priority; however, other activities could also be supported. Your suggestions are always welcome.

NSFG Student Spotlights and Research Highlights

Interested in being highlighted, or know a student who should be? Please email [Sarah Morton](mailto:sarah.morton@nsfg.org) 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](mailto:chi.zhang@nsfg.org).

Near-Surface Geophysics Position Announcement

- **ENIGMA is seeking 15 Ph.D. students**

ENIGMA (European Training Network for in situ Imaging of Dynamic Processes in Heterogeneous Subsurface Environments; <https://enigma-itn.eu/>) Innovative Training Network offers 15 Ph.D. positions to talented and enthusiastic students holding a relevant master's degree (or equivalent) starting preferably before July 2017.

ENIGMA will train researchers in the development of innovative methods for exploring process dynamics in subsurface hydrosystems to enhance understanding and predictive modeling capacities. The ENIGMA network gathers 21 partners (15 academic and six industrial) from eight European countries. ENIGMA is seeking highly qualified and motivated students with a strong background in geophysics, hydrology, hydrogeology, hydrogeophysics, biogeochemistry, microbiology, soil physics, or a related discipline.

Applications must be made through the website: <https://enigma-itn.eu/>. The first deadline for applications is 23 January 2017.

- **The University of Potsdam, Faculty of Science, Institute of Earth and Environmental Science, invites applications for a W 1-Junior Professorship for General Geophysics (Tenure Track)**

The successful candidate will be responsible for teaching a wide spectrum of topics in the field of general geophysics, maintaining a high degree of commitment to educating students (at both the bachelor's and master's levels), and further developing the geophysics curriculum. Candidates should be experts in experimental solid Earth geophysics research and intensively engaged with developments in this field. This involvement may include seismological source processes, the analysis of seismic wave fields, and Earth's potential fields. Candidates are expected to have internationally recognized research achievements, documented by publications in rigorously peer-reviewed scientific journals, expertise in organizing and executing projects supported by third-party funding, and a broad interest in research topics related to natural sciences. Moreover, candidates should be ready and willing to collaborate with members of the institute, join working groups in the department to pursue research foci in the Earth sciences, and cooperate with extramural research institutions in the Berlin/Brandenburg region. We offer a state-of-the-art, interdisciplinary, and international environment as well as excellent staffing and infrastructure. According to state law (§ 45 Brandenburgisches Hochschulgesetz - BbgHG), preconditions for the appointment as a junior professor include a completed university education, teaching skills, and a special qualification for academic work, which is usually demonstrated through an outstanding Ph.D. thesis. International experience, an outstanding publication record, and a teaching record are advantageous. The total time for completion of the Ph.D. and subsequent postdoc employment should not have exceeded 6 years. Appointment will be made according to §§ 40 and 46 BbgHG. The appointment as a civil servant or a public employee will be made for up to 4 years in the first instance and can be extended to up to 6 years in total, conditional upon a positive evaluation. There is the opportunity to be taken on for a permanent professorship (tenure track option) following positive evaluation.

The University of Potsdam strives to increase the proportion of women in research and teaching and specifically encourages female applicants to apply for this position. Handicapped applicants will be given preference in case of equal suitability. People with an immigration background are specifically encouraged to

apply. The University of Potsdam offers dual career support and coaching for newly appointed professors: <http://www.uni-potsdam.de/en/neue-beschaefigte/information-for-newly-appointed-professors.html>.

Applications (with a presentation of your research interests, curriculum vitae, copies of academic certificates and documents, a list of publications, a list of conducted courses, a list of externally funded projects) should be sent to the University of Potsdam (ausschreibungen@uni-potsdam.de) within 6 weeks of the publication of this notice.

FYIs

- [AGU On-Demand](#) now available

Register or log in today and to access all AGU On-Demand sessions from Fall Meeting. There are dozens of Fall Meeting sessions now available on demand, including all named lectures and

- [Remarks by California Governor Jerry Brown](#)
- [Presidential Forum: H.S.H. Prince Albert II of Monaco](#)
- [Union Agency Lecture: Dr. France A. Córdova](#)
- [AGU Agency Lecture: Convergence in the Geosciences: Marcia McNutt](#)
- [Special Lecture with Secretary Sally Jewell](#)
- [New Generation of Scientists](#)

Once logged into AGU On-Demand, navigate through the on-demand channels to browse the entire list of available presentations.

- **24–26 January:** [National Council for Science and the Environment](#)

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!