



**American Geophysical Union**  
**Near-Surface Geophysics Focus Group (NSFG)**  
**Newsletter: October 2015**

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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 Fall Meeting Business Luncheon

The Near-Surface Geophysics Focus Group luncheon will take place on Tuesday, 15 December, 12:30–1:30 p.m. at the Marriott. There are still tickets available, which can be purchased during the registration process.

#### Free Student Tickets

Free tickets are available for students to attend the NSFG luncheon! The luncheon is a great opportunity for students to learn about the near-surface community and network with professionals, academics, and fellow students. If you are interested in receiving a free ticket, email Fred Day-Lewis ([daylewis@usgs.gov](mailto:daylewis@usgs.gov)) or Sarah Morton ([smorton@kgs.ku.edu](mailto:smorton@kgs.ku.edu)). You must have a primary or secondary affiliation with NSFG.

We look forward to seeing everyone in San Francisco!

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### 1.2 Summary of Fall Meeting Abstract Submissions

The total number of abstracts submitted to near surface (NS) for the 2015 Fall Meeting was 194, representing a 12% increase over last year! The total number of abstracts submitted to all sessions mimics those from 2014 and reached a total of 23,085 submissions. The largest abstract contributors also mimic previous years and include atmospheric sciences (2930), hydrology (2915), biogeosciences (2036), global environmental change (1545), and tectonophysics (1439). On the basis of these statistics, NS was allocated eight oral presentation sessions and nine poster sessions that will be distributed more or less evenly from Tuesday (15 December) through Friday (18 December). Details of the final session schedule will be released shortly by AGU.

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### 1.3 Virtual Poster Showcase

A new and exciting opportunity for your undergraduate and graduate students to showcase their work is now available. Although many college students conduct research with faculty in organized summer programs or as part of their course work or degree work, they often face barriers to traveling to present that research, especially at national conferences. The [Virtual Poster Showcase](#) will allow participation by those students who can't travel. AGU is piloting [three opportunities](#) for undergraduate and graduate Virtual Poster Showcases this fall. Contact [Pranoti Asher](#) (AGU Education and Public Outreach Manager) for more information.

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### 1.4 Request for Photos

Have you been to the field this summer? Send your photos to student representative [Sarah Morton](#) to be displayed on the [NSFG Facebook page](#) and new [focus group webpage](#) with a short caption about your work!

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## 2. Journal Information and Special Issue Call for Papers

### 2.1 *Geophysics* Special Issue: Gravity, electrical, and magnetic methods and their applications

#### **Deadline for manuscript submission: 31 October 2015**

Following [GEM Chengdu 2015, an International Workshop on Gravity, Electrical, and Magnetic Methods and Their Applications](#), co-organized by the Society of Exploration Geophysicists (SEG) and the Chinese Geophysical Society (CGS), *Geophysics* is soliciting manuscripts for a special issue focused on the same theme of GEM Chengdu 2015.

Gravity, electrical, electromagnetic, magnetic, and nuclear magnetic resonance methods are among the primary tools for exploring natural resources (oil and gas, minerals, and geothermal), as well as for tackling geotechnical and environmental problems. Sensors, tools, acquisition techniques, processing, and interpretation methods are common among these different applications. This special issue covers the methodologies and technologies, bringing a suite of applications to a common forum, so that we can enjoy and learn from related applications of the same technologies.

Authors should first register their interest and prospective title with the special issue editors by email. Please also indicate when the manuscript will be submitted. The deadline for submitting manuscripts to the special issue is 31 October 2015. All submissions will be made using the [Geophysics online submission system](#). Please indicate that the manuscript is intended for the **GEM** special issue in the online submission system and in a cover letter to the editor. Manuscripts that are submitted to this special issue will undergo the standard *Geophysics* review process. Authors will also be asked to contribute to the review process.

#### **The submissions will be processed according to the following timeline:**

Submission deadline:	31 October 2015
Peer review complete:	31 March 2016
All files submitted for production:	31 May 2016
Publication of issue:	September–October 2016

**Special issue editors:** [Aria Abubakar](#), [Michel Chouteau](#), [Xiong Li](#), [Yaoguo Li](#)

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## 3. Tech-Transfer Courses and Training

### 3.1 Multichannel Analysis of Surface Waves (MASW) Workshop

**Dates:** 5–6 November 2015 and 3–4 December 2015

**Registration cost:** free

**Location:** [Kansas Geological Survey](#), Lawrence, Kansas

**[Website](#)**

This free 2-day [MASW](#) workshop will provide an opportunity for geoprofessionals, geoscientists, and graduate students to gain knowledge about data acquisition, analysis, and interpretation of the seismic Rayleigh surface waves. The learning process will be facilitated by the use of [SurfSeis](#) software. The workshop is designed to address the current approaches for analyzing seismic data from both active and passive sources for obtaining shear wave velocity ( $V_s$ ) estimates for the near surface.

On day 1 a theoretical overview of the MASW method (active and passive) will be presented, participants will be familiarized with the SurfSeis software package, and field data acquisition from both active and passive sources is scheduled to take place (weather permitting).

Day 2 will continue with the theoretical MASW overview covering surface wave inversion, multimode interpretation and inversion, inversion sensitivity, use of a priori information, the quality of inversion results, and the latest advancements for dispersion curve imaging—such as the high-resolution linear radon transform, challenging dispersion curve patterns, and more. Seismic data acquired on day 1 will be analyzed. Participants are encouraged to bring samples of their own data for discussion as time permits.

Attendees are expected to bring their own laptops.

## 4. Upcoming Conferences and Workshops

### 4.1 Meetings Overview

Meeting (click to go to website)	Location	Meeting Dates	Submission	Registration
<a href="#">Society of Exploration Geophysicists 85th Annual Meeting</a>	New Orleans, Louisiana	18–23 October 2015	<i>Closed</i>	<i>Open</i>
<a href="#">Geological Society of America</a>	Baltimore, Maryland	1–4 November 2015	<i>Closed</i>	<i>Open</i>
<a href="#">3rd International Conference on Engineering Geophysics</a>	Al Ain, United Arab Emirates	15–18 November 2015	<i>Closed</i>	<i>Open</i>
<a href="#">3rd International Workshop on Geoelectrical Monitoring (GELMON 2015)</a>	Vienna, Austria	24–26 November 2015	<i>Closed</i>	Early registration ends: 15 October 2015
<a href="#">AGU Fall Meeting</a>	San Francisco, California	14–18 December 2015	<i>Closed</i>	Early registration ends: 12 November 2015
<a href="#">2nd SEG/DGS Workshop: Near-Surface Modeling and Imaging</a>	Manama, Bahrain	6–7 March 2016	<i>Closed</i>	By email for accepted abstracts
<a href="#">SAGEEP 2016</a>	Denver, Colorado	20–24 March 2016	<i>27 Oct 2015</i>	<i>TBA</i>
<a href="#">EGU General Assembly</a>	Vienna, Austria	17–22 April 2016	<i>mid-Oct 2015</i>	Early registration ends: 17 March 2016

## 5. Position Announcements

### 5.1 Faculty position in Geophysics at Stanford University

We invite applications for a tenure-track faculty position in the [Department of Geophysics](#) in any broadly defined field of observational, experimental, computational or theoretical geophysics. Current departmental interests include, but are not limited to, energy, water, geodynamics, and natural hazards, as well as new and emerging areas. The appointment will likely be at the junior level (assistant or untenured associate professor). The successful candidate will have demonstrated skills in one or more of the following: quantitative observations and data analysis, data processing, computational modeling, or geophysical imaging, at any scale. Priority will be given to the overall originality and promise of the candidate's work over any specific area of specialization.

The successful candidate will be expected to develop a world-class independent program of research and have a strong commitment to both graduate and undergraduate teaching. A doctorate is required at the time of appointment.

#### How to Apply

Applications should include a cover letter, curriculum vitae, a statement of research and teaching interests, three recent publications, and the names and email addresses of three individuals from whom the search committee can request letters of reference. Please [apply online](#). Review of applications will commence 1 December 2015. The position will remain open until filled. Questions related to your submission may be directed to [csaplar@stanford.edu](mailto:csaplar@stanford.edu).

#### Contact

Csilla M. Csaplár  
(650) 498-6877  
[csaplar@stanford.edu](mailto:csaplar@stanford.edu)

*Stanford University has a strong institutional commitment to the principle of diversity. In that spirit, we particularly encourage applications from women, members of ethnic minorities, and individuals with disabilities.*

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### 5.2 Two Ph.D. positions in the field of hydrogeophysics at the Forschungszentrum Jülich, Germany

- Large-scale EMI and GPR hydrogeophysical soil characterization (reference number D115/2015)
- Weathering front characterization with EMI and GPR in Chile (reference number D116/2015)

In the IBG-3, advanced modeling and inversion algorithms are developed and applied for a wide range of hydrogeophysical studies using electromagnetic induction (EMI) and ground-penetrating radar (GPR) systems.

The Ph.D. position on “Weathering front characterization with EMI and GPR in Chile” is part of the interdisciplinary DFG Priority Program “Earthshape: Earth Surface Shaping by Biota.” The primary objective of this project is to apply and extend existing EMI and GPR data processing algorithms for the characterization of the weathering front on different hillslope sites along coastal Chile.

The Ph.D. position on “Large-scale EMI and GPR hydrogeophysical soil characterization” is part of the BMBF-funded project “Soil3” on sustainable subsoil management. The primary objective of this project is to extend and apply existing large-scale EMI and GPR data processing algorithms for the time-lapse characterization of the topsoil and subsoil of long-term agricultural field experimental sites.

A significant part of the projects consists of fieldwork with state-of-the-art multichannel EMI and GPR systems. Both projects offer a unique opportunity to connect novel processing and inversion techniques to interdisciplinary data in a state-of-the-art computational environment.

**Requirements:**

- University degree in geophysics, physics, electrical engineering, computational geoscience, or related natural sciences with a good final grade.
- Geophysical fieldwork experience, preferably with EMI and/or GPR.
- Advanced knowledge of numerical methods.
- Experience in (Matlab) programming.
- Strong English writing and communication skills.

**We offer:**

- An interdisciplinary environment, as well as excellent facilities for hydrogeophysical research and numerical simulation and inversion studies.
- Opportunities to be part of the national and international scientific community.
- Opportunities for educational enrichment. Ph.D. students are encouraged to attend international conferences and a 3-month research stay abroad with a cooperating partner is planned.

For further information, please contact [Professor Jan van der Kruk](#) or visit our [webpage](#).

Please send your application—including the reference number—with the relevant documentation to Mr. K. Beumers, Institut für Bio- und Geowissenschaften, Forschungszentrum Jülich GmbH, 52425 Jülich, Germany

Email: [k.beumers@fz-juelich.de](mailto:k.beumers@fz-juelich.de)

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**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 to 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!