



**NEAR-SURFACE GEOPHYSICS FOCUS GROUP (NS-FG)
NEWSLETTER: SEPTEMBER 2013**

In brief:

1. John Lane succeeds Seth Haines as the NS-FG Representative to the Eos Editorial Advisory Board
2. Free Student Tickets for NS-FG Luncheon at 2013 AGU Fall Meeting – limited number, get them now!
3. Association for Women Geoscientists (AWG) Lone Star Rising Career Scholarship for Women Resuming Geoscience Careers – Due 31 October
4. Nominations for Environmental and Engineering Geophysical Society (EEGS) Early Career and Frischknecht Awards
5. Inaugural Near Surface Education Event from the Society of Exploration Geophysicists (SEG) on 4 November)
6. Last Month's Twitter Highlights
7. Upcoming Conferences and Workshops
 - 7.1. Near Surface Activities at the 2013 SEG Annual Meeting (22–27 September 2013)
 - 7.2. 2014 Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP) held 16–20 March 2014 – Abstract submission opens in September
 - 7.3. GPR 2014 – 15th International Conference on Ground Penetrating Radar (30 June–4 July 2014) – Abstracts due 1 November
 - 7.4. Third International IP Workshop – Preliminary submissions due 15 November

Recent announcements of interest to the NS community (conferences, academic positions, graduate student opportunities etc.) can be found at the AGU NS-Focus Group Web Page: <http://sites.agu.org/nsg/>

Follow NS-FG on Twitter @NS_AGU!

1. John Lane succeeds Seth Haines as the NS-FG Representative to the Eos Editorial Advisory Board (from George Tsoflias, NS-FG President)

I am very pleased to announce that John Lane has assumed the position of Near-Surface Focus Group Representative to the Eos Editorial Advisory Board. Over the next two years, John will represent NS-FG in the review of *Eos* feature articles, he will provide advice on ways to improve the publication, and he will coordinate submissions to *Eos* from the near surface community. John will be calling on NS-FG members to submit *Eos* articles and to continue raising the visibility of near-surface disciplines to AGU. I would like to express my appreciation to Seth Haines for his exceptional service to NS-FG and *Eos* over the last three years. Seth helped with the publication of a Biogeophysics feature article (by Lee Slater and Estella Atekwana, 19 February 2013) and has laid the groundwork for future publications. Seth is the first NS-FG representative to the Eos Editorial Advisory Board. Please join me in thanking Seth for his service to the focus group and in welcoming John to his new appointment as the NS-FG *Eos* representative.

2. Free Student Tickets for NS-FG Luncheon at 2013 AGU Fall Meeting (from Seth Campbell, Student Representative)

We have 35 reserved tickets available on a first request basis, for students interested in attending the NS-FG luncheon, which will be held on Tuesday, 10 December, in San Francisco, Calif. If interested in receiving a free ticket, please e-mail Seth Campbell at seth.campbell@umit.maine.edu. You must have a primary or secondary affiliation with NS-FG prior to receiving a free ticket so please check your affiliation status online via the [AGU Member Portal](#) and notify Seth of your membership status in your ticket request.

We look forward to seeing you at the luncheon!

3. Association for Women Geoscientists (AWG) Lone Star Rising Career Scholarship for Women (from Roxy Frary)

Deadline: 31 October 2013

Website: [AWG Scholarships](http://www.awg.org/eas/scholarships.htm) (<http://www.awg.org/eas/scholarships.htm>)

The AWG Lone Star Rising Career Scholarship provides professional development funding for women geoscience professionals seeking to resume their geoscience careers after having been out of the work force or women geoscience students seeking to enter the workforce in a geoscience-related field within the next two years. Deadline for applications is 31 October; awards will range up to \$3,000.

4. Nominations for Environmental and Engineering Geophysical Society (EEGS) Early Career and Frischknecht Awards (from Jutta Hager)

Website: [EEGS Awards](http://www.eegs.org/AboutUs/Awards.aspx) (<http://www.eegs.org/AboutUs/Awards.aspx>)

The EEGS / Geonics Early Career Award (ECA) acknowledges academic excellence, and encourages research in near surface geophysics and is presented annually to a full time university faculty member who is fewer than five years beyond the starting date of his or her current academic appointment and within ten years post-completion of his/her Ph.D., to acknowledge significant and ongoing contributions to the discipline of Environmental and Engineering Geophysics.

The EEGS/NSGS-SEG Frank Frischknecht Leadership Award recognizes an individual who shows extraordinary leadership in advancing the cause of near surface geophysics through long-term, tireless, and enthusiastic support of the environmental and engineering geophysics community. The award is presented jointly by EEGS and the Near Surface Geophysics Section of the SEG (NSGS-SEG). The award

alternates on an approximately 18-month interval between EEGS' SAGEEP and the NSG Section of the SEG annual meeting, with EEGS.

The contact for both awards is the EEGS Nominations and Awards Committee Chair Doug Laymon, doug.laymon@tetrattech.com. All nominations are requested prior to the end of the year (December 2013).

5. Inaugural Near Surface Education Event from the Society of Exploration Geophysicists (from John Bradford)

Date: 4 November 2013

Location: Learning Tree Conference Center, Washington, D.C.

This is the inaugural SEG Near Surface Geophysics focused educational event. The courses that have been selected cover a broad range and would be of use to most practicing Near Surface geophysicists.

Brief Course Descriptions:

Full-Waveform Inversion of Ground Penetrating Radar Data, by Dr. Jan van der Kruk

This one-day course provides a thorough overview of full-waveform inversion of ground penetrating radar (GPR) data, which is a promising technique that fully utilizes all of the information content present in high-frequency GPR and is capable of yielding sub-wavelength resolution images. The course includes a theoretical background, synthetic examples, and several case histories using crosshole, on-ground and off-ground GPR.

Practical Seismic surface Wave Methods, by Dr. Julian Ivanov

This one-day short course introduces the most important theoretical and practical aspects of the multichannel analysis of surface waves (MASW) method by a principle from the research group that originally developed the methodology. Each student will be exposed to the most current approaches using active and passive Rayleigh surface waves for estimations of 1-D shear-wave velocity (V_s) and 2-D vertical profiles to depths of a few tens of meters.

HVSR-A Passive Seismic Resonance Method for Near-Surface Geophysics, by Dr. John W. Lane Jr.

This one-day course provides an introduction to the Horizontal to Vertical Spectral Ratio (HVSR) Method, an introduction to HVSR data analysis using Geopsy, acquisition of single-station HVSR data using 3-component seismometers, HVSR data download and importation into processing software. The course will include computer exercises and some data acquisition.

6. Last Month's Twitter Highlights (from Stephen Moysey)

Want to keep up on deadlines and happenings that get missed between newsletters? Sign up on [Twitter](#) to follow us @NS_AGU. Here are a few Tweets from last month:

- Fall deadline for Geoscientists without Borders proposals is 30 September!
- Learn about homeland security research opportunities with the EPA
- AGU journal highlight: Disposal of Marcellus Shale fracking waste caused earthquakes in Ohio
- EPA online resources for teaching about the environment
- Belmont Forum FACCE-JPI Multilateral International Opportunities Fund Initiative
- Matt Hall blog on "Gabor uncertainty"
- Student maps competition at GSA

- GSA On To The Future effort to support student attendance at GSA
- Share your geo research with K-12 teachers at the 2013 AGU GIFT Workshop
- Vote on AGU student t-shirt design contest
- USGS Mendenall post-doc position in airborne EM and volcanoes (Sept.20 deadline!)

7. Upcoming Conferences and Workshops

7.1 Near Surface Activities at the 2013 SEG Annual Meeting (from John Bradford)

Conference Date: 22–27 September 2013

Location: George R. Brown Convention Center, Houston, TX

Website: [SEG Meeting Web site](http://www.seg.org/web/annual-meeting-2013/overview) (<http://www.seg.org/web/annual-meeting-2013/overview>)

The SEG annual meeting is right around the corner! Join your colleagues in Houston to catch a great array of sessions and then continue the conversation at the social activities. Follow it all up with a post-convention workshop. It is sure to be a great meeting, so make your plans now!

Near Surface Geophysics Social Activities:

Luncheon

24 September 2013

11:30 AM - 1:00 PM

Reception

24 September 2013

7:00 PM - 11:00 PM

Near Surface Sessions:

• Hydrogeophysics Special Session	• Statics	• Surface Waves
• Seismoelectric, Electromagnetic, Electrical Methods	• Seismic Reflection & Tomography	• Seismic General Contributions

- Multidisciplinary Studies & Applications (Jointly sponsored with Humanitarian Applications)
- Addressing Risks and Resources (Jointly sponsored with Humanitarian Applications)

Post-convention Workshop:

Near Surface Geophysics in the Dynamic Coastal Environment: Crossing the Land/Sea Interface

Friday, 27 September, 8:30 AM–5:00 PM

Organizers: John Goff and Jeff Paine

E-mail Contact: goff@ig.utexas.edu

Through the support of the SEG Near Surface Section and EEGS

The coastal zone is a habitat for much of the world's population, a key economic driver for fishing, shipping, recreation and tourism, and critical wetlands ecology. However, the coastal zone is also a dynamic setting undergoing significant change at many different time scales. Large storms, for example, can restructure coastal morphology on the scale of hours or days. Rising sea level or changes in sediment supply will alter the coastline over decades to centuries and longer. These are human-relevant time scales, and such changes can have major impacts on coastal infrastructure, habitability, and ecology. Human activity also impacts the coast; e.g., hardening of coastlines and inlets, reduction in sediment supply due to damming, or artificial beach replenishment. Both land- and marine-based near-surface geophysical methods can play a significant role in understanding the many processes that impact the coastal zone. For example, laser ranging and acoustic bathymetry and backscatter can be

used to actively monitor morphological changes over days to years. Ground-penetrating radar or acoustic reflection can be used to map stratigraphic successions in the coastal zone that are developed over decades to millennia. The goal of this workshop is to highlight the latest developments in application of near-surface geophysical methods to the coastal zone. We will emphasize as well connections between these methods and both the sedimentary geology of the coastal zone and numerical modeling of the impacting processes.

7.2 2014 Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP) – Abstract submissions to open in early September (from Jutta Hager)

Conference Date: 16–20 March, 2014

Website: [EEGS Web site](http://www.eegs.org) (www.eegs.org)

SAGEEP 2014 will be held 16–20 March at the Boston Marriott Copley Place Center in the heart of Boston, Massachusetts. You may contact SAGEEP Technical Chair [Mario Carnevale](#) with session proposals at any time. Watch the [EEGS Web site](#) for more details.

The annual SAGEEP meeting continues to grow through collaboration with the AGU NS-FG, SEG and others with interest in near surface geophysics, and members of AGU NS-FG are strongly encouraged to participate in SAGEEP 2014. The activities will include the opening ice breaker, keynote, multi-track technical sessions, presentations by Early Career Award recipients, exhibitors' outdoor equipment demonstrations, field trips, luncheons, a special conference evening event, workshops, and short courses. So remember to save 16–20 March 2014 to attend SAGEEP 2014 in Boston!

7.3 GPR 2014 – 15th International Conference on Ground Penetrating Radar (from S. Lambot)

Conference Date: 30 June–4 July, 2014

Location: Square Brussels Meeting Centre, Brussels, Belgium

Website: [GPR2014 Conference Web site](http://sites.uclouvain.be/GPR2014/) (sites.uclouvain.be/GPR2014/)

This 15th International Conference on Ground Penetrating Radar (GPR 2014) is part of the series organized biannually since 1986. The conference will be held in Brussels, Belgium, from 30 June–4 July 2014 and will deal with the latest scientific and technical advancements in the field of GPR as well as to applications of this technique. It will bring together high-standard scientists, engineers, industrial delegates and end-users working in all GPR areas.

Papers are invited on, but not limited to, the following topics relating to GPR:

Surface and borehole radar	Inverse problems	Tomography
Antenna design, antenna arrays	Data fusion	Airborne systems
Numerical modelling	Migration, improved imaging	Novel radars
Full-wave modeling	Human media interaction	Utility detection and mapping
Nondestructive testing	Geology, sedimentology	Road and pavement inspection
Tunneling, mining	Planetary exploration	Railways
Security, demining	Hydrogeophysics	Digital soil mapping
Archaeology, historical buildings		

Important Deadlines:

Expression of interest (100 word abstract)	1 November 2013
Submission of full-length papers (4-6 pages)	1 February 2014
Notification of acceptance	15 March 2014

7.4 Third International Workshop on Induced Polarization (IP)**Conference Date:** 6–9 April 2014**Location:** Ile d’Oleron, Charente-Maritime, France**E-mail Contact:** IPworksho2014@gmail.com

While originally developed for prospection and characterization of mineral deposits purposes, the recent developments of Induced Polarization (IP) geophysical methods in terms of instrumentation, processes understanding at micro-scale for low frequencies (< 1000 Hz) or macroscopic modeling and inversion processes are very promising for environmental low-polarizable targets study. Promising applications of the IP method are particularly seen in hydrogeophysics, biogeophysics or characterization of contaminated sites.

Two previous workshops had already taken place entitled ‘International Workshop on Induced Polarization in Near-Surface Geophysics’. The first one held in Bonn, Germany in 2009, and the second one in Golden, Colorado, USA in 2011.

The aim of the first workshop was to present last developments and applications of the method for near surface hydrogeological and environmental investigations. The goal of the second workshop was to focus on the understanding of the mechanisms generating IP signals in the earth. These workshops had also dealt with data acquisition, petrophysical relationships, theory and laboratory studies, inverse modelling and imaging, or with environmental, hydrological or engineering applications.

The aim of this third workshop is twofold: (i) discuss the recent developments of the method for the geophysicist community, and (ii) open the discussion with other scientific communities (e.g., medical imaging, biological, astrophysical) using the same physical processes even if with other names (e.g., AC impedance spectroscopy, low-frequency dielectric spectroscopy).

The particularity of this workshop is that classical scientific sessions will be completed with working groups.

Four sessions will be organized. The 3 first sessions will focus on the recent work concerning the processes generating the IP response (S1), as well as for time domain and spectral domain IP data acquisition methodology for laboratory and field scale (S2), or for geoscientific case studies (S3). The last session (S4) is dedicated to nongeoscientist topics.

Four parallel Working Groups will be organized. The first one (WG1) concerns the advances about IP inversion procedures. WG2 is about transdisciplinarity of IP: from IP to impedance Spectroscopy. WG3 is about how to write a handbook on TDIP and SIP. The last

Important Deadlines:

Preliminary submission*	15 November 2013
Extended abstract (max 1000 words)	15 January 2014

*Preliminary submission includes title, authors, affiliation, a two sentence abstract, and oral/poster preference.

TO CONTRIBUTE MATERIAL TO THE NS-NEWSLETTER SEND AN E-MAIL TO:

Stephen Moysey (smoysey@clermson.edu)

DEADLINE: Material must be received 5 full business days prior to the first of each month.

GUIDELINES FOR SUBMISSIONS: All members are welcome to submit content of interest to the NS community. Please keep messages brief and provide contact information and (if available) a web address for additional information.

GET YOUR MESSAGE OUT NS MEMBERS FASTER:

You will 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 NS-FG members that follow [@NS_AGU](https://twitter.com/NS_AGU) will receive Twitter announcements, so make sure that you sign up!