



**NEAR-SURFACE GEOPHYSICS FOCUS GROUP
NEWSLETTER: SEPTEMBER 2014**

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

Follow NSFG on Twitter @NS_AGU!

1. 2014 AGU Elections (from George Tsouflias)

The AGU 2014 Election is underway, please make sure you cast your vote. NSFG candidates include:

- Sarah Kurse and Juan Lorenzo for President-Elect
- Burke Minsley and Frederic Nguyen for Secretary

To learn more about these candidates, please go to the NSFG Election Website:

<http://elections.agu.org/agu-sections-and-focus-groups/near-surface-geophysics/>

Elected AGU officers will serve two years, starting 1 January 2015.

Thank you to all for your willingness to serve NSFG!

This year, eligible voters receive an email ballot for every section/focus group to which they belong, in addition to the AGU Board and student/early career ballots. The voting site allows you to cast as few or many votes as you'd like, in one session or multiple sessions (visit <http://elections.agu.org/> for more information). Election is open through 17 September, 2014.



2. Near Surface events at the SEG Annual Meeting in Denver (26-31 October)

Join the near surface community at the 2014 Society of Exploration Geophysicists (SEG) meeting in Denver. Events include three oral presentation sessions, including the standing AGU-SEG Hydrogeophysics session, one e-poster and one poster presentation, the NSG luncheon and the evening reception. A list of the events is available online at:

<http://www.seg.org/web/annual-meeting-2014/events/Near-Surface>

3. Early Career: Truman Fellowship at Sandia National Laboratories (from Nedra Bonal)

Candidates from the Earth or Atmospheric Sciences are particularly encouraged.

Candidates for this post-doc position must have been awarded a PhD within the past three years or must have completed a PhD prior to the start of their appointment in October 2015. Additionally, they must have solved a major scientific or engineering problem, as evidenced by a recognized impact in their field.

Candidates must be seeking their first national laboratory appointment (pre-postdoc internships excluded) and have the ability to obtain a DOE clearance. A grade point average of 3.5 undergraduate and 3.7 graduate is preferred. **The application deadline is 1 Nov.** Sandia's competitive wage and benefits package includes an annual salary of \$111,200; flexible work arrangements; 11 paid holidays; three weeks of vacation; health, vision, and dental insurance; and a 401(k) savings plan with company match.

For more information, see the Truman Fellowship website:

http://www.sandia.gov/careers/students_postdocs/fellowships/truman_fellowship.html

or contact Nedra Bonal at nbonal@sandia.gov.

4. Upcoming Special Issues

4.1 *The Leading Edge* special issue on Near Surface Geophysics (from Dale Werkema)

The February 2015 issue of *The Leading Edge* (TLE) will focus on Near-Surface Geophysics. Please consider a submission to this special edition. The widespread distribution of TLE will enable a broad impact of your contribution. Your research, experience, and expertise is on the cutting edge of near-surface geophysics and is greatly welcomed and encouraged to make the issue a success. The submission details are attached and a timeline of the submission is detailed below.

Submission Timeline for the Special Issue

15 Oct:	articles due to guest editor (GE)
15 Oct–15 Nov:	GE reviews submissions
15 Nov:	GE lets authors know approved, rejected, suggestions for revision
15 Nov–1 Dec:	authors revise articles, return revision to GE
1 Dec–15 Dec:	GE reviews revision, makes any final changes
15 Dec:	revised articles due to TLE editorial staff, upload to SEG ftp site

4.2 *INTERPRETATION* special issue on Geophysical Imaging and Interpretation of Outcrops

Outcrops have long been studied as analogs for rocks rich in natural resources, including hydrocarbons, minerals, and groundwater. Outcrops provide highly detailed information on facies assemblages, stratigraphy, textural and petrographic variability, and fracture patterns, among others. However, except in a few exceptional cases, this information is strictly two-dimensional. Geophysical tools allow for a "look behind the cliff," thus enabling 2D outcrop analog data to be extended into the third dimension. Such geophysical investigations can be operated from the cliff top, cliff face, and boreholes.

With the increasing demand for unconventional, geothermal, mineral and water resources as exploration targets there is a renewed interest in detailed outcrop studies. For this special section of Interpretation, we invite papers that focus on applying geophysical tools (e.g., seismic, ground-penetrating radar, and downhole geophysical logging) for imaging and interpretation of outcrops. We also invite papers that use Lidar and high-resolution outcrop imagery in combination with behind-the-cliff geophysical data or synthetics.

The focus of the work can be on geophysical imaging and modeling, 3D facies analysis and sequence stratigraphy, studies of deformation and faulting, mineralization, fracture zones, and high-resolution input for geological modeling of sedimentary and crystalline systems. Case studies for specific outcrop analogs are also welcomed.

Interested authors should submit their manuscripts for review no later than 30 August 2014. In addition, the special section editors would like to receive a provisional title and list of authors as soon as possible. Authors should submit via the normal online submission system for Interpretation (<https://mc.manuscriptcentral.com/interpretation>) and indicate that it is a contribution for this special section. The submitted papers will be subject to the regular peer-review process, and the contributing authors also are asked to participate in this process as reviewers.

Submission Timeline for the Special Issue

30 Sept 2014:	submission deadline extended!
26 Jan 2015:	peer review complete
9 Feb 2015:	all files submitted for production
May 2015:	publication of issue

More information is available online at the following link:

<http://www.seg.org/resources/publications/interpretation/specialsections/2015-geo-img-outcrops>

5. 1st SEG/SBGf Workshop on Near Surface Geophysics

Submission Deadline Extended to 26 September 2014

Meeting Dates: 3-4 December 2014

Meeting Location: Salvador, Brazil

Website: <http://www.seg.org/events/upcoming-seg-meetings/salvador2014>

The program for this workshop will offer a broad range of geophysical methods to address a diverse near-surface community that utilizes geophysics methods applied to a large array of applications. It is designed to attract professionals from varied geophysical sectors with a focus on engineering, environmental, hydrogeophysics, and geohazard, as well as mining and shallow oil & gas exploration applications. Keynote speakers for the workshop are to include Dr. Oz Yilmaz.

Please note the extension of the abstract submission deadline to 26 September!

6. 2nd Agricultural Geophysics Webinar (from Barry Allred)

Meeting Date: 30 September, 2014; 3:00-4:30PM (Eastern Time)

Website: <http://www.ag-geophysics.org>

This second in a series of online agricultural geophysics webinars will focus on the use of ground penetrating radar (GPR) in agriculture. Topics will include GPR soil water content determination, GPR use in the USDA/NRCS soil survey program, GPR forestry applications, advances in GPR technologies, etc. Five presenters will provide a short overview on GPR use in agriculture during the first 30 minutes of the webinar. The last hour of the webinar will be devoted to a panel discussion with the presenters, who will answer questions from the audience. There will be no cost for participating in this webinar; however, since enrollment may be limited, participants will need to register at <http://www.ag-geophysics.org> (once operational in early September 2014) in order to obtain webinar login details.

One week prior to the webinar, extended versions of the presentations (approximately 20 minutes each) can be accessed via YouTube video links that will be posted at <http://www.ag-geophysics.org>. Participants will also have the opportunity submit questions to the presenters prior to the webinar through the website. Those from both the geophysical and agricultural communities will benefit from this webinar and are therefore encouraged to participate.

Please contact Barry Allred (allred.13@osu.edu) if you would like more information on this upcoming agricultural geophysics webinar during the time our website is being made operational.

7. Position Announcements

7.1 Electromagnetics – Halliburton, Singapore (from Glen Wilson)

Opportunities are available with Halliburton's Electromagnetic Discipline based in Singapore. These research and development positions involve leading technologies in the oil and gas industry, with the opportunity to directly contribute to innovative solutions across a wide range of electromagnetic sensing applications.

We welcome applications from candidates spanning 0 to 10+ years of postgraduate experience.

Requirements for these positions include:

- A very good knowledge of electromagnetic theory and computational electromagnetics is essential; demonstrated at least with a Masters or PhD in geophysics, physics, electrical engineering, or related discipline.
- Familiarity with one or more of the following simulation methods: Finite Difference (FD), Finite-Element (FE), Method of Moments (MoM), Integral Equations (IE), or semi-analytic solutions in stratified media.
- Familiarity with inversion, and have experience with one or more of the following numerical optimization methods: Conjugate gradients, Gauss-Newton.
- Experience with Fortran and MATLAB programming languages.
- Experience with electromagnetic modeling in CST software is a plus.
- A working knowledge of electromagnetic sensor systems is a plus.
- Oil and gas industry experience is a plus.
- Good oral and written communication skills are also required for the roles.

Applicants should apply via email directly to Pamela Papilla, pamela.papilla@halliburton.com, with a latest copy of their CV.

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

Stephen Moysey (smoysey@clemson.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 NSFG members that follow [@NS_AGU](https://twitter.com/NS_AGU) will receive Twitter announcements, so make sure that you sign up!