



**NEAR-SURFACE GEOPHYSICS FOCUS GROUP  
NEWSLETTER: AUGUST 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/>

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## 1. Call for Abstracts to the 2014 AGU Fall Meeting (from Xavier Comas)

### ***Abstract Submission Deadline: 6 August 2014***

The call for AGU Fall Meeting abstracts is now open. All abstracts must be received by 6 August 2014, 23:59 EDT/03:59 +1 GMT The abstract submission tool is NEW this year. Please take a few minutes to review the tutorial and become oriented with the 2014 submission process at <https://agu.confex.com/agu/fm14/webprogrampreliminary/start.html>.

#### **NEAR SURFACE GEOPHYSICS SESSIONS:**

##### **Advances in Exploration Geophysics [Session ID: 1992]**

Louise Pellerin, Green Geophysics, Berkeley, CA, USA, Kennedy O Doro, University of Tuebingen, Tuebingen, Germany and Darcy McPhee, USGS, Menlo Park, CA, USA

##### **Applications of Near Surface Geophysics in Cold Regions [Session ID: 1726]**

Martin Briggs, USGS, Reston, VA, USA, Seth Campbell, U. of Maine, Orono, ME, USA, Steven Arcone, US Army Cold Regions Research and Engineering Laboratory, Hanover, NH, USA

##### **Assessing Permafrost Change with Prospects for Human Adaptability and Commercial Exploitation [Session ID: 1979]**

Reginald Muskett, Geophysical Institute University of Alaska Fairbanks, Fairbanks, AK, USA and Alexander L Kholodov, University of Alaska Fairbanks, Anchorage, AK, USA

##### **Coastal Geophysical Studies: At the Transition between Land and Sea [Session ID: 3437]**

Juan Lorenzo, Louisiana State Univ, Baton Rouge, LA, USA and Bruce Smith, USGS, Lakewood, CO, USA

##### **GPR Advances for Subsurface Imaging [Session ID: 3124]**

Xavier Comas, Florida Atlantic University, Boca Raton, FL, USA, Remke Van Dam, Michigan State Univ., East Lansing, MI, USA and Georgios Tsoflias, University of Kansas, Lawrence, KS, USA

##### **Geophysical Methods for Groundwater Evaluation and Management [Session ID: 2226]**

Rosemary Knight, Stanford Univ, Stanford, CA, USA and John Lane Jr, USGS, Storrs, CT, USA

##### **Interpreting Geophysical Signals: What We Really See vs. What We Want to See [Session ID: 2416]**

Chi Zhang and Dimitrios Ntarlagiannis, Rutgers University, Newark, NJ, USA

##### **Near Surface Geophysics General Contributions [Session ID: 3120]**

Xavier Comas, Florida Atlantic University, Boca Raton, FL, USA and Bruce Smith, USGS, Lakewood, CO, USA

##### **Near-Surface Seismic Methods for Geohazard Assessment [Session ID: 2832]**

Laura Valentina Socco, Politecnico di Torino, Torino, Italy, Richard Miller and Georgios Tsoflias, University of Kansas, Lawrence, KS, USA

##### **Seismic Emission Due to the Propagation of Fluid-Driven Fractures [Session ID: 2079]**

Arash Dahi Taleghani, Louisiana State Univ. and Agricultural & Mechanical College, Baton Rouge, LA, USA, Juan Lorenzo, Louisiana State Univ, Baton Rouge, LA, USA and Joel LeCalvez, Schlumberger Oilfield Services, TX, USA

##### **The Seismoelectric Method: Going Together to the Next Level [Session ID: 1460]**

Niels Grobbe, Delft Univ. of Technology, Delft, Netherlands, Andre Revil, Colorado School of Mines, Golden, CO, USA, Zhenya Zhu, MIT, Quincy, MA, USA and Evert Slob, Delft Univ. of Technology, Delft, Netherlands

##### **Use of Distributed Fiber Optic Sensing in Study of Geophysical Processes [Session ID: 1938]**

Tom Oliver Trevett Read, Univ. of East Anglia, School of Environmental Sciences, Norwich, United Kingdom, Nick Van De Giesen, Delft Univ. of Technology, Faculty of Civil Engineering and Geosciences, Delft, Netherlands, John Selker, Oregon State University, Biological and Ecological Engineering, Corvallis, OR, USA and Scott Tyler, University of Nevada, Geological Sciences and Engineering, Reno, NV, USA

**HYDROGEOPHYSICS SESSIONS:**

**Advances in Hydrogeology and Hydrogeophysics: Innovations in Experimental Methods, Data Processing, and Modeling [Session ID: 1590]**

Tobias Lochbuehler, U. Lausanne, Lausanne, Switzerland, Pernille Aabye Marker, Technical University of Denmark, Lyngby, Denmark, Deqiang Mao, Colorado School of Mines, Golden, USA, and Kristopher Kuhlman, Sandia National Lab, Albuquerque, USA

**Contaminant Hydrogeophysics [Session ID: 2050]**

Lee Slater, Rutgers-Newark, Newark, USA, Kevin Mumford, Queen's University, Kingston, Canada

**Uncertainty Quantification and Reduction in Hydrogeological Forecasting and Inversion [Session ID:2156]**

Souheil Ezzedine, U. California LLNL, Livermore, USA, Niklas Linde, U. Lausanne, Lausanne, Switzerland, Philippe Renard, U. Neuchatel, Neuchatel, Switzerland, Daniel Tartakovsky, U. California San Diego, La Jolla USA

**Hydrogeophysical Characterization of the Critical Zone [Session ID: 2910]**

Ulrike Werban, Helmholtz Center for Env. Research UFZ Leipzig, Leipzig, Germany, David Hyndman, Michigan State U., East Lansing, USA, Peter Dietrich, Helmholtz Center for Env. Research UFG Leipzig, Taucha, Germany

**Characterizing Spatial and Temporal Variability of Hydrological and Biogeochemical Processes across Scales [Session ID: 2222]**

Bhavna Arora, Haruko Murakami Wainwright, Susan Hubbard, Lawrence Berkley National Lab, Berkeley, USA,

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**2. NSGS Student Travel Grants Program for 2014 SEG Meeting (from Remke Van Dam)**

The SEG-NSGS (Near Surface Geophysics Section) Student Travel Grants Program exists to support students seeking a career in near-surface geophysics to attend the SEG Annual Meeting. Each year a number of travel grants of up to \$500 (USD) may be awarded. Graduate students with research projects in near-surface geophysics are eligible. Preference will be given to students presenting oral or poster papers at the SEG Annual Meeting, and to those that have not previously received this grant. The applicant must be a student member of the NSGS. For details, see [http://nsgs.seg.org/e-newsletter/2014\\_2/segam.html](http://nsgs.seg.org/e-newsletter/2014_2/segam.html). *The deadline for submission is 3 August 2014.*

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### 3. Upcoming Special Issues

#### 3.1 *The Leading Edge* special issue on Humanitarian Geophysics (from Louise Pellerin)

The December 2014 issue of *The Leading Edge* (TLE) will focus on Humanitarian Geophysics. Those working in any area related to Humanitarian Geophysics are encouraged to consider sharing their work. If you are interested in submitting an article for the special issue, please contact Louise Pellerin ([pellerin@greengeophysics.com](mailto:pellerin@greengeophysics.com)). **The due date for article submission is 15 Aug 2014.**

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#### 3.2 *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**

<b>30 Aug 2014:</b>	submission deadline
<b>26 Jan 2015:</b>	peer review complete
<b>9 Feb 2015:</b>	all files submitted for production
<b>May 2015:</b>	publication of issue

More information is available online at the following link:

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

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### **3.3 *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
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## 4. Upcoming Conferences and Workshops

### 4.1 SEG Annual Meeting

**Meeting Dates:** 26-31 October 2014

**Meeting Location:** Denver, Colorado

**Website:** <http://www.seg.org/web/annual-meeting-2014/overview>

#### **Near Surface Geophysics Technical Program at the SEG Meeting:**

##### **Surface-Waves (Oral Session)**

Monday PM; Room 4B; Session Chairs: Rick Miller (KGS), Valentina Socco (Politecnico di Torino)

##### **Reflection, Tomography, Interferometry and Statics (Oral Session)**

Tuesday AM; Room 4B; Session Chairs: Seth Haines (USGS), Said Mahrooqi (PDO)

##### **Hydrogeophysics (Oral Session)**

Wednesday AM; Room 4B; Session Chairs: Kristina Keating (Rutgers U.), Ryan Swanson (Colorado School of Mines)

##### **Integrated Methods, Joint Inversion, ERT/EM, and Hazards (E-poster Session)**

Tuesday PM; Room 404 ; Session Chairs: John Bradford (Boise State Univ.), Louise Pellerin (Green Geophysics)

##### **NS Developments and Applications (Poster Session)**

Wednesday PM; Session Chairs: John Lane (USGS), Julian Ivanov (KGS)

#### **NSGS Social Events**

##### **Near Surface Geophysics Luncheon**

Tuesday 28 October 2014, 11:30 AM to 1:30 PM; Location: Convention Center

##### **Near Surface Geophysics Evening Social**

Tuesday 28 October 2014, 7:00 PM to 11:00 PM; Location: Katie Mullen's Irish Restaurant & Pub

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### 4.2 SAGEEP 2015

**Meeting Dates:** 22-26 March 2015

**Meeting Location:** Austin, Texas

**Website:** <http://www.eegs.org/Annual-Meeting-SAGEEP/SAGEEP-2015>

The Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP) organizers have announced that Austin, Texas is the site and 22-26 March, 2015 are the dates for SAGEEP 2015. General Chair Jeff Paine, Doug Laymon, and Dennis Mills are working to infuse a uniquely "Austin" experience into the 28th edition of SAGEEP. Technical Chair Brad Carr is developing a strong technical program and has released these important preliminary dates:

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|-----------------------------------|---|
| <b>Friday, 29 August, 2014:</b>   | Deadline for session topics or special session proposals - please send an email to Jeff or Brad ( <a href="mailto:bcarr1@uwyo.edu">bcarr1@uwyo.edu</a> ) with a title and short description |
| <b>Friday, 5 September, 2014:</b> | Abstract submission site opens  |
| <b>Friday, 17 October, 2014:</b>  | Abstract submissions deadline   |

Please send an email to Jeff ([jeff.paine@beg.utexas.edu](mailto:jeff.paine@beg.utexas.edu)) if you would like to be on an informal email list for developing information and send your ideas for workshops and short courses to Bill Doll ([dollw@battelle.org](mailto:dollw@battelle.org)). This just in: A Student Travel Grant has been approved by Geometrics for SAGEEP 2015 - details will be available on the EEGS web site: [WWW.EEGS.org/Annual](http://WWW.EEGS.org/Annual) Meeting/SAGEEP 2015.

We look forward to seeing you in Austin next spring!

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#### **4.3 Multichannel Analysis of Surface Wave (MASW) Workshop (from Mary Brohammer)**

**Workshop Dates:** 14-15 August 2014 *or* 6-7 November [two workshops] - Registration is free

**Location:** Kansas Geological Survey (KGS), Lawrence, Kansas

**Workshop Website:** <http://www.kgs.ku.edu/software/surfseis/workshops.html>

The free two-day MASW workshop will provide opportunity for geo-professionals, geoscientists, and graduate students to gain knowledge about acquisition, analysis, and interpretation of the seismic Rayleigh surface waves. The learning process will be facilitated by the use of SurfSeis software (<http://www.kgs.ku.edu/software/surfseis/index.html>). 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 take place (weather permitting).

Day 2 will continue with the theoretical MASW overview covering surface-wave inversion, multi-mode interpretation and inversion, inversion sensitivity, use of a-priori information and quality of inversion results, latest advancements for dispersion-curve imaging—such as the high-resolution linear Radon transform (HRLRT), challenging dispersion-curve patterns, and more. Day-1 acquired seismic data 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.

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#### **4.4 Upcoming SEG Workshops and Conferences with a NS Focus or Component:**

##### **1st SEG/SBGf Workshop on Near Surface Geophysics**

**Meeting Dates:** 3-4 December 2014

**Meeting Location:** Salvador, Brazil

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

##### **2nd Asia-Pacific Near Surface Geophysics Conference**

**Theme:** Geohazards

**Meeting Dates:** 7-10 July 2015

**Meeting Location:** Waikoloa Village, Hawaii, USA

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

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

Stephen Moysey ([smoysey@clemson.edu](mailto: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!