



**NEAR-SURFACE GEOPHYSICS FOCUS GROUP
NEWSLETTER: OCTOBER 2013**

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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 Web Page: <http://sites.agu.org/nsg/>

Follow NSFG on Twitter @NS_AGU!

1. NSFG to Host the SEG Near Surface Honorary Lecture at the Fall Meeting Business Luncheon (Dec.10). *Get your tickets early!* (from George Tsoflias, NSFG President)

NSFG is honored to host Valentina Socco, the 2013 Society of Exploration Geophysicists (SEG) Near Surface Honorary Lecturer, at the Fall Meeting business luncheon on Tuesday December 10. The title of the presentation is “*Surface wave analysis for near-surface characterization: Introduction, theme and variation*” and it is presented at seventeen international venues. Information about the 2013 SEG Near Surface Honorary Lecture is available at the [SEG website \(http://www.seg.org/education/lectures-courses/honorary-lecturers/nearsurface/socco/abstract\)](http://www.seg.org/education/lectures-courses/honorary-lecturers/nearsurface/socco/abstract).

NSFG Luncheon tickets are available online at the Fall Meeting registration site. Purchase your ticket early before they sell out!

2. AGU Fall Meeting Program Online - Register and Book Your Hotel Early!

The program for the Fall Meeting is now available online. This means that the rush to plan your meeting and book hotels is on now! Go to the [AGU website \(www.agu.org\)](http://www.agu.org) to see the fall meeting program, register, and book you hotel...before they are all gone!

3. Free Student Tickets for NSFG Luncheon at Fall AGU (from Seth Campbell, Student Rep.)

We still have some reserved tickets available for students to attend the NSFG luncheon on a first request basis. If interested in receiving a free ticket, please email Seth Campbell at seth.campbell@umit.maine.edu. You must have a primary or secondary affiliation with NSFG prior to receiving a free ticket so please check your affiliation status online at the AGU membership section and notify Seth of your membership status in your ticket request.

We look forward to seeing our NSFG students at the luncheon!

4. Early Career Networking Event at AGU (from Nedra Bonal, NSFG Early Career Rep.)

Please email Nedra (nbonal@sandia.gov) if you are interested in joining the NSFG Early Career group. You will receive updates about the networking event at the AGU Annual Meeting and other information that is important to Early Career Near Surface Geophysicists.

5. AWG Lone Star Rising Career Scholarship for Women (from Roxy Frary)

Deadline: 31 Oct., 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 \$3000.

6. Nominations for 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 PhD, 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 (Dec, 2013).

7. Inaugural Near Surface Education Event from the SEG (from John Bradford)

Date: 4 Nov., 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.

8. 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:

- STUDENTS - CUAHSI Pathfinder Fellowships (\$5k) – Deadline is Oct. 17
- So cool! Agile Geoscience's Geophysics Hackathon
- NSF: How do women and underrepresented minorities in academic employment differ from their male and white counterparts?
- Travel grants for GSA meeting in Denver
- USGS: Water on the moon?
- Deadline for submission of Geoscientists without Borders proposals

9. Upcoming Conferences and Workshops

9.1 SAGEEP 2014 – Abstract submissions to open in early September (from Jutta Hager)

Conference Date: 16-20 March, 2014

Website: [EEGS Website](#) (www.eegs.org)

SAGEEP (Symposium on the Application of Geophysics to Engineering and Environmental Problems) 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 NSFG, SEG and others with interest in near surface geophysics, and members of AGU NSFG 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 March 16-20, 2014 to attend SAGEEP 2014 in Boston!

9.2 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: [Conference Website](#) (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 30th June to 4th 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.

Important Deadlines:

Expression of interest (100 word abstract)	1 Nov, 2013
Submission of full-length papers (4-6 pages)	1 Feb, 2014
Notification of acceptance	15 Mar, 2014
Submission of final camera-ready papers	15 April, 2014

9.3 3rd International Workshop on Induced Polarization (IP)

Conference Date: 6-9 April, 2014

Location: Ile d'Oleron, Charente-Maritime, France

Conference Website: ip.geosciences.mines-paristech.fr

Email 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 Nov, 2013
Extended abstract (max 1000 words)	15 Jan, 2014

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

10. Position Announcements

10.1 Assistant Professor of Geophysics, Boise State University

Boise State University invites applications for a tenure track faculty position in geophysics to be filled at the level of Assistant Professor. Boise State has an internationally recognized program in near-surface geophysics with active research programs in the fields of hydrogeophysics, inverse theory, seismic/acoustic/electromagnetic wave propagation, engineering geophysics, volcanology and cryospheric science. The Boise Hydrogeophysical Research Site, Dry Creek Experimental Watershed, excellent computational facilities, an extensive pool of field equipment, and our newly completed Environmental Research Building provide state-of-the-art field and interior lab facilities to support research in our dynamic academic community

We seek a dynamic, recent PhD who will develop an internationally recognized program that complements and supports our programs in near-surface geophysics, via external funding. Active and continued growth and development of the geophysics program, through research and teaching, is required. The successful candidate will demonstrate the potential for collaborative research efforts, providing research opportunities for students, and effective teaching of both undergraduate and graduate level geophysics courses.

Please apply online at <https://cgiss.boisestate.edu/~pm/FacultySearch/> where you will upload a cover letter, curriculum vitae, statement of research and teaching interests, and contact information for at least three references. Please reference Search Number AS-0008-13. Review of applicants will begin 15 October and will continue until the position is filled. Applications received after that point may be considered if the position is not filled from the finalist pool. For additional information contact: Geophysics Search Committee, Department of Geosciences, Boise State University, 1910 University Drive, Boise, ID 83725, geopsearch@boisestate.edu.

Boise State University is an EEO/AA Institution, Veterans preference.

10.2 Two Tenure-track Faculty Positions, University at Buffalo

The Department of Geology at the University at Buffalo is expanding and invites applications for two tenure-track faculty positions.

Assistant or Associate Professor of Near Surface Geophysics or Hydrogeophysics. We seek a scholar who applies geophysical techniques to solve hydrogeologic problems. Researchers interested in developing novel approaches to characterize hydrogeologic processes and/or properties over a range of spatial scales and/or by combining data from multiple tools are of particular interest.

Assistant Professor of Volcanology. We seek a volcanologist with preference given to candidates with a strong background and interest in geophysical approaches to understanding and anticipating volcanic eruptions, and incorporation of such information into hazard assessment and mitigation strategies.

The successful candidates will join the Department's growing environmental and established volcanology groups that maintain interdisciplinary collaborations within UB and internationally, and will have opportunities to participate in activities of the UB Center for Geohazards Studies. The successful candidates will be expected to develop and maintain innovative, extramurally funded research programs that build on our current research and education strengths in hydrogeology, volcanology, climate change, and ecology. The successful candidates will have a demonstrated commitment to teaching; teaching duties will involve undergraduate and graduate level courses in the candidates' specialties. Service to the discipline, department and/or university is expected. Successful candidates must have a Ph.D. degree at the time of appointment. The Department is committed to the importance of a diverse faculty. Women and minorities are particularly encouraged to apply.

Applications must be submitted through the UB Jobs website: Near Surface Geophysics (posting #1300569) <https://www.ubjobs.buffalo.edu/applicants/Central?quickFind=56486> or Volcanology (posting #1300570) <https://www.ubjobs.buffalo.edu/applicants/Central?quickFind=56487>. We will begin to review candidates on 1 Oct., 2013 and continue until the position is filled. Inquiries concerning these positions should be made to geology@buffalo.edu. The University at Buffalo is an Affirmative Action/Equal Opportunity Employer (AA/EOE).

10.3 Assistant Professor Positions in Geochemistry and Hydrogeology/Geofluids, Oklahoma State

The Boone Pickens School of Geology at Oklahoma State University seeks two tenure track assistant professors: one in sedimentary geochemistry and another in hydrogeology/geofluids. These positions will be effective August 2014 contingent on funding. The applicant should have a Ph.D. degree in geosciences or a related field at the time of appointment.

For the ***sedimentary geochemistry*** position, we are seeking candidates with strengths in one or more of the following areas: organic geochemistry, low temperature metals geochemistry, biomarkers as applied to petroleum systems, environmental systems, and paleo/climate change.

For the ***hydrogeology/geofluids*** position, we are seeking candidates with strengths in one or more of the following: simulation of subsurface flow and solute transport, variable-density or multiphase fluid modeling, reactive transport modeling in porous/fractured media, and hydrogeophysics as applied to sedimentary basins, biogeophysics, petroleum, hydrodynamic systems, and environmental change.

The successful candidates will complement School strengths in stable isotope geochemistry, petroleum geology (conventional and unconventional), paleoenvironment, biogeochemistry and biogeophysics. We seek candidates who will develop vigorous and innovative research programs and who will contribute to School teaching at both undergraduate and graduate levels. The candidates will be expected to supervise M.S. and Ph.D. students and develop courses in their areas of expertise.

The successful candidates will join a faculty of fourteen geoscientists in a department that has close ties to the petroleum and water resource industries. The School's teaching and research facilities include state of the art geochemistry laboratory facilities and equipment, geophysical field and laboratory equipment and software, the Devon Visualization Laboratory, and a wide range of petrographic and hydrogeological instrumentation and field equipment. The School operates a field camp facility near Cañon City, Colorado.

Candidates should submit an application package that includes a cover letter; curriculum vitae; reprints of three published papers; contact information for three referees; and separate statements of research and teaching vision. Candidates should include in their research vision a brief description of how their research will interface with that of existing faculty. All application materials should be submitted to: Assistant Professor Search, Boone Pickens School of Geology, 105 Noble Research Center, Oklahoma State University, Stillwater, Oklahoma 74078-3031. Screening of candidates will begin on 15 November, 2013 and continue until the position is filled. More information about the Boone Pickens School of Geology can be found on the web at <http://geology.okstate.edu>. Inquiries may be directed to Dr. Todd Halihan (todd.halihan at okstate.edu) or Dr. Jay Gregg (jay.gregg at okstate.edu). Committed to health and safety, Oklahoma State University maintains a tobacco-free work environment. Oklahoma State University is an Affirmative Action/Equal Opportunity/E-Verify employer committed to diversity.

10.4 Two Environmental Geophysicist Positions at Lawrence Berkeley National Laboratory

The Earth Sciences Division of Lawrence Berkeley National Laboratory is seeking applications for two positions. The Earth Sciences Division conducts basic and applied research focused on hydrogeological, geochemical, geophysical, and biological processes that are important for climate change, carbon cycling, environmental stewardship, and energy sustainability. The incumbents will conduct research to develop advanced estimation approaches apply them to quantify subsurface behavior, with a particular focus on use of geophysical datasets. The open positions include:

- 1) **Postdoctoral Fellow** position focused on the development of advanced inversion methods and application to field data to quantify spatiotemporal distributions of hydrological and biogeochemical properties in shallow subsurface environments. Similar multi-physics, joint inversion approaches may also be developed and applied to deep oil, gas, and geothermal reservoirs. Essential for this position is expertise in inversion and interpretation of field geophysical field datasets (with a particular emphasis on complex resistivity and electromagnetic surface based methods) and hydrogeophysical approaches. Job Number 76369.
- 2) **Career Track Geological Scientist** position focused on developing new approaches to integrate diverse datasets (including point, surface geophysical, and remote sensing datasets) and use of information to quantify key controls and uncertainty associated with terrestrial environment behavior. Essential for this positions is demonstrated experience in the development of numerical algorithms, experience with forward and inverse hydrological/geophysical modeling, and experience with uncertainty quantification. LBNL Job number 76308.

To apply, please visit <http://jobs.lbl.gov> and reference the Job Numbers provided above.

Information about the Earth Sciences Division is provided here <http://esd.lbl.gov/home/>
Information about the LBNL Environmental Geophysics Group is provided here http://esd.lbl.gov/departments/geophysics/core_capabilities/environmental_geophysics.html.

10.5 STEM Future Faculty (Post-Doc) Program, Northeastern University

Northeastern University invites nominations and applications from candidates in the STEM (science, technology, engineering, and mathematics) fields for the Northeastern University STEM Future Faculty Fellowship Program. A prospective Fellow must have completed the Ph.D. degree by the start of their fellowship term.

Northeastern will provide Fellows with:

- placement in a NEU host laboratory in the Fellow's specialty
- two Northeastern faculty members committed to mentoring
- appointment for a 12-month term during the 2014-2015 academic year
- a 12-month salary of \$50,000, plus health benefits
- \$5,000 towards conference travel and other research-related expenses

The deadline for applications is 15 January, 2014. For full details on the Future Faculty Fellowship, please visit:

<http://www.northeastern.edu/advance/recruitment/northeastern-university-stem-future-faculty-fellowship-program/>

10.6 Senior Geophysicist, Alaska Division of Geological and Geophysical Surveys

The Alaska Division of Geological & Geophysical Surveys (DGGs) is seeking a senior-level geophysicist to support the division's Strategic & Critical Minerals project, which is part of the Alaska Airborne Geophysical/Geological Mineral Inventory (AGGMI) program. DGGs is a dynamic, fast-paced office with multiple field-based programs evaluating many facets of Alaska geology. Alaska offers a geophysicist frontier opportunities to make creative professional contributions and significant new geologic discoveries. The successful applicant will use advanced principles and knowledge of geophysics to provide professional scientific and operational management of multiple, applied airborne geophysical surveys, including magnetic, electromagnetic, and radiometric data acquisition, in support of statewide resource development and infrastructure-hazards assessments. The successful applicant will work independently and collaboratively in all aspects of project work, including participating in initial project concept development, writing and managing the components of geophysical survey contracts, quality checking the data and working with contractors to ensure contract compliance, and preparing digital data sets, documentation, and reports for publication.

Application must be made on-line through the [Workplace Alaska website](http://doa.alaska.gov/dop/workplace/) (doa.alaska.gov/dop/workplace/). Under Find Job Opportunities "for All Job Seekers", type "PCN 10N13094" into the Search keywords section and click on "Apply Search" to locate the full job description and application instructions for this Geologist IV position based in Fairbanks, Alaska. The State of Alaska complies with Title I of the Americans with Disabilities Act (ADA). Individuals with disabilities, who require accommodation, auxiliary aides or services, or alternative communication formats, please call 1-800-587-0430 or 465-4095 in Juneau or (907) 465-3412 (TTY). The State of Alaska is an equal opportunity employer. The State of Alaska does not sponsor work VISAS for non-U.S. citizens; non-U.S. citizens must have a valid work VISA at the time this position closes in order to be considered. This position recruitment will remain open through 21 October, 2013.

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 NSFG members that follow [@NS_AGU](#) will receive Twitter announcements, so make sure that you sign up!