



American Geophysical Union

Near-Surface Geophysics Focus Group (NSFG)

Newsletter: October 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](#).

Follow NSFG on Twitter [@NS_AGU!](#)

1. AGU Fall Meeting – Register, Book Your Hotel

Remember to [pre-register online](#), [book your hotel](#) and get your NSFG luncheon ticket. The housing and pre-registration deadline is 14 November, 11:59 P.M. EST.

The Near Surface Focus Group Luncheon will take place Tuesday, 16 December. Luncheon tickets sell-out online and are not available for purchase onsite, so make sure you get your ticket early when you pre-register for the meeting.

2. Free Student Tickets for NSFG Luncheon at the AGU Fall Meeting

NSFG has 30 tickets available, on a first request basis, for students interested in attending the NSFG luncheon which will be held on Tuesday, 16 December, in San Francisco, Calif. The luncheon is a great opportunity for students to learn about the near surface community and network with professionals, academics and fellow students. If interested in receiving a free ticket, please e-mail George Tsoflias at Tsoflias@ku.edu. You must have a primary or secondary affiliation with NSFG prior to receiving a free ticket so please check your affiliation status online and notify me of your membership status in your ticket request.

We look forward to seeing you at the luncheon!

3. AGU Career Webinar – 10 (Surprising!) Ways You Can Use LinkedIn to Advance Your Career and Profession

Tuesday, 7 October, 2014 3:00-4:00 P.M. (Eastern)
<https://www1.gotomeeting.com/register/558026328>

You may already have a profile on LinkedIn and perhaps you have sent some colleagues an “Invitation to Connect”. But what’s next? How can you use and leverage this critical tool to explore career paths, connect with decision-makers and potential collaborators and mentors, establish your brand, amplify your reputation, learn important skills, and position yourself for the job of your dreams? In this webinar, you will learn about how LinkedIn is utilized by successful people in your profession and field and how it is used as a hiring technique to identify potential candidates for positions.

4. SAGEEP 2015 Abstract Submission Deadline: 17 October 2014

Submit your abstracts now to be part of the technical program at the 28th SAGEEP, which is being held in Austin, Texas 22-26 March 2015. SAGEEP technical program organizers are accepting short or extended abstracts through 17 October 2014. Preliminary session topics are listed on the [abstracts submission page](#). Sessions include those with an applications focus and those with a focus on advances in near-surface geophysical methods. For further information, please contact Brad Carr (technical program chair, bcarr1@uwyo.edu) or Jeff Paine (general chair, jeff.paine@beg.utexas.edu). Send Jeff a message if you want to be on an informal email list for periodic updates on conference activities. Visit <http://www.eegs.org/Annual-Meeting-SAGEEP/SAGEEP-2015> for the latest information about conference events, registration, and the host hotel, the Sheraton Austin at the Capitol.

5. Near Surface events at the SEG Annual Meeting in Denver, 26-31 October

SEG Denver will offer a variety of near-surface events and activities this year — all happening on Tuesday, 28 October.

NS LUNCHEON:

Co-organized by SEG and the Near-Surface Geophysics Section of SEG, the Near Surface Luncheon is at 11:30 A.M.–1:30 P.M. Tuesday, 28 October, in the Colorado Convention Center. The luncheon's guest speakers will be the recipients of the 2014 Harold Mooney Award and the 2014 Frank Frischknecht Leadership Award.

NS BUSINESS MEETING:

Later that day, there is a Near-Surface business meeting at 4–6 P.M. The general business meeting is open to all attendees. For information on the Near-Surface Geophysics technical sessions, visit <http://seg.org/ns>.

NS SOCIAL:

The last Near Surface event of the day is the annual Near-Surface Geophysics Section social at 7–11 P.M. at Katie Mullen's Irish Restaurant and Pub. Attendees will enjoy appetizers and listen to a brief presentation by Remke Van Dam, Near-Surface Geophysics Section (NSGS) president, on NSGS activities. ***Open to all! NSGS members can attend at no charge; SEG members who are not NSGS members can join on the spot for US \$15 (please bring your SEG membership card). Students can join for free.***

NS TECHNICAL PROGRAM:

Oral Presentation: Surface Waves

Monday, 27 October, 1:30 P.M. – 4:30 P.M., Rm 4B

Oral Presentation: Reflection, tomography, interferometry, and statics

Tuesday, 28 October, 8:30 A.M. – 11:30 A.M., Rm 4B

e-Poster Presentation: Integrated methods, joint inversion, ERT/EM, and hazards

Tuesday, 28 October, 1:30 P.M. – 4:30 P.M., Rm 404

Oral Presentation: AGU-SEG Hydrogeophysics

Wednesday, 29 October, 8:30 A.M. – 11:30 A.M., Rm 4B

Poster Presentation: Case histories, developments and applications

Wednesday, 29 October, 1:30 P.M. – 4:30 P.M., Concourse D/E/F Foyer

6. Upcoming Special Issues: *The Leading Edge* special issue on Near Surface Geophysics

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

7. Upcoming Conferences and Workshops

7.1 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>

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.



SEG/SBGf Workshop
**Near-Surface Geophysics Applied to Exploration,
Engineering, and Environmental Studies**
Salvador, BA, Brazil
3-4 December 2014

Register Now!
www.seg.org/meetings/Salvador2014

The banner features the SEG and SBGf logos and a photograph of a coastal city with a prominent tower.

7.2 Near Surface Asia Pacific Conference

Submission Deadline: 21 November 2014

Meeting Dates: 7-10 July 2015

Meeting Location: Waikoloa, Hawaii

Website: <http://www.seg.org/meetings/nsgapc15>

The 2015 Near-Surface Asia Pacific Conference will focus on near-surface issues within the entire Pan-Pacific region and will provide a world-class forum for new technical advances, developments, and applications in near-surface geophysics. We welcome the submission of papers covering theoretical developments and case histories in the broad topic of near-surface geophysics.

In addition, given that this year's venue is located on the Hawaiian volcanic chain, we will highlight geophysical applications to natural hazards focusing on volcanoes. Special sessions are planned for volcano characterization; monitoring, imaging, and stratigraphy of pyroclastic flows; geophysical applications to tsunamis; and passive/micro-seismic methods for near-surface applications.

As a new component to this year's conference, we invite proposals for additional special sessions and one-day post conference workshops. In your proposal, please identify the workshop or session organizers, potential invited speakers, and a brief description of the topic and its relevance to the conference.

7.3 Multichannel Analysis of Surface Waves (MASW) Workshop

Meeting Dates: 6-7 November 2014 (Registration is free)

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

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

This 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. 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.

8. Position Announcements

8.1 Assistant Professor of Geophysics – Dept. of Geology, Colgate University

The Department of Geology at Colgate University invites applications for a tenure-stream position in Geophysics at the rank of Assistant Professor, beginning fall semester 2015. We seek an individual with a Ph.D. who is committed to excellence in teaching and research at the undergraduate level. Completion of the Ph.D. is expected prior to or shortly after the date of hire. The area of specialization is open. The successful applicant will teach Geophysics and develop other courses at the introductory level for non-majors and at the upper-level for geology students. Participation in the Geology Department's summer field courses, involvement of undergraduates in research, and a willingness to contribute to other all-university curricula, such as the Scientific Perspectives program in the university's Core Curriculum, are expected.

A cover letter, CV, research and teaching statements, and reference letters must be submitted through <https://academicjobsonline.org/ajo/jobs/4548>.

Colgate strives to be a community supportive of diverse perspectives, identities and ways of life. Candidates are encouraged to describe [in their cover letter] their strengths and experiences in teaching diverse student populations and in promoting a diverse and inclusive educational environment. Colgate is an EEO/AA employer; women and candidates from historically underrepresented groups are especially encouraged to apply. Review of applications will begin 13 October 2014, and will continue until the position is filled. Applicants with dual-career considerations can find postings of other employment opportunities at Colgate and at other institutions of higher education in upstate New York at www.upstatenyherc.org.

Developing and sustaining a diverse faculty, staff, and student body further the University's educational mission.

Colgate is a highly selective liberal arts university of 2800 students situated in central New York. Colgate faculty are committed to excellence in both teaching and scholarship. The Geology Department comprises eight faculty, a senior lecturer/lab instructor, and a technician. Analytical facilities include SEM-EDS, XRF, XRD, ICP-MS, GC-MS, AA, stable isotope mass spectrometer, and micropaleontology lab. Information about the Geology department can be found at <http://www.colgate.edu/academics/departments-and-programs/geology>.

For further information about the position please contact the department chair or department members at the GSA meeting in Vancouver.

Further Info:
William Peck
wpeck@colgate.edu
315-228-7201
220 Ho Science Center
Colgate University
13 Oak Drive
Hamilton, NY 13346

8.2 Visiting Lecturer – Department of Geosciences, Boise State University

The Department of Geosciences at Boise State University seeks a Visiting Lecturer as a sabbatical replacement for the Spring Semester 2015. The Department 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.

We seek applicants who have a PhD in geophysics or related field. The Department of Geosciences is a community of over 20 faculty and research staff who engage with over 150 undergraduate majors and 60 graduate students. The Department is home to two doctoral programs (Geosciences and Geophysics), four masters level programs, and three undergraduate programs. For further information about our faculty, research and teaching programs, please visit our websites at <http://earth.boisestate.edu> and <http://cgiss.boisestate.edu>.

The lecturer will be required to teach both GEOPH 201 *Seeing the Unseen* and GEOPH 502 *Processes and Properties of the Earth II* - course descriptions are provided below. GEOPH 201 is a four credit, non-calculus-based introductory geophysics course required of all undergraduate geosciences students, and has an expected enrollment in Spring 2015 of 30-40. GEOPH 502 (also four credits) is the second of our core sequence for geophysics graduate students, and is designed to provide a sound understanding of earth processes while developing problem-solving skills in mathematical physics. 502 is expected to have a Spring 2015 enrollment of at least 5 masters and doctoral students. Teaching assistants will be provided to help with labs for GEOPH 201.

Course Descriptions

GEOPH 201 Seeing the Unseen: an Introduction to Physics of the Earth. This is a class for sophomore geoscience students and anyone else interested in learning about geophysics. We identify the major methods of physics that govern processes in the Earth, explore the theory and applications in geophysics, such as hazards, environmental geophysics, exploration geophysics and (earthquake) seismology. Emphasis will be on historical developments and a qualitative understanding of the physics as well as the state-of-the-art of its application in the earth.

GEOPH 502 Processes and Properties of the Earth II. Building on the material from GEOPH 501, which focuses on the physical principles that underlie the analysis of geophysical properties and processes, GEOPH 502 will focus on analytical and numerical methods for solving boundary value problems. Both mathematical and computational techniques will be used to solve problems using governing equations and constitutive relations for gravitation, electromagnetism, and the mechanics of continuous and porous media. The course will continue the emphasis on unifying themes from the first semester, in addition to the approach of starting with general governing equations and applying assumptions to focus on important terms in the partial differential equations. Lab sessions will give students experience in applying numerical techniques, which will be compared to analytical solutions developed in lecture.

Applicants should send a statement of their teaching philosophy and a copy of their current CV with a list of references and contact info to dwilkins@boisestate.edu. Review of applicants will begin immediately and conclude when a candidate is selected.

About the University: <http://www.boisestate.edu/>

About the City of Boise: <http://www.boisechamber.org/>

Background Investigations – Any offer of employment at Boise State University will be contingent upon the successful completion of a background investigation. To view the University's full Background Investigations policy, please go to <http://policy.boisestate.edu>.

Drug-Free Workplace – It is the policy of Boise State University to maintain a drug-free workplace and campus. For more information about this policy, please go to <http://policy.boisestate.edu>. Jeanne Clery Statement - The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act) requires all colleges and universities that participate in federal financial aid programs to keep and disclose information about crime on and near their campuses to all job applicants. To read the Boise State University Safety Report go to <http://security.boisestate.edu/annual-security-reports/> Boise State University is a SMOKE FREE campus. For more information please go to <http://healthservices.boisestate.edu> Boise State University is strongly committed to achieving excellence through cultural diversity. The University actively encourages applications and nominations of women, persons of color, and members of other underrepresented groups. EEO/AA Institution, Veterans preference.

8.3 Senior Geophysicist – Center for Groundwater Evaluation and Management (GEM Center), Stanford University

The GEM Center (gemcenter.stanford.edu) was founded in 2008 to focus on advancing the use of geophysical methods for groundwater evaluation and management. Rosemary Knight (Professor of Geophysics, Stanford) is the founding director. The Center includes faculty, graduate students and post-doctoral fellows, engaged in fundamental research involving geophysical imaging, with a commitment to facilitate the rapid transfer of research results into practice. Our approach involves working in partnership with groundwater managers and districts where we explore novel ways to employ state-of-the-research approaches for groundwater applications.

We seek to hire an individual who has the background to understand the research activities of the GEM Center and act as our liaison with groundwater districts. This will involve designing and leading outreach activities to advertise and explain GEM Center activities, contacting and meeting with potential partners, and developing new partnerships by working closely with partners to define and conduct field projects using a wide range of geophysical methods. Responsibilities include ongoing communication with partners; handling logistics of field projects, for example the rental or loan and mobilization of equipment, arrangements for transportation and accommodation for personnel, completion of any permitting processes; review of existing data and modeling as needed to develop survey design and data acquisition schedules; acquisition of field data, engaging and training personnel as needed; processing of data using in-house and/or commercial software; development of new processing streams as required; interpretation of results including integration with other forms of data; writing and presenting proposals for new projects and final reports.

The minimum education and experience required is a Master's degree and four years of experience in Geophysics, or closely related field, or the equivalent combination of education and relevant experience. Experience should include the acquisition and analysis of geophysical data for groundwater applications, management of geophysics field projects, and a solid understanding of groundwater hydrology. Given the nature of the position applicants will also be expected to have excellent communication skills. This is a two-year position, with an intention to renew, subject to the availability of funding. To apply, please go to <http://stanfordcareers.stanford.edu/> and search for Job ID 64024.

8.4 Postdoctoral Position in Magnetotellurics – University of Edinburgh

The University of Edinburgh has an exciting opportunity for a Post-Doc to collect, model and interpret magnetotelluric data, as part of a new, large, multi-disciplinary project, in the Ethiopian part of the East African rift. Please see vacancy number 031501 at <https://www.vacancies.ed.ac.uk/>.

Contact Dr. Whaler if you have questions about the position (kathy.whaler@ed.ac.uk).

8.5 Multiple Postdoctoral and PhD Positions – University of Lausanne, Switzerland

Postdoctoral Research Positions in Applied and Environmental Geophysics

The Applied and Environmental Geophysics Group at the University of Lausanne has an opening for one or possibly two postdoctoral researchers. The starting date is January 1, 2015, or a later date to be decided upon. The initial contract is one year and it can be renewed three times for a maximum duration of five years. The successful candidate should hold a PhD degree in geophysics, hydrology, mathematics, physics, or engineering. The ideal candidate has a strong experience in at least two of the following areas: multiple-point statistics or other modern geostatistical approaches, Markov chain Monte Carlo methods, groundwater flow and transport modeling, inverse problems, and numerical methods of relevance to applied and environmental geophysics. Exceptional candidates from all fields of applied and environmental geophysics that does not meet these requirements are also most welcome to apply. Fluency in English is necessary, while a good command in French is an advantage. In addition to research, it is also expected that the successful candidate contribute to the teaching program at the BSc and MSc level. Our research center is well equipped, evolving dynamically, and scenically located on the shores of Lake Geneva, a region of outstanding beauty that offers a vibrant cosmopolitan atmosphere and a very high quality of life.

To apply, please send a cover letter clarifying your overall motivation for applying together with a research statement describing your desired research direction, your curriculum vitae and the names, telephone numbers, and e-mail addresses of two referees to Prof. Niklas Linde, Institute of Earth Sciences, Géopolis 3779, University of Lausanne, 1015 Lausanne, Switzerland or by e-mail to niklas.linde@unil.ch. The application deadline is 31 October 2014.

Two PhD Positions in Hydrogeophysics

The Applied and Environmental Geophysics Group at the University of Lausanne has openings for two doctoral students working on (A) sub-resolution effects on upscaled hydrological and geophysical properties and (B) the use of geophysics for model selection of competing conceptual subsurface models. Both students will work within the framework of approximate Bayesian computation. The positions are funded for three years (an extension of one year is likely) and the starting date is 1 January 2015, or a later date to be decided upon. The successful candidate should hold a MSc degree in geophysics, hydrology, mathematics, physics, or engineering. He/she should have a keen interest and preferably some experience in Bayesian statistics, scientific computing, geophysical and/or hydrological data processing, forward modeling and inversion. We are a dynamic international research group working on a wide variety of topics in environmental and computational geophysics. Basic knowledge of French is an advantage, but not a requirement. Our research center is well equipped, evolving dynamically, and scenically located on the shores of Lake Geneva, a region of outstanding beauty that offers a vibrant cosmopolitan atmosphere and a very high quality of life.

To apply, please send a cover letter clarifying your overall motivation for entering a PhD program together with your curriculum vitae and the names, telephone numbers, and e-mail addresses of two referees to Prof. Niklas Linde, Institute of Earth Sciences, Géopolis 3779, University of Lausanne, 1015 Lausanne, Switzerland or by e-mail to niklas.linde@unil.ch. The application deadline is 31 October 2014.

8.6 Multiple Postdoctoral and PhD Positions – Clemson University

Multiple postdoctoral and PhD student positions are available in the Department of Environmental Engineering and Earth Sciences at Clemson University (Clemson, SC) for exceptional individuals motivated to work in a large interdisciplinary team of researchers (approximately 50) studying radionuclide fate and transport in soils. Research topics range from the influence of soil-root interactions and microbial processes on contaminant transport to the stability and degradation of nuclear waste forms. The project offers a unique opportunity for the integration of non-traditional medical imaging techniques with traditional hydrologic instrumentation, geophysical electrical measurements, and a variety of other supporting imaging methods. Project participants will have access to Clemson's outstanding high-performance computing facility (Palmetto2) for data analysis and may contribute to the development of pore-scale and multi-scale hybrid modeling techniques. Postdoctoral positions will be responsible for management of a field-scale lysimeter test-bed and contribute to the development of novel radionuclide imaging techniques.

We are looking for individuals with a solid background in quantitative methods and an interest in integrating novel measurements through statistical and/or model-based analysis. Candidates that are either experimentally or computationally proficient are desired, preferably with measurement or modeling experience in hydrology, geophysics, physics, analytical geochemistry, soil physics, applied math or a related area. Willingness to work collaboratively in an interdisciplinary setting is essential.

Interested applicants should email Dr. Stephen Moysey (clemsonnuclear@gmail.com). In your email you should provide a cover letter that indicates the type of position you seek and explains how your background and interests are appropriate for this position. You should also provide a research statement that clearly describes your desired research direction. Also include your curriculum vitae and the names, telephone numbers, and e-mail addresses of two referees. Applications will be accepted while positions remain open. Applicants may alternatively also submit their materials by mail to: Stephen Moysey, Environmental Engineering and Earth Sciences, 445 Brackett Hall, Clemson University, Clemson, SC, USA 29634.

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!