



American Geophysical Union
Near-Surface Geophysics Focus Group (NSFG)
Newsletter: December 2014

In brief:

1. What you need to know for the 2014 AGU Fall Meeting:

- 1.1. NSFG Fall Meeting Business Luncheon: 16 Dec., 12:30-1:30PM, InterContinental San Francisco – Union Square Room
- 1.2. Free Student Tickets for NSFG Luncheon
- 1.3. Volunteer as an OSPA Judge to Evaluate Student Presentations
- 1.4. Joint Near Surface-Hydrogeophysics Social Event: 17 Dec., 7:00PM, Hotel Utah (500 4th St.)
- 1.5. Hydrogeophysics Technical Comm. Meeting: 6:45-7:45AM, 15 Dec., Marriot Marquis - Sierra C
- 1.6. SEG Near Surface Honorary Lecture at the AGU Fall Meeting:
- 1.7. NS Quick Reference for the 2014 AGU Fall Meeting (*Formatted to 1 page for easy printing!*)

2. *Geophysics Special Issue: Advancements in the measurement of the cryosphere using geophysics;* papers due 28 February 2015

3. Upcoming Conferences and Workshops

- 3.1. Near-Surface Asia Pacific Conference, Waikoloa, Hawaii – Abstract Deadline: 6 Jan 2015
- 3.2. Multichannel Analysis of Surface Wave (MASW) Workshop, Lawrence, Kansas, 19-20 Feb 2015

4. Position Announcements

- 4.1. International Master of Research Course, Institut de Physique du Globe de Paris
- 4.2. Thompson Postdoctoral Fellowships in Geophysics, Stanford University
- 4.3. Assistant Professor of Geophysics, James Madison University, USA

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](#).

Early Career Scientists: Check out the Early Career website at <http://sites.agu.org/nsg/early-career>.

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

1. What you need to know for the 2014 AGU Fall Meeting:

1.1 NSFG Fall Meeting Business Luncheon

The Near-Surface Geophysics Focus Group Luncheon will take place on Tuesday, 16 December, 12:30 P.M.-1:30 P.M. at the InterContinental San Francisco - Union Square room. The event sold-out online, but we have made a few more tickets available. Contact George Tsoflias (tsoflias@ku.edu) to reserve one of the last remaining tickets. We look forward seeing everyone in San Francisco!

1.2 Free Student Tickets for NSFG Luncheon at the AGU Fall Meeting

A few last free luncheon tickets are available for students to attend the NSFG luncheon. The luncheon is a great opportunity for students to learn about the near-surface community and network with professionals, academics, and fellow students. If you are interested in receiving a free ticket, e-mail George Tsoflias (tsoflias@ku.edu). You must have a primary or secondary affiliation with NSFG.

We look forward to seeing you at the luncheon!

1.3 Outstanding Student Paper Awards (OSPA)

OSPA needs your help! The Outstanding Student Paper Awards (OSPAs) recognize quality research in the geophysical sciences at the undergraduate, Master's and PhD level. The process relies on volunteer judges. Signing up is easy -- see: <http://ospa.agu.org/ospa/>

This is a great program that honors young, early scientists. All judged students are provided feedback, and the top 3-5% of presenters in each section/focus group receive an OSPA.

Your help is needed. Please volunteer!

1.4 Joint Near Surface – Hydrogeophysics Social Event at the Hotel Utah

The annual joint NS-HGP get-together is scheduled for 17 December, Wednesday at the Hotel Utah at 500 4th Street (the cross street is Bryant). We hope that you will join your near-surface and hydrogeophysics colleagues there around 7:00 PM! All are welcome!

1.5 Hydrogeophysics Technical Committee Meeting

The Hydrogeophysics Technical Committee meeting is scheduled for Monday, 15 December from 6:45-7:45AM at the San Francisco Marriott Marquis, Sierra C. All are welcome to attend and provide input into the organization of future hydrogeophysics sessions and activities through the AGU.

1.6 SEG Near Surface Honorary Lecture at the Fall AGU Meeting

The 2014 SEG NS HL, Koichi Hayashi, will give an invited presentation based on his SEG lecture "Integrated Geophysical Methods Applied to Geotechnical and Geohazard Engineering: From Qualitative to Quantitative Analysis and Interpretation" in session NS43B: Near-Surface Seismic Methods for Geohazard Assessment II, Moscone South 302, Thursday, 18 December 2014, at 1:40 PM. More information about Koichi's lecture is at <http://www.seg.org/education/lectures-courses/honorary-lecturers/2014/hayashi/abstract>.

1.7 NS Quick Reference Guide for the 2014 AGU Fall Meeting

Monday, 15 December		
06:45 AM - 07:45 AM <i>Hydrogeophysics Technical Committee Meeting – SF Marriot Marquis, Sierra C</i>		
Tuesday, 16 December		
08:00 AM - 12:20 PM		
NS21A	Coastal Geophysical Studies: At the Transition between Land and Sea	MS Poster Hall
NS21B	GPR Advances for Subsurface Imaging Posters	MS Poster Hall
12:30 PM - 01:30 PM <i>NSFG Fall Meeting Business Luncheon - SF Intercontinental, Union Square Room</i>		
01:40 PM - 06:00 PM		
NS23A	Seismic Emission Due to the Propagation of Fluid-Driven Fractures Posters	MS Poster Hall
NS23B	The Seismoelectric Method: Going Together to the Next Level I Posters	MS Poster Hall
Wednesday, 17 December		
08:00 AM - 10:00 AM		
NS31D	The Seismoelectric Method: Going Together to the Next Level II	MS 302
08:00 AM - 12:20 PM		
NS31A	Applications of Near Surface Geophysics in Cold Regions I Posters	MS Poster Hall
NS31B	Interpreting Geophysical Signals: What We Really See Versus What We Want to See Posters	MS Poster Hall
NS31C	Use of Distributed Fiber Optic Sensing in the Study of Geophysical Processes I Posters	MS Poster Hall
10:20 AM - 12:20 PM		
NS32A	Advances in Exploration Geophysics I	MS 302
01:40 PM - 03:40 PM		
NS33B	Advances in Exploration Geophysics II	MS 302
01:40 PM - 06:00 PM		
NS33A	Near Surface Geophysics General Contributions Posters	MS Poster Hall
04:00 PM - 06:00 PM		
NS34A	Applications of Near Surface Geophysics in Cold Regions II	MS 302
07:00 PM <i>Near Surface-Hydrogeophysics Social Event at the Hotel Utah (500 4th Street)</i>		
Thursday, 18 December		
08:00 AM - 10:00 AM		
NS41C	Use of Distributed Fiber Optic Sensing in the Study of Geophys. Processes II	MS302
08:00 AM - 12:20 PM		
NS41A	Geophysical Methods for Groundwater Eval. and Management I Posters	MS Poster Hall
NS41B	Near-Surface Seismic Methods for Geohazard Assessment I Posters	MS Poster Hall
10:20 AM - 12:20 PM		
NS42A	Advances in Exploration Geophysics III	MW 3018*
01:40 PM - 03:40 PM		
NS43B	Near-Surface Seismic Methods for Geohazard Assessment II SEG Near Surface Honorary Lecture (Koichi Hayashi)	MS 302
01:40 PM - 06:00 PM		
NS43A	Advances in Exploration Geophysics IV Posters	MS Poster Hall
04:00 PM - 06:00 PM		
NS44A	Geophysical Methods for Groundwater Evaluation and Management II	MS 302

Notes: MS = Moscone South; MW = Moscone West; * indicates virtual option available
Choose a session name to find out more information about the session from the AGU meeting website.

2. Geophysics Special Issue: *Advancements in the measurement of the cryosphere using geophysics*
Deadline for Manuscript Submission: 28 February 2015

The Near Surface Geophysics Section of SEG is soliciting manuscripts for a special issue of *Geophysics* focused on methods used to investigate the cryosphere. The cold regions of Earth are of interest to the broad scientific community due to their importance in engineering, resource, and environmental problems. Ground-based, airborne, and space-borne geophysical measurements can all add valuable subsurface information used in understanding the frozen regions of Earth. This special section will highlight recent advances from a broad range of methods and applications that have provided significant new ability to study the cryosphere system. We seek discussions of field acquisition methods and new applications to measure cryosphere parameters using geophysical methods including seismic, georadar, electromagnetic, nuclear magnetic resonance, magnetic, electrical resistivity, LiDAR, synthetic aperture radar (SAR), etc. We seek case histories from cold and temperate glaciers, rock glaciers, permafrost or seasonal freezing, sea ice, river and lake ice, and snow covers in alpine, valley or plains settings.

Authors should first register their interest and prospective title with the special section editors and plan to submit their manuscripts for review no later than 28 February 2015. All submissions can be made using the Geophysics online submission system (<https://mc.manuscriptcentral.com/geophysics>). Please indicate that the manuscript is intended for the *Advancements in the measurement of the cryosphere using geophysics* special section in the online submission system and in a cover letter to the editor. Please note, that if you submit, your manuscript will go through the standard Geophysics review process and authors will also be asked to contribute to the review process.

A link to Manuscript Central where submissions may be made is [here](#). Remember to choose the “*cryosphere methods in GEOPHYSICS*” from the “Manuscript Type” drop down menu to ensure that each submission is routed to the guest editorial team. Please share this announcement with others who may be interested.

If questions arise, please do not hesitate to contact Andrew Parsekian (aparseki@uwyo.edu), or another member of the guest editorial board (Steve Arcone, John Bradford, Bernd Kulesa, George Tsoflias).

3. Upcoming Conferences and Workshops

3.1 Near-Surface Asia Pacific Conference

Submission Deadline: 6 January 2015

Meeting Dates: 7-10 July 2015

Meeting Location: Waikoloa, Hawaii

[Visit the Conference Website](#)



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, including:

- Shallow Seismology
- Engineering Geophysics
- Borehole Geophysics
- Rock and Soil Properties
- Ground-penetrating Radar
- Hydrogeophysics
- Modeling and Inversion
- Remote Sensing and Lidar Applications
- Electric, EM, and NMR Methods
- Mining and Geothermal Exploration
- Geophysical Instruments

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 include the workshop or session organizers, potential invited speakers, and a brief description of the topic and its relevance to the conference.

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/microseismic methods for near-surface applications.

Submit your paper today! The Call for Papers deadline is 6 January 2015; all abstracts along with application forms must be submitted electronically to nsgapc@seg.org in PDF format by the deadline.

3.2 Multichannel Analysis of Surface Waves (MASW) Workshop

Meeting Dates: 19-20 February 2015 (Registration is free)

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

[Visit the Workshop Website](#)

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.

4. Position Announcements

4.1 International Master of Research Course – Institute de Physique du Globe Paris, France

Applications are invited for the International Master of Research course in Exploration Geophysics at Institut de Physique du Globe Paris (IPGP) and Ecole des Mines de Paris (Mines ParisTech). The IPGP, one of leading Earth Science Institutes in the world, and the Mines Paristech, one of the top French Engineering Schools, have decided to jointly start an International Master of Research in Exploration Geophysics at advanced level.

The new Master's course is for one year, from September to June, and is set up at the second year of the European Master level. It will consist of the courses taught in the Fall Term, between September and December, and six months of research, January-June. Courses will be in several disciplines of exploration geophysics, such as advanced seismic and EM methods. Each course will consist of strong theoretical training with examples drawn from industry-related problems. The students will receive on-hand training in field experiments and data analysis. Creative thinking and complex problem solving will be the main focus of the teaching. The research project will be carried out at IPGP and partner institutions as well as in industry.

The objective of this Master course is to train top-level exploration geophysicists, who will go-on to carry out research either in academia (Ph.D.) or in industry. Several Ph.D. Fellowships will be available for the graduating students. The courses will be taught by internationally renowned scientists who are actively engaged in research from IPGP, Mines ParisTech, TOTAL, Shell, CGGVeritas and Schlumberger.

Each student will receive a fellowship of 1000€ per month during 10 months. A minimum of four years of undergraduate/master's degree either in mathematics/physics/geophysics, or engineering with a strong interest in computing and fluency in English are required.

Application Procedure:

Send a CV with a letter of application to Ms Marie Dominique Rocheron (rocheron@ipgp.fr), Institut de Physique du Globe de Paris, 1 rue Jussieu, 75238 Paris France. Please request two referees to email recommendation letters directly to the above address. Deadline for application is 28 February, 2015 for non-European students and 15 May, 2015 for European students.

For more information: Contact Professor Satish Singh (singh@ipgp.fr), Tel: +33 1 83957658 or Professor Hervé Chauris (herve.chauris@mines-paristech.fr, +33 1 64 69 49 13) www.ipgp.fr

4.2 Thompson Postdoctoral Fellowships in Geophysics, Stanford University

The Department of Geophysics, Stanford University, has established the Thompson Postdoctoral Fellowship to be awarded to a candidate preferably within two years of receipt of the Ph.D. The fellowship is open to applicants in any area of geophysics including new areas of research that cross existing disciplinary boundaries, so that students and recent graduates in Earth science, physics, chemistry, biology, or computational sciences with interests in the geophysical sciences are also encouraged to apply. Our department is currently active in crustal geophysics, exploration and production geophysics, seismic imaging, rock physics, earthquake seismology, crustal deformation, stress and geomechanics, environmental geophysics, and planetary sciences. The successful candidate will have her/his own independent research agenda, but have common interests with one or more existing faculty (who will serve as a formal mentor) to participate in their research group activities. We encourage prospective applicants to communicate in advance with their prospective faculty mentor.

This honorific postdoctoral fellowship will be awarded for a one-year period that can start any time in the academic year 2015/2016, with an anticipated extension for a second year. The compensation package includes salary of \$56-62,000/year depending on experience, benefits, and a \$15k one-time research allowance. **Applications received by 5 January 2015**, will receive fullest consideration.

How to apply:

Applications should include a statement of research interests and proposed research, curriculum vita, a list of publications, and the names and email addresses of three individuals from whom the search committee can request letters of reference. Please apply online at: <https://academicjobsonline.org/ajo/jobs/5063>.

The position will remain open until filled. Questions related to your submission may be directed to thompsonfellowship@sesmail.stanford.edu.

Stanford University is an equal opportunity employer and is committed to increasing the diversity among its students, staff, and faculty. It welcomes nominations of and applications from women, members of minority groups, protected veterans and individuals with disabilities, as well as from others who would bring additional dimensions to the university's research, teaching and clinical missions.

4.3 Assistant Professor of Geophysics, James Madison University, USA

The Department of Geology and Environmental Science (<http://www.jmu.edu/geology/>) at James Madison University seeks applications for a geophysicist at the Assistant Professor level for a tenure-track position beginning August 2015. A Ph.D. related to the geosciences is required at the time of employment. We seek a colleague who is committed to excellence in teaching and research involving undergraduates. Teaching responsibilities include introductory and upper level undergraduate geophysics courses, and general education science courses. Information on existing equipment housed in the department can be found at <http://www.jmu.edu/geology/facilities.shtml>. Collaborations are encouraged with faculty in other STEM fields.

The department has 14 full-time faculty, 2 staff members, and approximately 125 undergraduate majors. Degree options include a BS in Geology, a BA in Earth Science, and minors in Geology and in Geophysics. Our graduates are recognized for their strong foundation in core geoscience disciplines with experience in undergraduate research. The department has an excellent record of placing students in graduate programs and employment in geoscience professions.

To apply, please submit a cover letter, a detailed curriculum vitae, a statement of teaching philosophy, a statement of research interests, and the names and addresses of three references to: <https://JobLink.jmu.edu> under posting number 0406253. Questions regarding this position may be directed to Elizabeth Johnson, Search Committee Chair, at: geophysics@csm.jmu.edu.

Screening of applicants will begin **21 December 2014**; however, applications will continue to be accepted until the position is filled. Salary is commensurate with experience. James Madison University is an equal opportunity/Affirmative Action/equal access employer and especially encourages applications from women, minorities, and persons with disabilities.

We will be at the AGU Fall Meeting! If you have any questions you would like to ask JMU faculty at the meeting, please e-mail geophysics@csm.jmu.edu so we can coordinate a time to meet.

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

Stephen Moysey (smoysey@clemsn.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!