



American Geophysical Union

Near-Surface Geophysics Focus Group (NSFG)

Newsletter: March 2015

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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](#).

Early Career Scientists: Check out the [NSFG Early Career website](#).

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

1. AGU Updates

1.1 GSSI Student Grant

Online applications for the GSSI student grant opened 31 January 2015. For more details, see the [GSSI student grant website](#) and the [AGU research grants and fellowships page](#).

The new student grant is established by GSSI (Geophysical Survey Systems INC). The goal of the grant is to support NSFG student members conducting field geophysical research using Ground-Penetrating Radar (GPR) and Electromagnetic (EM) methods. The GSSI Student Grant will be up to US \$2000 and in addition it can include loan of field instrumentation by GSSI.

This is an annual award. Applications will open 31 January and will close by 15 March. The first award will be given in May 2015. Applications will be submitted online through the [AGU grants application website](#). Each application should include: Personal details (CV) and transcripts; Proposal narrative including research objective, benefit, methods and plan (not to exceed two pages); Proposed budget, including financial and equipment needs, and brief budget justification; One letter of support from research faculty advisor.

1.2 2015 Fall Meeting Session Proposals

Session proposals for the 2015 Fall AGU meeting can be made [online](#). The deadline for proposing sessions is 22 April 2015.

1.3 Union Awards, Medals, and Prize Nominations

Deadline for Nominations: 15 March 2015

Did you know that AGU has 22 Union Awards, Medals, and Prizes, plus the Union Fellows program? Surely there are NSFG members deserving recognition for their contributions to science and society. If you have someone in mind that you would like to see nominated from NSFG, review details on the [AGU Honors website](#) and [contact George Tsoflias](#) (tsoflias@ku.edu), Nominations Committee Chair.

2. Tech-Transfer Courses & Training

2.1 Meeting the Challenges of Fractured-Rock Aquifers with Borehole Geophysical Methods

Dates: 13 - 17 April 2015

Registration cost: \$375

Location: USGS Leetown Science Center, Kearneysville, WV

[Website](#)

This U.S. Geological Survey workshop will focus on borehole geophysical methods for investigation of fractured-rock aquifers. Methods will include borehole imaging, full waveform sonic, heat-pulse and electromagnetic flowmeters, and fluid-electrical conductivity and temperature differencing. Participants will be introduced to principles, field data collection techniques, and methods for data analysis through lectures, field demonstrations, and hands-on exercises. The course is limited to 20 participants and

open to USGS, other Federal agency, State, and University personnel. For registration information, contact [Fred Day-Lewis \(daylewis@usgs.gov\)](mailto:daylewis@usgs.gov).

2.2 Multichannel Analysis of Surface Waves (MASW) Workshop

Dates: 19 – 20 May 2015

Registration cost: free

Location: [Kansas Geological Survey](#) (KGS), Lawrence, Kansas

[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.

3. Upcoming Conferences and Workshops

3.1 SAGEEP 2015

Submission Deadline: *closed*

Meeting Dates: 22-26 March 2015

Meeting Location: Austin, Texas

[Visit the Conference Website](#)



SAGEEP 2015 Update: Online Registration Closes March 6!

March 6 is the deadline for [online registration](#) for SAGEEP 2015. Below is some information on key SAGEEP events that should help you select events of interest to you and plan your travel to Austin. Many of the “extra” events described below have limited space and are available on a first-come, first-served basis. Please register as soon as you can to ensure we can save a spot for you. Keep checking the [conference website](#) for the latest information.

Technical Program and Abstracts

233 abstracts for oral and poster presentation have been accepted for SAGEEP and presentation dates and times have been set. You can find a list of abstracts and papers [here](#). Contact technical chair [Brad Carr \(bcarr1@uwo.edu\)](#) for further information.

Conference Schedule and Special Events

In addition to the stellar technical program, we have several extracurricular events planned to introduce you to Austin and to other attendees. We highly encourage you to join us for any or all! We've tried very hard to maximize the enjoyment and minimize the cost. Below is a brief summary of the schedule. Please check the [preliminary schedule](#) for further scheduling information.

Sunday, March 22

- Pre-Conference Tours/Events
- Icebreaker & Student Event
- Short Courses

Monday, March 23

- Opening Session
- Best of EAGE's NSGS
- Geoscientists *Without Borders*® Luncheon
- Technical Sessions
- Outdoor Equipment Demonstrations/Texas BBQ

Tuesday, March 24

- Technical presentations and Posters
- EEGS/NS Community Luncheon and Forum

- Happy hour (with a ticket for one free beer) in the poster area at the close of the day
- Conference Evening at Max's Wine Dive

Wednesday, March 25

- Technical presentations and posters
- Student Career Luncheon and Forum
- Happy hour (and another free beer ticket!) at the poster area, which may morph into an informal closing party on the hotel patio and lawn

Thursday, March 26

- Short Courses (passive seismic, borehole geophysics, and water-borne geophysics)
- Full Day Field Trip, "Geologic and Engineering Wonders of Austin"

Final Notes

Remember that SAGEEP immediately follows SXSW, a major music, film, and interactive festival with strong international appeal. We have set aside some rooms at the conference hotel ([Sheraton at the Capitol](#)) beginning the Wednesday before SAGEEP (March 18th) for those who wish to come a few days early and catch some [SXSW](#). Please make your hotel reservations early!

Local committee members [Dennis Mills](#) (dmills@expins.com), [Doug Laymon](#) (doug.laymon@tetrattech.com), Brad Carr, and [Jeff Paine](#) (jeff.paine@beg.utexas.edu) look forward to seeing you in Austin! Please let us know if there's anything you need as you make your plans to attend this special SAGEEP.

3.2 NovCare 2015 International Conference

Submission Deadline: *closed*

Meeting Dates: 19-21 May 2015

Meeting Location: Lawrence, Kansas

[Visit the Conference Website](#)



The **NovCare 2015** International Conference (Novel Methods for Subsurface Characterization and Monitoring: From Theory to Practice) will take place 19-21 May 2015 at the University of Kansas in Lawrence, Kansas, a delightful college town in the central United States. This conference, organized by the University of Kansas, Michigan State University, the Helmholtz Centre for Environmental Research, and the University of Tübingen, is the fourth conference in a series that has proven to be an excellent forum for exchanging ideas and experiences related to the challenges of subsurface characterization and

monitoring. Previous conferences in the series were in Leipzig in 2009, Cape Cod in 2011, and Leipzig again in 2013.

NovCare 2015 will again provide an outstanding platform for researchers and practitioners from all over the world to share research on innovative methods for characterization and monitoring of aquifers, soils, and watersheds. The six thematic categories of **NovCare 2015** are **(1)** integrated characterization of the unsaturated and saturated zones, **(2)** characterization at the interface (stream-aquifer interactions, coastal settings, etc.), **(3)** opportunistic characterization (natural/anthropogenic stimuli and tracers of opportunity), **(4)** new tools for watershed characterization, **(5)** geotechnical site characterization, and **(6)** long-term monitoring.

Invited speakers for NovCare 2015 from the geophysics community include Rick Miller, Rosemary Knight, Esben Auken, and Jens Tronicke.

We cordially invite you to participate in the conference and present your work. [Further information is available online.](#)

3.3 77th EAGE Conference & Exhibition

Submission Deadline: *closed*

Meeting Dates: 1-4 June 2015

Meeting Location: Madrid, Spain

[Visit the Conference Website](#)



Near surface focus-topics for the conference call for abstracts are listed below; see conference website for a full list:

- Environmental and Hydrological Issues Related to Unconventional Resource Exploitation
- Characterization and Monitoring of Hydrocarbon Polluted Sites
- Exploration Applied to Water Resources Estimation and Management
- Geophysical Site Characterization Applied to Climate Change Evaluation
- Geophysical Investigation and Monitoring of Shallow Hazards
- Geophysical Investigation and Monitoring for Induced Seismicity
- Near-surface Characterization for Hydrocarbon Prospecting
- Risk Assessment of Shallow Sub-seabed
- Site Investigation for On- and Off-shore Engineering

Workshop on “Full Waveform Inversion for Near-surface Characterization”

This one-day workshop will be held on 1 June 2015. The workshop will highlight the state of the science and critical future directions in using accurate forward modeling programs in full-waveform inversion algorithms to obtain sub-wavelength resolution images of the near surface. Recently successful field data applications of FWI have been published in the non-destructive material testing using ultrasonics, the prospecting of the near-surface using ground penetrating radar, and the reconstruction of elastic properties from shallow seismic Rayleigh waves. During the workshop recent developments will be discussed and it is expected that the workshop will include presentations about the theoretical background, synthetic examples, and several case histories for ultrasonics, shallow seismics and ground penetrating radar applications. The workshop shall consist of oral and poster presentations depending on the number of submissions. Sufficient time will be given for discussion to allow for the exchange of knowledge and experiences.

[Additional information is available online.](#) For more information please [contact Thomas Bohlen \(thomas.bohlen@kit.edu\)](#) or [Jan van der Kruk \(j.van.der.kruk@fz-juelich.de\)](#)

3.4 6th International Workshop on Magnetic Resonance

Submission Deadline: *closed*

Meeting Dates: 8 – 10 June 2015

Meeting Location: Aarhus, Denmark

[Visit the Workshop Website](#)



We are glad to invite the community to this event Denmark hosted by the HydroGeophysics Group, Aarhus University.

We like to invite newcomers to the world of MRS and therefore we offer a short course on MRS on June 6 – 7. Here we will cover all aspects of MRS including examples on how these data can be used in hydrological modeling. We have gotten prominent experts from all over the world to give the lectures.

The workshop will focus on the recent advances in nuclear magnetic resonance (NMR) measurements for near-surface characterization. The most important findings will be presented in the areas of:

- Magnetic Resonance Sounding (MRS) / Surface NMR
- Borehole NMR
- Laboratory NMR
- Integration of NMR with hydrologic modeling
- Instrumentation
- Case studies

Look forward to see geophysicist, geologists and hydrologist in Aarhus in June!

3.5 MARELEC 2015

Submission Deadline: *closed*

Meeting Dates: 16 - 19 June 2015

Meeting Location: Philadelphia, PA

[Visit the Conference Website](#)



The conference technical committee invites paper and poster proposals in the broad areas of marine electromagnetics concerned with theoretical development and modeling, measurement and analysis, together with case studies where appropriate.

The topics of interest are: Electromagnetic Surveillance & Communication Systems, Vessel Electromagnetic Signature Prediction and Control, Seafloor & Sub-Bottom Electromagnetic Exploration and Oceanographic Electromagnetics.

Marelec 2015, the 9th international conference on marine electromagnetics will be held at the Bossone Research Enterprise Center, Philadelphia, USA from 16 – 19 June 2015.

Presentations are supported by an exhibition of the leading manufacturers and service providers. There are only 3 exhibit booths remaining and limited sponsorship opportunities available.

3.6 Near-Surface Asia Pacific Conference

Submission Deadline: *closed*

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.

3.7 Near Surface Geoscience 2015

Submission Deadline: 15 April 2015

Meeting Dates: 6 – 10 September 2015

Meeting Location: Turin, Italy

[Visit the Conference Website](#)



Near Surface Geoscience 2015 is actually three conferences in one! Participants can attend the [21st European Meeting of Environmental and Engineering Geophysics](#), the [1st Conference on Proximal Sensing Supporting Precision Agriculture](#), or the [1st European Airborne Electromagnetics Conference](#). In addition, there will be several workshops available on 6 September.

3.8 Society of Exploration Geophysicists 85th Annual Meeting

Submission Deadline: 1 April 2015

Meeting Dates: 18 - 23 October 2015

Meeting Location: New Orleans, LA

[Visit the Conference Website](#)



The [2015 Annual Meeting](#) Technical Program Committee invites you to submit papers for consideration for the 2015 New Orleans Technical Program. Abstract submission begins 4 March, and the deadline for submissions is 1 April. Start preparing your papers for submission by reading the updated [2015 Abstract Kit](#).

3.9 3rd International Conference on Engineering Geophysics

Submission Deadline: 1st week of May 2015

Meeting Dates: 15 – 18 November 2015

Meeting Location: Al Ain, United Arab Emirates

[Visit the Conference Website](#)



The United Arab Emirates University (UAEU) and Al Ain City Municipality (AAM) in partnership with the Society of Exploration Geophysicists (SEG) are proud to announce the third edition of the International Conference on Engineering Geophysics (ICEG). This third edition will take place 15-18 November 2015 on the grounds of the UAEU in the Conference Auditorium of the Crescent Building.

The success of the first and second ICEGs is reflected by the number of participants and the great interest shown by and feedback from both local authorities and the international geo-community working with geophysical methods applied to engineering, environmental, archaeological, geotechnical, and forensic problems. Overwhelming encouragement from this community has led to the third in the series and decision to extend the fields of interest to a wider range of near surface related specialties including groundwater, time-lapse, security, seismicity, and geothermal to name a few options. Beyond this 2015 event, this world class series will be broadened to allow sharing of the event with other regional partners with equivalent enthusiasm for the application of geophysics to near-surface problems.

In addition to the regular conference program, [Oz Yilmaz](#), the 2015 SEG DISC, will deliver a full day course on *Engineering Seismology: With Applications to Geotechnical Engineering* on 14 November 2015. [Learn more about the DISC at ICEG 2015](#).

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

[Burke Minsley \(bminsley@usgs.gov\)](mailto:bminsley@usgs.gov)

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!