

November 2011 Newsletter of the AGU Near-Surface Focus Group

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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](#).

AGU NS Membership as of November 2011:
Primary affiliation: 740 members; Secondary: 2591 members

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1. 2011 Fall AGU Meeting
 - 1.1. Outstanding Student Paper/Poster Award judges needed for Near Surface Fall meeting sessions (from George Tsoflias)

Dear NS Colleagues:

We would like to ask for your help in judging student presentations at the Fall Meeting Near Surface sessions. NS student papers and posters at AGU have been consistently of the highest quality and have earned the distinction of AGU Outstanding Student Presentations. We would like to ask for your help again this year in judging student presentations and ensuring that deserving work by NS students is recognized.

AGU has revised and streamlined the process of judging student presentations. Judges will use the new online OSPA scheduling system to select the student talks they would like to evaluate, each judge will be provided with pre-printed judging forms (with names of student and judge), scoring will be done electronically (including mobile apps), and judges will be identified at the meeting by “judge” ribbons.

If you would like to serve as an OSPA judge (even in one NS session, oral or poster), please email [George Tsoflias](#),

[Xavier Comas](#), or [Lu Pellerin](#) by 10 November. We will give you access to the online scheduling tool where you will be able to select presentations to evaluate based on your interests and conference attendance schedule.

Thank you for the support.

George, Xavier, Lu

1.2. Near-Surface Geophysics final session schedule

A total of 139 NS abstracts were received resulting in 6 oral sessions and 7 poster sessions. Approved Near-Surface Geophysics sessions for the 2011 [AGU Fall Meeting](#) are as follows:

Monday, 5 December 2011:

NS11B: Near Surface Geophysics General Contributions I: 8:00 AM - 10:00 AM; Room 3007

NS11A. Hydraulically Fractured Systems and Thermo-Hydro-Mechanical Problems Relevant to Environmental Engineering Posters: 8:00 AM - 12:20 PM; Halls A-C

NS12A. The Role of Mineral Water Interface in Understanding Geophysical Signals: 10:20 AM - 12:20 PM; Room 3007

NS13A. From Pore-Scale to Basin-Scale: Geophysical Methods for Groundwater Evaluation and Management II: 1:40 PM - 3:40 PM; Room 3007

NS14A. Novel Techniques Applied to Near-Surface Geophysical Problems I: 4:00 PM - 6:00 PM; Room 3007

Tuesday, 6 December 2011:

NS23A. Near Surface Geophysics General Contributions II Posters: 1:40 PM - 6:00 PM; Halls A-C

Wednesday, 7 December 2011:

NS33A. From Pore-Scale to Basin-Scale: Geophysical Methods for Groundwater Evaluation and Management I Posters: 1:40 PM - 6:00 PM; Halls A-C

NS33B. Novel Techniques Applied to Near-Surface Geophysical Problems II Posters: 1:40 PM - 6:00 PM; Halls A-C

Thursday, 8 December 2011:

NS41A. Exploiting GPR and Seismic Wavefield Properties for Characterization of the Shallow Subsurface I: 8:00 AM - 10:00 AM; Room 3005

NS42A. Seismic Characterization of Unconsolidated Sediments I: 10:20 AM - 12:20 PM; Room 3005

NS43A. Exploiting GPR and Seismic Wavefield Properties for Characterization of the Shallow Subsurface II Posters: 1:40 PM - 6:00 PM; Halls A-C

Friday, 9 December 2011:

NS51A. Cryosphere Geophysics I Posters: 8:00 AM - 12:20 PM; Halls A

NS51B. Near Surface Geophysics General Contributions III Posters: 8:00 AM - 12:20 PM; Halls A-C

1.3. Hydrogeophysics final session schedule

Thursday, 8 December 2011:

H41D. Geophysics for the Critical Zone I Posters: 08:00-12:20; Halls A-C

H42F. Hydrogeophysics: Monitoring and Modeling of Hydrological Processes From Lab to Field Scale I: 10:20 AM - 12:20 PM; Room 2020

H43D. Hydrogeophysical Data Fusion for Estimation and Prediction in Hydrologic Systems I Poster: 13:40-18:00; Halls A-C

H43E. Hydrogeophysics: Monitoring and Modeling of Hydrological Processes From Lab to Field Scale II Posters: 1:40 PM - 6:00 PM; Halls A-C

H44B. Characterization and Noninvasive Imaging of Plant Roots and Other Hydrobiophysical Processes Across Scales I: 16:00-18:00; Room 3012

Friday, 9 December 2011:

H51A. Characterization and Noninvasive Imaging of Plant Roots and Other Hydrobiophysical Processes Across Scales II Posters: 8:00-12:20; Halls A-C

H52A. Geophysics for the Critical Zone II: 10:20-12:20; Room 3010

H52C. Hydrogeophysical Data Fusion for Estimation and Prediction in Hydrologic Systems II: 10:20-12:20; Room 3014

1.4. Near Surface Geophysics Focus Group Luncheon (ticket required)

The NS luncheon at the Fall AGU meeting will be held from 12:30-13:30 on Tuesday, 6 December at the Intercontinental Hotel (Ballroom C). This event is the opportunity to learn about NS activities, engage with you fellow NS members and the NS officers, and provide feedback on how the focus group can further support the needs of the NS community. This is a ticketed event and we strongly encourage you to purchase lunch tickets in advance when you register online for the meeting.

We are offering 30 free tickets to students, for attending the NSFG luncheon at the fall AGU Meeting on 6 Tuesday December, from 12:30-1:30 pm. If students are interested in receiving a ticket, please email [Seth Campbell](mailto:Seth.Campbell@agupubs.org). Students with primary affiliation to NSFG will receive tickets on a first come first serve basis until 10 November 10. If free tickets are still available after November 10, they will be given to all students who request tickets (NSFG and non-NSFG affiliated students) on a first come first serve basis until 20 November. Please note that tickets will not be available at the door and arrangements must be made prior to November 20th to gain access to the NSFG luncheon

1.5. Near Surface Focus Group Hydro-geophysics social (from Kamini Singha)

Join us at the NS FG Hydro-geophysics social on 6 December, Tuesday evening at the Hotel Utah Saloon, 500 4th Street @ Bryant, San Francisco at 6:30.

2. Announcement: Help the Near Surface Focus Group Fund Make a Bigger Impact! (from Lu Pellerin)

Your support of fellow AGU Near Surface members and the next generation of student scientists is vitally important. With increased donations, we will be able to expand programming and NSFG initiatives to subsidize student tickets and registrations for Fall Meeting events, fund special student travel grants, honor distinguished and early-career NS member achievements, and provide travel support for NSFG award winners.

Help the NSFG increase our impact by [making your donation](#) of \$200, \$100, or \$20 today! Any amount will be greatly appreciated. Thank you for your support!

Don't forget that all Supporting Members who donate \$120 or more in 2011 will have [access to AGU's new and improved Donor Lounges](#) at the 2011 Fall Meeting!

3. Announcement: AGU-SEG Collaboration Committee (from Lu Pellerin)

AGU-SEG Collaboration: In 2012 SEG will be sponsored by the NSGS and we are proposing a 'Best of AGU' special session. We seek folks to organize and chair the session. For more information contact [Lu Pellerin](#).

4. Announcement: British Geophysical Association / Royal Astronomical Society Conference Announcement: The Geophysics of the Cryosphere and Glacial Products, 9-10 February 2012 (from Bernd Kulesa)

Dear colleagues,

On behalf of the Organizing Committee, at Swansea University and the British Antarctic Survey, I have the great pleasure to announce the British Geophysical Association / Royal Astronomical Society / The Geological Society - New Advances in Geophysics Meeting 2012 on the 'The Geophysics of the Cryosphere and Glacial Products: Properties, Processes and Technical Advances', which will take place on 9-10 February 2012 in the Burlington House, Home of The Geological Society of London, UK.

We are excited to have Prof. David Vaughan (British Antarctic Survey, UK), Prof. Robin Bell (Lamond-Doherty Earth Observatory, USA) and Prof. Christian Hauck (University of Fribourg, Switzerland) as our keynote speakers at the event. It is currently our intention that an ['Annals of Glaciology' volume](#) will be produced from the conference.

We cordially invite international contributions from all areas of geophysics and associated disciplines as applied or relevant to present-day ice masses, ice cores, frozen ground or snow. Likewise, we are keen to receive contributions on the application of geophysical and associated techniques to glacial materials and products to reconstruct past ice masses, dynamics, and hydrology.

On our [conference Web site](#) you will find all relevant and more detailed information, and are able to submit an abstract (deadline: 16 December 2012) and/or register (deadline: 13 January 2012) for the event. Please also find all key information attached below.

We look forward to seeing you at the meeting on 9-10 February. Please do not hesitate to contact the Chair of the

Organizing Committee, Bernd Kulesa, if you have any queries

Best wishes,

[Bernd Kulesa](#)

College of Science, Swansea University, UK

5. Call for papers: GPR2012: deadline 15 November 2011 (from Jan van der Kruk)

The 14th International Conference on Ground Penetrating Radar (GPR2012) will be held on 4-8 June 2012. Tongji University in Shanghai, China is the host institution (General Chair: Prof. [Xie Xiongyao](#)).

The goal of GPR2012 is to provide an international forum for scientists, engineers, and all kinds of GPR end users to discuss and exchange the advancement of GPR technology (advanced modeling, processing, inversion, and novel GPR systems and antennas) and its applications in hydrogeophysics, geophysical exploration and mining, archaeology and geology, civil and geotechnical engineering, concrete, pavement and material characterization, etc.

The deadline for submitting abstracts (limited to 300 words) is 15 November 2011

The deadline for the Camera ready paper (4 to 6 pages) submission is 15 February 2012

For more information, please visit the [GPR2012 Web site](#).

6. Call for proposals: SAGEEP 2012 Making Waves: Geophysical Innovations for a Thirsty World (from Bruce Smith)

Members of the near-surface geophysics community are invited to propose and chair a session(s) for the 25th Anniversary meeting of the Symposium on the Application of Geophysics to Environmental and Engineering Problems (SAGEEP) to be held in Tucson, AZ, 25-29 March 2012 at the Hilton Tucson El Conquistador Tucson, Arizona USA

Meeting Chair: [Moe Momayez](#), University of Arizona

Technical Chair: [Gail Heath](#), Idaho National Laboratory

[SAGEEP 2012 Online Submissions](#)

The SAGEEP Program Committee is soliciting proposals for joint AGU-EEGS sessions. Accepted sessions will be considered as "invited" under the collaborative agreement between the AGU NSFG and EEGS. Session proposals must focus on scientific results and/or their applications. The Technical Program Committee will consider proposals on a rolling basis, so conveners will be notified of the status shortly after submission. The committee plans to have sessions in place by the end of November. Session proposers may request poster or oral formats. The Technical Program Committee will attempt to honor all requests, but may not be able to do so for all oral sessions. Approved sessions, including session title, description and convener, will be available to authors submitting papers on the online submission site. A list of current sessions, including approved proposed sessions,

will also be available on this web page.

7. Opportunities: Geotechnical properties of the upper 5m of the seafloor through remote sensing techniques (from Juan Lorenzo)

The Naval Facilities Engineering Service Center (NAVFAC ESC) provides ocean engineering program management and technical services to the U.S. Navy for matters regarding seafloor geotechnical engineering. Two broad agency announcements have recently been posted that seek out technologies and methodologies to determine several geotechnical properties of the upper 5m of the seafloor through remote sensing techniques.

Relevant to note is that several sensors currently provide limited geotechnical information without requiring direct contact with the seafloor. Sub-Bottom Profiling, swath bathymetry, electro-resistivity, seismic refraction, and electromagnetic sensors are all examples of these techniques, several which are frequently utilized with Autonomous Underwater Vehicles (AUV's) and Remotely Operated Vehicles (ROV's).

While many of these sensors provide information on bottom topography and sub-surface layering, no capability currently exists to utilize those approaches-or a combination of approaches-to estimate seafloor strength or sediment classification. In addition to potential solutions based on such aforementioned existing technologies, these announcements seek out emerging/developing technologies that may be deemed more appropriate for the subject application.

The Broad Agency Announcements are listed below, and white papers (337215) / proposals (337216) are due by 15 December.

[A--No-Touch Geophysical Strength Properties for Navy Autonomous Underwater Vehicles \(AUV\) And Remotely Operated Vehicle \(ROV\) Systems](#)

[A--BAA - lab results and a preliminary analytical framework to assess the magnitude and uncertainty in geotechnical properties estimated from the results of offshore geophysical surveys](#)

8. Open positions:

8.1. Post Doctoral Position in Biogeophysics: Geoelectrical Signatures of Microbial Biofilms

The Biogeophysics Group at Oklahoma State University has an immediate opening for a scientist at the postdoctoral level. The position is for three years. The objectives include: (i) evaluating the contribution of biofilm components to geoelectrical signatures using field relevant organisms, (ii) determining if the geoelectrical signatures can be used to quantify the rates of biofilm formation and biogenic mineral accumulation in subsurface media, (iii) evaluating the use of reactive transport models to predict the geophysical response associated with the development of biofilms in field conditions. Clogging of porous media by microorganisms using electrical

geophysical techniques will also be investigated. It is expected that these investigations will develop standardized geophysical methods as tools to accurately assess microbial metabolic activity at DOE contaminated sites. The preferred candidate will have a PhD in Geophysics (with strong emphasis on electrical techniques) or relevant field (e.g., environmental engineering, environmental microbiology, biophysics) with experience related to microbial community analysis using molecular biology techniques and/ or the cultivation of anaerobic prokaryotes, biofilms, bioclogging, electrochemistry, and or biogeophysics. We seek to hire a highly motivated, enthusiastic; and creative individual who is capable of working and thinking independently. The salary is attractive and will include full benefits

Candidates should submit a full CV, including the contact information of three referees, to: Prof. [Estella Atekwana](#) (+1.405.744.6358), Oklahoma State University, School of Geology, 105 NRC, Stillwater, Oklahoma, 74078.

We have a new state-of-the-art biogeophysical laboratory. Oklahoma State University is an equal opportunity/affirmative action employer. Minorities, women, veterans, and persons with disabilities are strongly encouraged to apply. The position will remain open until a suitable candidate is found.

To contribute material to the NS-letter send an e-mail to:

[Xavier Comas](#)

DEADLINE: Material must be received 2 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. AGU requests formatting of e-mail messages