

February 2010 Newsletter of the AGU Near-Surface Focus Group

1. Seth Haines officially appointed to the EOS Advisory Board
2. Joint Assembly Meeting of the Americas, 08-13 August 2010, Foz do Iguassu, Brazil:
  - 2.1. Near Surface Geophysics sessions
  - 2.2. Hydrogeophysics sessions
3. SAGEEP in Keystone, Colorado on April 15, 2010: Workshop on airborne electromagnetic methods
4. Student News: Update from Fall AGU and NS Wiki Reminder
5. Summer of Applied Geophysical Experience (SAGE) 2010

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://nsg.agu.org>

AGU NS Membership as of February 2010:  
Primary affiliation: 691 members; Secondary: 2316 members

=====

1. Seth Haines officially appointed to the EOS Advisory Board (from NS Chair Lee Slater and Seth Haines)

If you look at the masthead of your January 26 2010 issue of EOS you will see that Seth Haines is now officially appointed as the NS member of the EOS Advisory Board. Seth is a research geophysicist with the United States Geological Survey (USGS) in Denver and his interests include the water and environmental impacts of oil and gas production, and the application of seismic methods to various near surface targets, including aquifers and natural gas hydrates.

We very much hope that Seth's official appointment to the EOS Advisory Board will facilitate increased NS-related content and greater NS Focus Group visibility in EOS, as well as enhance the relationship between the NS community and the AGU as a whole. Seth's responsibilities include all aspects of communication between the EOS editors and the NS Focus Group, and this will ideally involve communication that occurs in both directions. EOS represents a very different sort of publication than the AGU journals and offers a rapid turn-around time for material that is considered to be of interest to the broad AGU readership i.e. spanning multiple sections/focus groups. It therefore represents a great forum for rapid communication of timely information (outcomes of workshops/committee/panel meetings, high-impact and/or time-

sensitive research, etc).

If you have ideas for any sort of EOS content (feature articles, columns, news items, members who ought to be recognized in the Geophysicists column, etc.) please contact Seth. Seth will also be working to help the EOS editors identify topics and/or authors for invited feature articles and he will assist with various aspects of evaluating NS- and non-NS-related material submitted for publication in EOS. The global importance of near-surface geophysics is steadily growing and EOS is an easily accessible medium for highlighting the contributions that we as a community make to the AGU and to society as a whole.

Please contact Seth ([shaines@usgs.gov](mailto:shaines@usgs.gov)) with any EOS-related ideas, comments or questions.

---

## 2. Joint Assembly Meeting of the Americas, 08-13 August 2010, Foz do Iguassu, Brazil

### 2.1. Near Surface Geophysics sessions (from Juan Manuel Lorenzo):

Dear NS members:

Thanks for your continued support of our growing group.

We have two more months before the abstract submission deadline on March 31, 2010. We do encourage you to support your students to attend this exciting meeting. We have now five (5) approved Near Surface Geophysics session for the JA meeting in Brazil, this year. Please continue to help the NS focus group grow by submitting your latest exciting work to one or more of these sessions.

#### GPR and EMI Developments and Applications in Agriculture:

Description: Soils and groundwater make up the framework of food production, with aquifers widely used for irrigation. The increase in food production is accompanied with leaching of nutrients and pesticides, depletion of aquifers, soil salinization, etc. This section will present advances and applications of GPR and other EM methods in the shallow subsurface, especially hydrogeophysical applications such as: Modeling electrical- hydraulic relationships and their theoretical limitations, Integration of EM electric-hydraulic models with GPR data, GPR sensitivity to contaminants, Soil water content determination, Time-lapse monitoring of hydrodynamic events.

Primary Convener: Evert C Slob

Primary Convener: Lambot Sebastien

Primary Convener: Jandy De Menezes Travassos

#### Near-surface Geophysics for Prediction and Monitoring:

Description: Globally, populated urban centers, find increasing dependence on an understanding

of the near-surface geo-processes for landslide monitoring, drinking water management, waste disposal, flood control as well as economic resource management. We encourage submission of abstracts to this session that highlight advances in our fundamental understanding of processes at the cross-roads of soil physics, engineering geology and geotechnical engineering.

Primary Convener: Jandyr De Menezes Travassos

Primary Convener: Juan Manuel Lorenzo

Open Reference Data Sets, Software and Control Test Sites:

Description: Near-surface geophysics is an emerging, cross-disciplinary, focus group, at a time when virtual collaborative technology is coming of age. Cross-verification of results and techniques is fundamental to the scientific method. We are looking for new, scientific problems, results, data sets, and software and new results from geophysical control sites in ALL near-surface fields. Time will be allotted at the end of the session to discuss creation of open near-surface community site.

Primary Convener: Juan Manuel Lorenzo

Primary Convener: Jorge Porsani

Radioactivity in the Near Earth Surface Environment:

Description: The quantification of radioactivity in environmental samples has a large number of applications in the earth sciences including young rock geochronology, water-rock interactions in aquifers, water quality, oceanographic studies and evaluation of the effects of continuous exposition of general public to low radioactivity environment. The proposed section intends to gather scientists working in the broad research field of environmental radioactivity. We intend to receive papers on field measurements, laboratory experiments and numerical modeling of radioactivity transfer in the upper crust atmosphere and hydrosphere.

Primary Convener: Joselene Oliveira

Primary Convener: Fernando Brenha Ribeiro

Technological Developments in Near-surface Geophysics:

Description: In geotechnical and hydrological investigations, resource exploration and humanitarian undertakings, new technologies and the continuing development of existing technologies are needed to enhance resolution, increase efficiency and recover physical properties from geophysical measurements. Developments are needed in instrumentation and software for land, marine and airborne systems. We invite papers that advance GPR, seismic, geoelectric, electromagnetic and potential field methods. New and ongoing developments in instrumentation, processing, modeling or inversion as applied to the near surface are welcome.

Primary Convener: Sergio Luiz Fontes

Primary Convener: Louise Pellerin

The Meeting of the Americas (<http://www.agu.org/meetings/ja10/>), will be held 08-13 August 2010 in Foz do Iguacu, Brazil. The Iguazu World Natural Heritage Park will provide a spectacular backdrop to this Assembly which is sponsored by the most important Earth Science and Space Community Organizations of the Americas.

Regards,

NS Program Committee for JA 2010

Jandyr Travassos, Brazil [jandyr@on.br](mailto:jandyr@on.br) [jandyr@on.br](mailto:jandyr@on.br) [jandyr@on.br](mailto:jandyr@on.br)

Juan Lorenzo, [gllore@lsu.edu](mailto:gllore@lsu.edu) [gllore@lsu.edu](mailto:gllore@lsu.edu) [gllore@lsu.edu](mailto:gllore@lsu.edu)

## 2.2. Hydrogeophysics sessions (from Niklas Linde):

### Advances in Hydrogeophysics:

Description: There is growing recognition of the value of near-surface geophysical methods for hydrological characterization and monitoring. Such methods are often cost-effective compared to direct sampling, and can provide more complete spatial coverage and improved spatiotemporal resolution over traditional hydrological measurements. We invite contributions from all areas of hydrogeophysics that address (i) new observations and interpretations of the relationships between geophysical and hydrological properties; (ii) new or improved hydrogeophysical measurement techniques; and (iii) novel applications of existing techniques.

Conveners: James Irving and Remke L. Van Dam

-----

## 3. SAGEEP in Keystone, Colorado on April 15, 2010: Workshop on Airborne EM for Environmental and Engineering applications (from Jeff Paine):

Jeff Paine (Univ. Texas; [jeff.paine@beg.utexas.edu](mailto:jeff.paine@beg.utexas.edu)) and Paul Bedrosian (USGS; [pbedrosian@usgs.gov](mailto:pbedrosian@usgs.gov)) are moderating an all-day workshop on airborne electromagnetic methods at SAGEEP in Keystone, Colorado on April 15, 2010. The use of airborne electromagnetic (AEM) methods for environmental, hydrogeological and engineering purposes continues to expand as more organizations recognize the benefits of rapid and extensive coverage offered by airborne instruments. This expansion has been augmented by advances in instrumentation, data acquisition and processing, and inversion. This technical, interactive workshop will highlight the capabilities of modern helicopter-borne and fixed-wing AEM systems (especially the newer time-domain systems) together with case studies on the use of AEM data for environmental, engineering, and hydrogeological investigations. Representatives from several AEM companies will be speaking as well as leaders in the field of AEM data processing and application. Go to [www.eegs.org/sageep/](http://www.eegs.org/sageep/) for conference and workshop registration information.

-----

#### 4. Student News: Update from Fall AGU and NS Wiki Reminder (from NS Student Rep. Elliot Grunewald):

Students had lots of great opportunities to interact within the NS focus group this year at AGU. Casual student lunch outings and evening social events were organized throughout the week, allowing students from a diverse range of universities and countries to meet and share their experiences in near surface geophysics. A large number of students (more than 40!) were also able to attend the NS luncheon, thanks to the generous support of our sponsors, which covered the costs of admission for students. The enhanced student presence at the luncheon allowed more focus group members to communicate directly with students and gave students a chance to learn how to become more actively involved in the focus group. The luncheon also provided students an opportunity to express their ideas for improvements, which included making student research more visible at meetings and consolidating information relevant to students from resources within AGU and other professional organizations (SEG, EAGE, SAGEEP, EGU, etc.).

The tremendous level of student activity at this year's AGU made the meeting more rewarding and enjoyable for everyone involved. Students are strongly encouraged to stay active in the focus group throughout the year. One of the best ways for students to get involved is to set up an account on the NS wiki and to contribute content and ideas for improvements. As a reminder, the wiki is located at [ns-students.pbworks.com](http://ns-students.pbworks.com). Students who were registered with NS as of last summer will already have an account associated with the email address at which they receive this newsletter. If your email address shows up as unregistered, please email Elliot Grunewald ([elliotg@stanford.edu](mailto:elliotg@stanford.edu)) to setup an account.

---

#### 5. Summer of Applied Geophysical Experience (SAGE) 2010

The SAGE program is a three-week graduate and advanced undergraduate course of instruction and research in exploration geophysics based in Santa Fe, New Mexico, USA. We acquire, process and interpret reflection/refraction seismic, MT/EM, GPR, gravity & magnetics data at a shallow archeological site and at the basin scale. We particularly encourage 1) qualified students who are U. S. citizens or Permanent Residents (PR) who will have completed their junior year and completed the requisite physics and math before SAGE, and 2) qualified U. S. graduate students in all stages of their careers to apply. All qualified applicants, including international and Professional, are welcome.

For students qualifying as US/permanent resident undergraduates, SAGE will begin on Thursday, June 17 (arrival on Wednesday, June 16). Stipend and travel support will be automatic if accepted, and the \$450 fee will be waived. Foreign and all graduate students will arrive on June 20. The cost is \$450, of which \$100 is due with the application. For all students, SAGE will extend through evening dinner on Sunday, July 11, 2010.

The deadline for SAGE 2010 is 5:00 PM local time on Friday, March 26. A letter of interest, two references, proof of insurance, and complete transcripts (informal OK) are required. For application, reference forms, further details and a description of the program refer to <http://www.sage.lanl.gov>, or contact Georgia at +1 (505) 663-5291 or e-mail [georgia@lanl.gov](mailto:georgia@lanl.gov).

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

Xavier Comas [xcomas@fau.edu](mailto:xcomas@fau.edu)

**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 to be as simple as possible (no bold characters (use ALL CAPS instead), no color font, or other special formatting of text and paragraphs). E-mail attachments cannot be distributed.