



**NEAR-SURFACE GEOPHYSICS FOCUS GROUP
NEWSLETTER: DECEMBER 2013**

In brief:

1. What you need to know for the 2013 AGU Fall Meeting:

- 1.1. NSFG Fall Meeting Business Luncheon: 10 Dec., 12:30-1:30PM, San Francisco Marriott Marquis Golden Gate C3 (Business luncheon SOLD OUT. No tickets available on site)
- 1.2. NSFG Student and Early Career Networking Event
- 1.3. Joint Near Surface-Hydrogeophysics Social Event: Hotel Utah (500 4th St.), 11 Dec., 7:30PM
- 1.4. Exploring Careers in Natural Hazards Town Hall: 12:30-1:30PM, 12 Dec., 2005 Moscone West
- 1.5. Hydrogeophysics Technical Committee Meeting: 6:45-7:45AM, 10 Dec., 114 Moscone North
- 1.6. Volunteer as an OSPA Judge to Evaluate Student Presentations
- 1.7. Quick Reference for NS-Related Sessions (*Formatted to 1 page for easy printing!*)

2. Nominations Request: SEG 2015 Spring Distinguished and Honorary Lecturer: Due 8 Jan., 2014

3. Upcoming Conferences and Workshops

- 3.1. SAGEEP 2014 (16-20 March, 2014) – Abstract submission extended to 16 Dec., 2013
- 3.2. EGU 2014 (27 April – 02 May, 2014) – Innovative sensing techniques and data analysis approaches to increase hydrological process understanding – Abstracts due 16 January 2014

4. Position Announcements

- 4.1. Senior Geophysicist, De Beers, South Africa
- 4.2. Staff Scientist or Environmental Engineer, Mundell & Associates

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://sites.agu.org/nsg/>

Follow NSFG on Twitter @NS_AGU!

**1.1 NSFG Fall Meeting Business Luncheon (from George Tsoflias)
(Business luncheon SOLD OUT. No tickets available on site)**

Time: 12:30-1:30PM, Tuesday, 10 December, 2013

Location: San Francisco Marriott Marquis, Room: Golden Gate C3

The Fall AGU Business Meeting and Luncheon of the Near Surface Focus Group will be held on 10 December 2013, 12:30 PM - 1:30 PM, at the San Francisco Marriott Marquis Golden Gate C3. Tickets can be purchased at the conference registration in Moscone West (<http://fallmeeting.agu.org/2013/events/near-surface-focus-group-business-meeting-and-luncheon/>).

This year NSFG is honored to host Dr. Valentina Socco from Politecnico di Torino, the 2013 Society of Exploration Geophysicists (SEG) Near Surface Honorary Lecturer, at the Fall AGU Meeting Luncheon. The title of the presentation is "Surface wave analysis for near-surface characterization: Introduction, theme and variation". Information about the 2013 SEG Near Surface Honorary Lecture is available online at <http://www.seg.org/education/lectures-courses/honorary-lecturers/nearsurface/socco/abstract>.

1.2 NSFG Student and Early Career Networking Event at AGU (from Nedra Bonal and Seth Campbell)

We will be having a joint networking event for students and early careers at the AGU Annual Meeting in December. Please contact Seth Campbell (Seth_Campbell@umit.maine.edu) or Nedra Bonal (nbonal@sandia.gov) for more information. We look forward to seeing you.

1.3 Joint Near Surface-Hydrogeophysics Social Event (from Niklas Linde)

Time: 7:30PM, Wednesday, 11 December, 2013

Location: Hotel Utah, 500 4th Street (cross street is Bryant)

The annual joint NS-HGP get-together is scheduled for 11 December (Wednesday). As usual, will meet up 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 7:30 PM!

1.4 Town Hall Meeting: Exploring Careers in Natural Hazards (from Hans Lechner)

Time: 12:30-1:30PM, Thursday, 12 December, 2013

Location: Rm. 2005, Moscone West

In this Town Hall Meeting, the Natural Hazards Focus Group will present a panel of established professionals, showcasing a variety of opportunities and career paths in the field of natural hazards. This meeting will also provide a forum to engage with a broad range of scientists, disaster management experts and early career scientists, underscoring the importance of integrating a social component into hazards research and communication.

1.5 Hydrogeophysics Technical Committee Meeting (from Niklas Linde)

Time: 6:45-7:45AM, Tuesday, 10 December, 2013

Location: Rm. 114, Moscone North

The Committee members are expected to be present if in town, while those not on the committee are also most welcome to attend and make suggestions for future hydrogeophysics sessions at AGU.

1.6 Volunteer as an OSPA Judge to Evaluate Student Presentations (from Louise Pellerin)

Please consider serving as an OSPA judge during the AGU Fall Meeting. The OSPA program links scientists like yourself with bright, young minds and is an excellent way to interact with students at the Meeting. You can provide them with valuable feedback via presentation scores and comments regarding their scientific research. Students are grateful to hear from scientists in their field and eager to learn from you.

If you have already signed up to be an OSPA judge, thank you! If not, please do so even if it is only 1 or 2 presentations.

Sign-Up is Easy:

- Use your AGU member login to the [OSPA system](#)
- Judges must be AGU members
- Click on “Find Presentations” in the menu at right
- Type in a particular session or paper in the “Quick Search” box at the top and click “Search”
- OR: Search for presentations by keyword, presentation type (oral or poster), location, section/focus group, day, or time
- Students who requested to be judged will be displayed on the screen, along with how many judging slots are open (all students should have 3)

Selecting Students

- Only students who asked to be judged will appear in search results and only students who are not from your institution
- Click on the orange triangle beside each paper’s title, to show details: student’s abstract, institution, and photo (if uploaded).
- Poster presenters have selected a minimum of 2 hours during which they will remain at their poster (this is indicated in the search results)
- You may “bulk add” presentations to your schedule. Simply scroll through the search results, checking the box of each presentation you’d like to add and then click “Add to Schedule.”

Judging Students

- A score sheet button will appear for each student closer to the Meeting
- Can add/remove presentations on this screen up until the Meeting starts- then you cannot remove presentations from your schedule and are responsible for ensuring that they are judged
- Can edit score sheets up until 15 December- all scores must be entered by 11:59 P.M. EST on 15 December
- Judging should be anonymous and judges should leave written feedback for each student- this is the most important part!
- “Criteria for Judging” will appear in the OSPA system in the menu by Thanksgiving

As sessions are cancelled, presentations are moved to different sessions, students withdraw, etc., the list will be updated in the system. You will be notified if you have signed up for one of these presentations.

Thank you for your help - the students very much appreciate it and are looking forward to hearing from you. If you aren’t attending the meeting, no need to respond. If you have any suggestions as to who might be interested in judging, please let me know. If you have any technical questions please contact

Kara Smedley
ospa@agu.org
OSPA Coordinator
Education, Public Affairs, Union

1.7 Quick Reference for NS-Related Sessions at the 2013 AGU Fall Meeting

The following sessions are likely to be of particular interest to members of the NSFG, though there are many other geophysics-related talks distributed throughout other sessions at the meeting. Sessions marked with a * are joint SEG/AGU sessions.

Tuesday – 10 December	Type	Time/Location
*NS21A. Developments and Practical Applications of the Multichannel Seismic-Data Surface-Wave Analysis Method I	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South
NS21B. Geophysical Monitoring and Modeling of Microbial Mediated Processes at Laboratory and Field Scales I	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South
NS21C. Ground Penetrating Radar (GPR) Method: Advanced Research and Case Studies I	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South
NS21D. Monitoring of LNAPL in the Subsurface: Current Trends in Environmental Applications	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South
NS23A. Advances in Airborne Electromagnetics	Poster	1:40 PM - 6:00 PM Hall A-C Moscone South
NS23B. Advances in Archaeological Geophysics I	Poster	1:40 PM - 6:00 PM Hall A-C Moscone South
NS23C. Advances in Near Surface Fracture Studies	Poster	1:40 PM - 6:00 PM Hall A-C Moscone South
NS24A. Geophysical Monitoring and Modeling of Microbial Mediated Processes at Laboratory and Field Scales II	Oral	4:00 PM - 6:00 PM 2000 Moscone West
Wednesday – 11 December		
NS31A. Near Surface Geophysics General Contributions I	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South
NS31B. Geophysical Methods for Groundwater Evaluation and Management I	Oral	8:00 AM - 10:00 AM 2000 Moscone West
*NS32A. Developments and Practical Applications of the Multichannel Seismic-Data Surface-Wave Analysis Method II	Oral	10:20 AM - 12:20 PM 2000 Moscone West
*V32B. Geology, Geophysics, and Flow Modeling of Hydrothermal Alteration in Geothermal and Volcanic Systems I	Oral	10:20 AM - 12:20 PM 310 Moscone South
NS33A. Near Surface Geophysics General Contributions II	Poster	1:40 PM - 6:00 PM Hall A-C Moscone South
NS33B. Advances in Exploration Geophysics I	Oral	1:40 PM - 3:40 PM 2000 Moscone West
*V33C. Geology, Geophysics, and Flow Modeling of Hydrothermal Alteration in Geothermal and Volcanic Systems II	Poster	1:40 PM - 6:00 PM Hall A-C Moscone South
NS34A. Advances in Exploration Geophysics II	Oral	4:00 PM - 6:00 PM 2000 Moscone West
Thursday – 12 December		
NS41A. Geophysical Methods for Groundwater Evaluation and Management II	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South
NS42A. GPR Method: Advanced Research and Case Studies II	Oral	10:20 AM - 12:20 PM 2000 Moscone West
NS43A. Advances in Exploration Geophysics III	Poster	1:40 PM - 6:00 PM Hall A-C Moscone South
NS43B. Advances in Archaeological Geophysics II	Oral	1:40 PM - 3:40 PM 2000 Moscone West
H43L. Hydrogeophysical Characterization of the Critical Zone I	Oral	1:40 – 3:40 PM 3014 Moscone West
H44D. Hydrogeophysical Data Integration and Joint Inversion I	Oral	4:00 – 6:00 PM 3014 Moscone West
Friday - 13 December		
H51F. Hydrogeophysical Characterization of the Critical Zone II	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South
H51G. Hydrogeophysical Data Integration and Joint Inversion II	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South
H51H. Hydrogeophysics: Laboratory to Field Scale Characterization	Poster	8:00 AM - 12:20 PM Hall A-C Moscone South

2. Nominations Request: SEG 2015 Spring Distinguished and Honorary Lecturer (from Louise Pellerin)
Deadline for Nominations: 8 January, 2014

Nominations are now open through 8 January for the 2015 Spring DL and the 2015 Spring HLs: Near Surface, Europe, Pacific South, and South & East Asia. The Near Surface tour has been moved to a spring rotation due to some changes in the business office.

The nomination forms are available from Karline Threadgill (kthreadgill@seg.org); completed forms should be send to Karline. Regional HLs should be chosen preferably from the region of their tour. You should discreetly approach your nominees to inquire about availability and topic. Other than that all proceedings should remain strictly confidential.

If you have any questions, please do not hesitate to ask. Thank you for helping to strengthen this important, high-profile program.

3. Upcoming Conferences and Workshops

3.1 SAGEEP 2014 – Abstract deadline extended to 16 December 2013 (from Jutta Hager)

Conference Date: 16-20 March, 2014

Website: [EEGS Website](http://www.eegs.org) (www.eegs.org)

SAGEEP (Symposium on the Application of Geophysics to Engineering and Environmental Problems) 2014 will be held 16-20 March at the Boston Marriott Copley Place Center in the heart of Boston, Massachusetts. You may contact SAGEEP Technical Chair [Mario Carnevale](#) with session proposals at any time.

SAGEEP 2014 is moving right along with over 110 abstracts received to date. The abstract submission deadline has been extended to December 16th to give potential authors additional time to participate. We have named our Keynote Speaker, Bill Eustes, who is also the SPE Distinguished Lecturer for 2013-2014 and have confirmed 4 short courses:

- Google Earth Applications in Education and Research
- Overview of Utility Locating Technologies
- Environmental Applications of the Induced Polarization Method
- MASW

In addition, we are working on a Hydrofracture Methods workshop and have set up a Geological and Engineering Tour of Boston field trip.

3.2 EGU 2014 – Session Announcement: Innovative sensing techniques and data analysis approaches to increase hydrological process understanding (from Heye Bogena)

Conference Date: 27 April- 02 May, 2014

Location: Vienna, Austria

Session Details Website: <http://meetingorganizer.copernicus.org/EGU2014/session/14296>

The experimental catchments are field laboratories with sophisticated long-term measurements of hydrological processes. They are not only sources of data but also sources of knowledge. Understanding of hydrological systems is limited by the frequency and spatial distribution of co-located multi-parameter observations. Wireless distributed sensing platforms are a key technology to address the need for higher resolution data. The session will focus on the presentation and discussion of recent developments in experimental hydrology and distributed sensing techniques. We solicit contributions related but not limited to the following topics:

- i. Innovative distributed sensing techniques to advance hydrological understanding (e.g. wireless network, fiber optic etc.)
 - ii. Distributed sensing applications (e.g. calibration and validation of remote sensing data, improved characterization of hydrological fluxes, development of upscaling and downscaling techniques, irrigation systems)
 - iii. Investigations related to the operational capability of wireless networks (including analysis of signal attenuation, network performance, reliability, security, efficient data propagation strategies, and network applicability) and sensors
 - iv. Methods for the evaluation, visualisation and interpretation of distributed data sets (e.g. soil moisture, micrometeorology, groundwater)
 - v. Analysis of hydrological patterns at different scales and recent ongoing measurements in the experimental river basins throughout Europe (or elsewhere)
 - vi. impact of different measures on water regime in the experimental basins identified by field measurements
 - vii. unusual and unexpected hydrological phenomena identified by measurements that could not be explained by existing theoretical considerations
 - viii. gaps in knowledge on integrated basin responses to present and future anthropogenic and/or climate impacts
-
-

4. Position Announcements

4.1 Senior Geophysicist, De Beers Group Exploration, South Africa (from Louise Pellerin)

Applications are invited for the position of Senior Geophysicist based in Johannesburg.

The Job - This position is for a highly motivated and experienced geophysicist who will be required to travel to field prospecting operations to coordinate geophysical exploration in the search for economic diamond deposits. The candidate must already have acquired field experience in mineral exploration from grassroots discovery through to advanced projects, using techniques such as magnetics, gravity, electromagnetics and other related techniques. The work is strongly quality orientated according to established exploration practices. The candidate must be effective at quality control practices, executing and coordinating field operations, and developing subordinates, with a proven track record in achieving defined goals.

- *Data management* - Responsible for geophysical data archiving, data structuring, data publishing and data requests.
- *Data Integration* - Data integration and development of tools to integrate and visualize geophysical data and other GIS information.
- *Integrated modelling* - Forward and inversion modelling. Integrating modelling products with input from other specialists/stakeholders including field geologists, Petrologist, structural geologists, geochemists etc.
- *Interpretation* - Provide ventures with specialist geophysical input. Select, grade and model geophysical anomalies from different geophysical datasets.
- *Processing* - Process and interpret various types of geophysical data including magnetic, electromagnetic and gravity data.
- *Data Acquisition* - Conduct geophysical field surveys and QC field data. Training of geologists and field personnel at the ventures. Evaluate geophysical equipment and make recommendations in terms of most suitable geophysical techniques to be used.

Minimum Qualifications and Experience

- B.Sc. (Honours) Geophysics (NQF 8)
- M.Sc. / Ph.D. (NQF9/10) would be an added advantage
- 3 –5 years' experience post qualification working in the geophysical field, preferably on kimberlites or related rocks

Knowledge, Skills and Attributes

It is expected that the applicant will have the following knowledge, skills and attributes:

- Data processing, analysis, visualization and reporting
- Competency in software packages incl. Geosoft, Encom Model Vision Pro & Profile Analyst, Intrepid Geomodeller, GOCAD, ESRI ArcMap
- Ground survey techniques incl. gravity, magnetics, electromagnetics, magneto-tellurics, wireline logging etc.
- Kimberlite interpretation techniques
- Excellent communication skills
- Problem solving skills
- Effective team member
- High degree of mobility
- Advanced report writing skills

Additional Information

- Registered professional in a recognized body (like SACNASP)
- Due to the nature of the work, your employment application is subject to a police clearance, and an integrity test (polygraph), and it is a condition of employment that you be cleared by the Security Department of De Beers and that you retain this security clearance.
- It is a standard requirement for employees who frequently travel to or work under conditions in countries such as Angola to undergo a pre-employment medical and psychological evaluation.
- Due to the prevalence of endemic tropical diseases (e.g. malaria), you will also be required to undergo such medical examination annually.
- In the event that you are presently employed within the De Beers Group of Companies, please inform your immediate line manager of your intention to apply.
- This advert is open to internal and external candidates.
- Consideration will be given to the Company's Employment Equity Policy.

Applications are to be submitted on or before the closing date to:

Email: expsa.recruitment@debeersgroup.com

Closing Date: 13 December 2013

4.2 Staff Scientist or Environmental Engineer, Mundell & Associates (from Sudershan Gangrade)

MUNDELL & ASSOCIATES, INC. (MUNDELL - www.MundellAssociates.com), a small, dynamic, Indianapolis-based earth and environmental consulting firm is seeking an outstanding candidate to fill the position of **STAFF SCIENTIST/ENVIRONMENTAL ENGINEER**. New graduates or those with one to three years of progressive geological, geophysical or environmental engineering consulting experience are required. The ideal candidate should have a B.S. degree (M.S. or Ph.D preferred) in a scientific or engineering earth science-related discipline with graduate course work in hydrogeology, geophysics, or environmental engineering from an accredited university. Potential for registration in the future as a Licensed Professional Geologist (LPG) or Professional Engineer (PE) is desirable. Typical projects involve Phase I and II Environmental Site Assessments, soil/sediment/groundwater sampling, chemical source area mapping, plume delineation, subsurface geological and hydrogeological characterization studies, groundwater flow and contaminant transport modeling, corrective action and remedial design for soil and groundwater cleanup, and human health risk assessments.

Desirable skills include: excellent familiarity with field data collection and mapping methods, analytical and numerical groundwater flow and contaminant transport modeling, geophysical instrumentation trouble-shooting and survey completion, quantitative and statistical analysis, data visualization, and good oral and written communication. The candidate must demonstrate a proven ability to work independently, organize and manage multiple tasks and project assignments, and interact well with a multidisciplinary team.

The company's specialties include: the quantitative stratigraphic, geochemical, geophysical and hydrogeological characterization of the subsurface; quantitative analysis and engineering design of remediation systems; groundwater modeling and contaminant transport analysis, and environmental and engineering geophysics.

Apply by sending a resume in a Word or PDF format by email to:

Merle Tebbe, Director of Administration

Mundell & Associates, Inc.

110 South Downey Avenue

Indianapolis, Indiana 46219

Phone: 317-630-9060,

Fax: 317-630-9065,

Email: mtebbe@MundellAssociates.com

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

Stephen Moysey (smoysey@clemsun.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!