Letter from the Chair

Dear SEG Near-Surface Geophysics Technical Section Members,

I hope you have plans to attend the SEG Annual Meeting starting October 14 in Anaheim, CA. This year the NSTS will have 15 technical sessions (3 special, 6 oral, and 6 poster). The special sessions are on Surface Wave Methods, Engineering Geophysics, and Hydrogeophysics. Our regular sessions include interesting combinations of subjects from agricultural and airborne methods to tomography and tunnel detection.

In addition, this year we have included three near-surface panel discussions, one each at 5:30 pm on Monday through Wednesday. Topics include (Monday) challenges of working in the coastal zone, (Tuesday) near-surface student career information, and (Wednesday) near-surface geophysics for groundwater management. The panel discussions will take place immediately after the technical sessions in room 204B. Please come out and support these three panels before you begin your evening activities.

We also have two post convention workshops that should be very good. The first is a half day workshop on Thursday about *Advances in geophysical tomographic methods*, and a full day workshop on Friday about *Advances in unmanned airborne systems (UAS) geophysics*.

We will have our annual reception on Tuesday night at McCormick & Schmick’s Grille, which is within easy walking distance from the convention center. Steve Sloan, our past-chair, will present the Harold Mooney Award to this year’s worthy recipient, Dr. James Harris.

You can find more detailed information on our technical sessions and panel discussions elsewhere in this newsletter. Please join us for a great annual meeting and wonderful reception. If you’d like to serve on the 2019 San Antonio annual meeting subcommittee, please email ns@seg.org.

At the conference in Anaheim, or anywhere your profession takes you, as you listen and read about the recent near-surface applications of our methods, I hope you will seek what I refer to as the magic of geophysics. At school they did an excellent job of teaching us the science of geophysics. We learned not only the physical principles and the earth properties, but the mechanics of making accurate observations. However, it was later, while working for a major oil exploration company that I learned about the magic of geophysics. When you understand all the many details that must be done correctly to make geophysical measurements, and everyone involved gets it exactly right, the subsurface information revealed is magical. The magic of geophysics comes from understanding every detail and ensuring it is all done correctly to create an amazing understanding of subsurface features. You can find examples of efforts that fall short of magic. I have performed many of them. The magic of geophysics requires knowledge, experience, and dedication in every step. Watch for it at the conference, and let’s all strive for it in our work.

Listed below are the many NSTS volunteers who contributed to this year’s conference. Sorry if we missed anyone. We appreciate all of you.
**NSTS Leadership:** Mike Powers, Steve Sloan, Jose Arce, Erasmus Oware, Dale Rucker, Sajad Jazayeri, and Sarah Morton Rupert.


Mike Powers, Chair Near-Surface Geophysics Technical Section
Overview of this Issue of the NS Views

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Member News

Please join us in celebrating our members!

Rick Miller, previous NSTS Chair, has been elected President-Elect of the SEG

Lee Slater and Eli A. Silver have been named 2018 AGU Fellows

Paul Cunningham was featured in Episode 34 of Seismic Soundoff, check out the podcast here

Have exciting news about yourself, a student, or colleague? Email us to have it featured here!
Please join us in welcoming the newly-elected members of the 2018-2019 Near-Surface Leadership:

Chester Weiss  
Chair-Elect

Lia Martinez  
Secretary

2018-2019 Near-Surface Leadership:

Chair: Jose Arce  
Chair-Elect: Chester Weiss  
Past Chair: Mike Powers  
Vice Chair: Erasmus Oware  
Secretary: Lia Martinez  
Program Manager: Laurie Whitesell  
Newsletter and Student Program Leads: Sarah Morton Rupert  
Social Media Lead: Sajad Jazayeri
Highlight from the Big Island of Hawaii

By Sarah Morton Rupert

Much to the Hawaiian’s delight, the Kilauea eruption has finally come to a halt after 3 months. Unfortunately, the lava flows have destroyed the town of Leilani and its previously pristine coral reef; an area said to be one of the most beautiful in Hawaii. While I was there in early September, the southeastern coast was starting to reopen road access on Routes 130, 137, and 132. However, signs were still posted warning drivers to keep windows closed while driving through those sections of areas where steam was still coming out of the ground.

Hawaii Volcanoes National Park plans to reopen parts of the park starting the end of September, but the best way to see the extent of the lava flows was and still is by helicopter. Fortunately, I had the opportunity to take a helicopter trip over Fissure 8, which is still releasing steam throughout various sections as seen in the first image below. These sights were absolutely surreal to see in person and the smell of sulfur while flying directly above part of the flow was overpowering.
Since the flows have ceased and roadways are slowly reopening, parts of the flows are accessible on foot. Thankfully all residents were able to evacuate, but many are no longer able to access their homes because they were either in the path of the flows or road access to their homes have been completely cut off by the lava. Above are three more photos from our hike across the flows that lead out to the newly-added coastline. Although lighter blue colors along the shore typically imply shallow water, here the lighter blue indicates hotter water temperatures from the flows interacting with the ocean with coastal depths to almost 200 feet.

If you have the opportunity to go to Hawaii, more so than ever it seems there is so much more to see including these hardened flows and fresh black sand beaches!
Highlight from the 2018 Forum on Infrastructure

By Laurie Whitesell

The SEG Near-Surface Geophysics technical Section (NSTS), as part of its 2016-2017 strategic planning efforts proposed a new event format that that was on a focused local or regional topic that could be developed in collaboration with partnering societies, institutes, and/or governmental agencies that is small in size with around 30 attendees, a few keynote speakers and panel discussions. The NSTS felt that partnering would help bring a more well-rounded perspective to a local challenge. This format was thought to better engage those who attended and create an atmosphere of collegial participation. In this case, the SEG partnered with the U.S. Army Corps of Engineers (USACE), and the Society of Civil Engineers’ Division of Infrastructure Resiliency (ASCE, IRD). For the inaugural forum, the SEG NSTS Strategic Planning Subcommittee felt that the increased seismic activities in the central U.S. offered an interesting and focused subject with which to examine how near-surface geophysics and engineering practices could be utilized to examine the more or less constant low level seismicity’s impact on large scale infrastructure.

The co-chairs for the forum were Dr. Dwain Butler, and Dr. Priyank Jaiswal. The event took place at Oklahoma State University’s main campus in Stillwater, Oklahoma from 24-26 August and was well attended. There was good participation between attendees and the panelists. The keynote speakers where Dr. Norbert Delatte who is the M.R. Lohmann Endowed Professor and Head of the School of Civil and Environmental Engineering at Oklahoma State University. The next keynote speaker was Dr. Matthew Smith, Senior Research Civil Engineer at the U.S. Army Engineering Research and Development Center (USACE-ERDC). The forum had a nice mix of engineering and geophysics presentations. Geophysics related talks by Dr. Mike Powers, chair of the Near-Surface Geophysics Technical Section (NSTS), and those by Mr. Phil Sirles, former chair of the NSTS, as well as Dr. Priyank Jaiswal were informative and interesting and complimented well those of the engineers. The forum also had student poster session sponsored by NSF Award No. 1849273.

A post forum wrap-up session did a nice job of gathering in one place the feedback from the attendees. All attendees felt the event was interesting, worthwhile and indicated that it was well worth attending. Attendees also felt that the size of the forum lent itself well to more intimate and real discussions that could not otherwise have occurred in a larger setting. Enjoyment in learning more about each other’s disciplines and further collaboration between geophysicists and engineers would better enhance the all projects. Cautionary awareness was made in that the government, in this case the U.S. government did not have endlessly deep pockets for funding. So, working more collaboratively together might help with regards to funding challenges.

Groups are currently working to develop joint articles for publication in SEG and ASCE journals. Thank you to everyone who participated in making the first SEG NSTS Forum a success!
Biography

Jamie Harris is a professor of geology and specializes in near-surface geophysics. He has undergraduate degrees in geology (from Eastern Kentucky University) and geophysics (from the University of Houston) and M.S. and Ph.D. degrees from the University of Kentucky. Harris teaches introductory geology courses and upper level courses in structural geology and geophysics. In addition, he has taught field courses in Southwest Montana, the Pacific Northwest, Yellowstone, Alaska, and Scotland.

Harris has developed an active field-based research program focused on seismic imaging of the shallow subsurface. He and his research students have been involved in numerous geophysical surveys centered on earthquake hazards of the lower Mississippi valley and high-resolution imaging at archaeological sites in Albania, Turkey, and the Yucatán Peninsula. Harris' expertise in geophysics is widely recognized. In recent years he has travelled to Italy to present an invited paper on near-surface seismic methods, and served as a keynote speaker for an international geophysics conference in China. In 2006 he was named Millsaps' Distinguished Professor, and in 2009 was recognized as the Mississippi Professor of the Year by the Carnegie Foundation for the Advancement of Teaching.

When not in the classroom or in the field, Jamie can be found on the tennis courts at Millsaps where he serves as a volunteer assistant coach for the men's tennis team.
Congratulations to the six near-surface student members who received SEG Travel grants to attend the 2018 SEG Annual Meeting in Anaheim.

**SEG/ExxonMobil Student Education Program (SEP) Travel Grant:**
Meghan Dibacco, University of Houston
David Graham, University of Texas at Dallas

**SEG/Chevron Student Leadership Symposium (SLS) Travel Grant:**
Rustam Khoudaiberdiev, University of Texas of the Permian Basin
Fan Zhang, University of Kansas

**Technical Program Travel Grant:**
Sarah Morton, University of Kansas
Frantisek Stanek, Institute of Rock Structure and Mechanics, Czech Academy of Sciences

For more information about SEG Student programs, please click [here](#).

Advocating student growth is an important part of what SEG is all about. Focused on providing students with needed tools for successful careers, SEG hosts and partners with other organizations on special programs, expositions, and symposiums, to turn today’s students into tomorrow’s leaders.
You’re invited!

Near Surface Geophysics Technical Section Evening Reception
The NSTS Business Meeting will take place at the beginning of the reception, all are encouraged to attend and participate. Incoming NSTS leaders will be introduced.

Date and Time:
Tuesday 16 October
7:00 - 10:00 PM

Location:
McCormick & Schmick’s Grille
321 West Katella Avenue
Anaheim, CA 92802
<table>
<thead>
<tr>
<th>Room #</th>
<th>Pre-Conference Events</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Post Conference Events</th>
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<tbody>
<tr>
<td>204 A</td>
<td>Sat.-Sun. 8:00AM Practical Seismic Surface Wave Methods, Basics to Cutting Edge</td>
<td>1:50PM: NS1 Geoscientists without Borders ® and Humanitarian Geophysics</td>
<td>8:30AM: NS 2 Surface Wave Studies and Applications</td>
<td>8:30AM: NS 4 Tomography for Improved Imaging and Airborne Application</td>
<td>8:30AM: NS 6 Tunnel Detection</td>
<td>Thurs. 1:30 PM W-12: Advances in Geophysical Tomographic Methods</td>
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<td>207 A</td>
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<td></td>
<td>Fri. 8:30AM W-22: Advances in Unmanned Airborne System (UAS) Geophysics</td>
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<td>213 B</td>
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<td>Exhibit Hall</td>
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<td>Other</td>
<td>5:30PM Challenges of working in the Coastal Zone Panel (Rm 204B)</td>
<td>5:30PM NS Student Career Panel (Rm 204B)</td>
<td>7:00PM: NSTS Business Meeting and Evening Reception (McCormick &amp; Schmick’s Grille)</td>
<td>8:00AM Members-Only Breakfast (Rm. 304A)</td>
<td>5:30PM NS for Groundwater Management Panel (Rm 204B)</td>
<td></td>
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</tbody>
</table>
Complete biographies for panelists can be found online here.

Challenges of Working in the Coastal Zone Panel
15 October 2018, 5:30-6:30 PM, Room 204B

The Coastal Zone is one of the most important environments on earth where major cities are heavily populated, and ports and harbors and coastlines include substantial infrastructure necessary for society to survive and enjoy. Because the Coastal Zone spans the region from land to water, there are special requirements for obtaining subsurface information needed to identify and map potential environmental hazards. Site surveys are needed to plan routes for pipelines and other coastal infrastructure, and to locate obstacles for planned construction. Major coastal infrastructure includes energy, transportation, water supply, hydrocarbon production, processing and storage, waste management, and critical defense installations. Due to the difficult data acquisition within the transition zone - where water meets land - the Coastal Zone may be considered the biggest data gap in earth sciences. The Coastal Zone Panel Discussion will examine challenges in obtaining near-surface geophysical data needed for projects in the Coastal Zone. Environmental sensitivity and government regulations to minimize impacts of geophysical surveys in the Coastal Zone will be discussed. Technology available to acquire useful subsurface images for mapping and characterizing subbottom materials will be described. Examples will be presented from the Coastal Zone in California where space for critical infrastructure must be shared with a popular recreational environment. Furthermore, natural hazards including active faults and landslides, earthquakes and liquefiable sediments, storm surge and tsunamis, climate change and sea level rise must be recognized and mitigated through careful planning, design and construction of facilities. Near-surface geophysical data in the Coastal Zone are crucial for successful development and enjoyment of this great resource.

Moderator: Mark Legg, Legg Geophysical, Inc. President
Panelist 1: Richard Greenwood, California State Lands Commission, Geologist, Geophysical Coordinator
Panelist 2: Phillip J. Hogan, PhD, Fugro Consultants, Inc., Senior Principal Engineering Geologist
Panelist 3: Scott Seyfried, CA State Water Resources Control Board, Division of Water Quality Groundwater Ambient Monitoring and Assessment Unit Chief

Near-Surface Geophysics Student Career Panel
16 October 2018, 5:30-6:30 PM, Room 204B

Industry, academic, and government near-surface geophysics professionals will lead a discussion on their current career paths. Panel members will share their stories of how they rose to the position they are in right now. They will highlight obstacles they encountered and overcame throughout their journey from student to professional providing insight on how they too can prepare for their upcoming careers in near-surface geophysics. Members of this panel will be near-surface geophysics professionals ranging from early-career to senior scientists to give students a wide array of information and perspectives. The panel will feature members who hold positions as engineering/environmental geophysicists, government researchers, and university faculty.

Moderator: Sarah Morton Rupert, SEG NSTS Student Program Lead
Panelist 1: Esther Babcock, President and Chief Geophysicist, Logic Geophysics
Panelist 2: Kristina Keating, Associate Professor, Rutgers University
Panelist 3: Adam Mangel, Postdoctoral Fellow, Colorado School of Mines
Panelist 4: Anthony Martin, Vice President and Technical Director, GEOVision
Near-Surface Geophysics for Groundwater Management

17 October 2018, 5:30-6:30 PM, Room 204B

Improved groundwater management is becoming a critical issue in many parts of the U.S. and the world, owing to competing demands for this depleting resource and increasing threats to groundwater quantity and quality. Near surface geophysical methods can play an important role in evaluating and monitoring this resource and mitigating risks associated with groundwater exploitation.

The purpose of this panel is to bring together a cross-section of stakeholders who can share sector-specific perspectives on groundwater issues, and through interaction with technical experts on the panel, receive feedback on how near surface geophysics, and hydrogeophysics in particular, can address their needs and priorities. The significance of groundwater resources in international development and the role of near surface geophysics in promoting sustainable groundwater practices are also within the scope of this discussion.

Among the topics for discussion are groundwater withdrawals for municipal supply and agriculture use; practices for aquifer depletion mapping and aquifer recharge; and approaches to monitoring and remediation of saltwater intrusion in coastal aquifers. Also pertinent to the discussion will be applicable water laws and regulation, including possibly international water law in the case of transboundary aquifers.

The intended outcome of the panel is twofold: 1) to provide sector representatives an informed awareness of geophysical tools that can address their needs with regard to groundwater management; and 2) to facilitate access to potentially expanded market opportunities for geophysical companies and service providers.

**Moderator:** John W. Lane, Jr., Chief, Hydrogeophysics Branch, Earth System Processes Division, U.S. Geological Survey (USGS)

**Panelist 1:** Rosemary Knight, The George L. Harrington Professor of Earth Sciences, Director of the Center for Groundwater Evaluation and Management, Stanford University

**Panelist 2:** Bill M. Alley, Director of Science and Technology for the National Ground Water Association (NGWA)

**Panelist 3:** John Borkovich, California Professional Geologist, California State Water Resources Control Board, Division of Water Quality

**Panelist 4:** Timothy Sovich, P.E., Principal Engineer, Orange County Water District
YOU ARE INVITED TO ATTEND YOUR CAREER WORKOUT

Strategies and tools for improving your professional profile and employability presented by SEG Women’s Network and Lincoln Leadership Advisors at the SEG 2018 Annual Meeting in Anaheim, CA

This short course is a professional development opportunity for geophysicists in a changing energy ecosystem. Attendees will increase career awareness and acquire skills aimed at professional and personal development and career mobilization. Exercises reinforce the concepts introduced in the course, including understanding self, professional branding, networking and a career toolkit to take into the future. This course is expressly tailored to the needs of SEG members by the management consulting professionals at Lincoln Leadership Advisors.

Learn how to self-assess, put together a killer CV, improve your branding and positioning at work and interviews, network effectively, keep your tools sharp and strategize your future!

Tuesday, 16 October 2018 | 9-11:30AM | Anaheim Convention Center

Registration Fee: $150 | Attendee limit: 30 | REGISTER

Your career is your business. It is time for you to manage it and work it out!
Support the NSTS and SEG

Looking to become more involved in NSTS?
The Near-Surface Geophysics Technical Section is recruiting volunteers to assist in designing and developing the near-surface geophysics technical program for the 2019 SEG Annual Meeting in San Antonio.

If you are interested in helping shape the technical program and assist in recruiting abstracts, your energy and enthusiasm is welcome. Interested members should send us an email.

Looking to make a contribution?
Go to: https://donate.seg.org/Near-Surface to donate today!
Don't miss this opportunity to show off your photography skills!

The Near-Surface Geophysics Technical Section is excited to announce its inaugural photo contest! We hope you will take this opportunity to participate.

The contest will run through 12:00 AM (CDT) on 1 October 2018.

Prizes:
1st Prize
1 year free SEG membership, signed copy of *Engineering Seismology with Applications to Geotechnical Engineering*, signed copy of *Near-Surface Geophysics*, and *Electromagnetic Methods in Applied Geophysics, Vol 1 & Vol 2*.

2nd Prize
Signed copy of *Engineering Seismology with Applications to Geotechnical Engineering*, signed copy of *Near-Surface Geophysics*, and *Advances in Near-Surface Seismology and Ground-Penetrating Radar*.

3rd Prize
Signed copy of *Engineering Seismology with Applications to Geotechnical Engineering* and signed copy of *Near-Surface Geophysics*.

Students, looking for other award opportunities?
SEG NS student chapters have the chance to win a prize of $250 for submitting an article to the near-surface geophysics newsletter, Near Surface Views. Articles can feature an event, activity, or research project your student chapter has recently participated in. Submit your article here.

Past Award Recipients:
2017 Boise State University
2016 Eötvös Loránd University
2015 University of Kansas
NSTS Student Program: Highlighted Career Articles for Job Seekers

Preparing your Resume:

4 Soft skills LinkedIn says are most likely to get you hired in 2018

3 Resume Tips from the Society of Exploration Geophysicists

What your resume should look like in 2018

Job Searching:

3 key elements of a successful job search mindset

The MIND career exploration road map

Preparing for a non-faculty job

Negotiating your Position:

Wherever you go, there you are - How to leverage a less-than-ideal position into that dream job

How women can get what they want in a negotiation

Looking for mentoring opportunities?

Mentoring365 - As an SEG student member, you can participate in Mentoring365, a joint program supported by AGU, SEG, AWG and others to quickly connect students with geoscientists across various institutions and disciplines. Sign up today here! Listen to the SEG Seismic Soundoff episode here.

2018 SEG Student Speed Mentoring Event - At the SEG Annual Meeting in Anaheim from 4-6PM in Rooms 202A-213B and Exposition Hall C. This twist on the traditional student networking reception provides students an opportunity to network with more than 20 industry professionals who will be on hand to answer questions from students while visiting over refreshments.
If you would like to continue receiving email communications from the SEG as well as the Near-Surface Geophysics Technical Section, please OPT-IN!

How to OPT-IN:

Within My Account on https://seg.org, edit your email subscriptions by clicking My Communications on the left-hand side menu. From there, you can opt-in to receive this newsletter, Near-Surface Views, as well as the Near-Surface eTOC to stay up to date with the NSTS. We look forward to staying connected with you!
SEG and NSTS Member Benefits

Have you renewed your SEG Membership?

SEG Near-Surface Geophysics Technical Section Benefits:
1. Near-Surface Geophysics Technical Section elected leadership
2. Non-elected Near-Surface Geophysics Technical Section leadership positions open to students
3. Quarterly newsletter
4. Quarterly Electronic Table Of Contents
5. Quarterly TLE Near-Surface Geophysics non-technical focused article
6. Engineering and environmental geophysics competency management
7. SEG Near-Surface Student Research Award
8. Best Student Chapter Near-Surface newsletter Article Award
9. Mentoring365 membership as mentor or mentee
10. Access to SEG journals and other publications online*

Renew Here Today!

*Check the SEG Dues Structure for more details on publications and information about due-paying assistance.

Has your company considered a Corporate Membership?
The benefits enjoyed by Corporate Members include:

1. Listing on SEG Web site's exclusive Corporate Member page, including a link to your corporation's site
2. Listing in the official Annual Meeting program
3. Special recognition at the Annual Meeting
4. Right to publish affiliation with SEG and use of SEG corporate logo
### Calendar of Upcoming Events

<table>
<thead>
<tr>
<th>Events</th>
<th>Location</th>
<th>Date(s)</th>
<th>Submissions</th>
<th>Registration</th>
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</thead>
<tbody>
<tr>
<td>SEG Annual Meeting</td>
<td>Anaheim, CA</td>
<td>14-19 Oct 2018</td>
<td>Closed</td>
<td>Open</td>
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<tr>
<td><strong>ICEG</strong></td>
<td>Hangzhou, China</td>
<td>28 Oct - 1 Nov 2018</td>
<td>Closed</td>
<td>Open</td>
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<tr>
<td>SEG Borehole Geophysics Workshop</td>
<td>Guilin, China</td>
<td>28-30 Oct 2018</td>
<td>Closed</td>
<td>Open</td>
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<tr>
<td><strong>SEGJ Symposium</strong></td>
<td>Tokyo, Japan</td>
<td>12-14 Nov 2018</td>
<td>Closed</td>
<td>Open</td>
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<tr>
<td>AGU Fall Meeting</td>
<td>Washington D.C.</td>
<td>10-14 Dec 2018</td>
<td>Closed</td>
<td>Open</td>
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<tr>
<td><strong>SAGEEP</strong></td>
<td>Portland, Oregon</td>
<td>17-21 March 2019</td>
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<td>TBA</td>
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<tr>
<td>Near Surface Modeling and Imaging Workshop</td>
<td>Manama, Bahrain</td>
<td>17-18 March 2019</td>
<td>5 Nov 2018</td>
<td>TBA</td>
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<tr>
<td>GEM 2019 Xi’an</td>
<td>Xi’an, China</td>
<td>19-22 May 2019</td>
<td>30 Nov 2018</td>
<td>TBA</td>
</tr>
</tbody>
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### Upcoming Journal Submission Deadlines

<table>
<thead>
<tr>
<th>Journal</th>
<th>Issue</th>
<th>First Deadline</th>
<th>Publication Date</th>
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<tbody>
<tr>
<td>JEEG</td>
<td>Geophysics for urban underground space studies</td>
<td>31 Aug 2018</td>
<td></td>
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<tr>
<td>The Leading Edge</td>
<td>Near-surface geophysics</td>
<td>15 Feb 2019</td>
<td>June 2019</td>
</tr>
<tr>
<td>The Leading Edge</td>
<td>Borehole geophysics</td>
<td>15 June 2019</td>
<td>Nov 2019</td>
</tr>
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</table>
**Tenure-Track Assistant Professor, Oregon State University**

Web link for more details: [https://jobs.oregonstate.edu/postings/65702](https://jobs.oregonstate.edu/postings/65702)

The College of Earth, Ocean, and Atmospheric Sciences at Oregon State University invites applications for a full-time (1.00 FTE), 9-month tenure-track Assistant Professor position.

We seek an early career geophysicist who will complement existing areas of strength in the College of Earth, Ocean, and Atmospheric Sciences (CEOAS) with a research focus in at least one of the following areas: near-surface/environmental geophysics, crust and mantle processes, tectonics, volcanology, marine geophysics, hydrogeophysics, natural hazard characterization and mitigation, and natural resource exploration. The successful candidate will be a field-oriented colleague who has a deep understanding of the underlying geological and physical principles and the imagination to address a wide range of problems on a variety of temporal and spatial scales using seismology, MT/EM or other geophysical techniques.

The successful candidate is expected to teach in both lower- and upper-division courses in the undergraduate Earth Sciences program, as well as graduate courses in their specialty. The successful candidate is also expected to develop a vibrant, externally funded research program and contribute to teaching and mentoring of undergraduate and graduate students. Oregon State University’s (OSU’s) Solid Earth Geophysics program has a strong international reputation and a history of creative research and teaching that crosses disciplinary boundaries in the geosciences, and allied fields such as engineering, forestry and water resources.

Search Committee Members to contact if you have any questions:  
(Chair of Search Committee) Shanaka (Shan) de Silva - desilvas@geo.oregonstate.edu  
Anne Trehu - trehu@coas.oregonstate.edu  
Andrew Meigs - meiga@geo.oregonstate.edu  
Adam Schultz - Adam.Schultz@oregonstate.edu  
Robert Harris - rharris@ceoas.oregonstate.edu

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**TWO Assistant Professor Positions, Durham University**

Web link for more details: [https://www.durham.ac.uk/jobs/recruitment/vacancies/eart18-51](https://www.durham.ac.uk/jobs/recruitment/vacancies/eart18-51)

The Earth Science department at Durham University is looking to appoint two exceptional and collaborative colleagues as Assistant Professors, with research and teaching interests in any area of Earth Science that complements and builds on its current expertise and interests. The application deadline is 31st October, 2018.

For any further questions, please feel free to contact Jeroen van Hunen, jeroen.van-hunen@DURHAM.AC.UK
**Geophysical Post-Doctoral Scholar, Colorado School of Mines**

We are currently accepting applications for a Post-Doctoral Fellow in the area of geophysical data science at Colorado School of Mines. Advanced deep learning algorithms have increased the potential for utilizing statistical techniques 1) in place of physical simulations and 2) for efficient and quantitative interpretations of 3D and 4D data. Both represent potential milestone moments for the geophysical community. The paramount outcome from the application of these models would be to gain insightful new physical relationship(s) or other spatial/temporal intuition; in these scenarios, the deep neural network model(s) would be deemed to have transparency.

The successful postdoctoral candidate would develop guidelines for deep learning model transparency for the purpose of geophysical modeling and/or interpretation. The postdoctoral scholar would be responsible for designing research that would evaluate when simulated (geo)physical measurements of different fidelity can be sufficiently captured by deep learning algorithms, e.g. with different acquisition parameters. The scholar will also design experiments that will determine when deep learning techniques can bring new geological insight via quantitative spatial/temporal interpretation.

**Qualifications**

The successful candidate will meet the following criteria:
1. A PhD in a related field (engineering, geophysics, applied math or statistics, computer science, operations research, etc.).
2. Experience designing and implementing state-of-the-art data analysis methodologies on large scale data.
3. The ability to work effectively as part of a multi-disciplinary team, plus the motivation and discipline to carry out autonomous research.
4. A record of science innovation and creativity.
5. A record of excellent written and oral communication skills.

Prior experience with the following is a plus but not necessary:

- Geophysical forward and inverse modeling
- High performance computing and/or cloud computing

To be considered for this position, please send a detailed CV, a cover email detailing your research experience and how it will qualifies you for this opportunity, 1-3 recent publications and contact information for three professional references to Professor Whitney Trainor-Guitton (wtrainor@mines.edu). The full time fellowship position is initially one year and could be extended to two years. The review of applications will continue until the fellowship position is filled. Please feel free to contact Prof. Trainor-Guitton for more information. Colorado School of Mines is located in Golden, CO, at the base of the Rocky Mountains, a great place to enjoy world-renowned biking, hiking and skiing and only 20 minutes from downtown Denver.
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<tr>
<th>Job Title</th>
<th>Company</th>
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<tr>
<td>Level A/B Female mineral-system geoscientist - University of Adelaide</td>
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<tr>
<td>Research Geophysicist, Dept. of Interior</td>
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<tr>
<td>Geologist/Geophysicist - NAEVA Geophysics, Inc.</td>
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<td>Field Geophysicist - Barr Engineering</td>
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<td>Associate Geophysicist - Tetra Tech</td>
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<td>Marine Geophysicist - TerraSond</td>
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<td>Senior Geophysicist - ION Geophysical Corporation</td>
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<td>Geophysicist/Geologist - Rettew Associates</td>
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<td>Geophysicist III - Oklahoma Geological Survey</td>
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<td>Senior Level Manager/Geoscientist - Farallon Consulting</td>
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<td>Senior Geophysicist</td>
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To contribute material to the NS views send an Email to Sarah Morton (smorton@kgs.ku.edu)

All members are welcome to submit content of interest to the Near Surface community. Note, that we have two new sections “What’s hot” where new methods, new developments, new technology, new equipment, or new NS event can be presented as well as “Member News and Updates” where we will highlight information about our membership including retirements, special publications, and awards.

Feel free to send articles for these new sections. Please keep messages brief, provide contact information, and (if available) a web address for additional information.

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