Letter from the Chair

Dear members of the SEG Near Surface,

With the second quarter, comes our annual election of candidates for open near-surface leadership position. This year we have will conduct elections opening 1 June and closing on 1 July, to fill the roles of chair-elect and secretary within the Near Surface Technical Section (NSTS) leadership. You can review the candidate’s biographies and position statements by clicking on the attached link. http://seg.org/News-Resources/Near-Surface/Near-Surface-Elections. I thank all of the candidates for their enthusiasm in agreeing to run.

This year the SEG NSTS and EEGS members awarded the 2016 joint Frank Frischknecht award at SAGEEP to Esben Auken. You can watch Esben’s acceptance speech. The Frank Frischknecht Leadership Award is established to recognize an individual who shows extraordinary leadership in advancing the cause of near-surface geophysics through long-term, tireless, and enthusiastic support of the near-surface geophysics community. Such leadership is often boldly displayed by an invention, a new methodology or technique, a theoretical or conceptual advancement, or a unique innovation that transforms the nature and capabilities of Near-Surface geophysics. Congratulations Esben, well deserved!

The NSTS will be soliciting your input on nominations for the 2016 Harold Mooney Award that will be presented at the NSTS evening reception. The Harold Mooney Award was originally presented in recognition of scientific and technical excellence and innovation leading to the advancement of near-surface geophysics. Starting in 2005, the award definition was expanded and is now presented to an individual in recognition of long-term, tireless, and enthusiastic support of the near-surface geophysics community through education, outreach efforts, professional service, or development of opportunities with other professional disciplines that employ geophysics. An email survey will arrive in your inboxes at the end of the month for you to provide your input on the 2016 nominee. Please make time to nominate a deserving near-surface geophysicist.

The entire Near Surface Technical Section leadership would like to express our deep appreciation for the help that all of the annual meeting abstract reviewers provided. There is no way would could have done this without you. We had over eighty abstracts submitted and this year the NSTS will have eight sessions.

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<tr>
<th>Session Name</th>
<th>Session Type</th>
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<td>Special Standing Session - Engineering Geophysics</td>
<td>Oral</td>
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<td>Special Standing Session - GWB Humanitarian Geophysics</td>
<td>Oral</td>
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<td>Special Standing Session - AGU-SEG Hydrogeophysics</td>
<td>Oral</td>
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<td>Special Session - Surface Waves</td>
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<td>Near-surface seismic applications and innovations</td>
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<td>Shallow seismic statics, inversion, and tomography</td>
<td>E-poster</td>
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<td>Seismic effects of the shallow subsurface</td>
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<td>Application of near-surface geophysics</td>
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This year we are very pleased to be able to present the inaugural Near Surface Research Award that a near-surface geophysics award that goes directly to offsetting research costs. The inaugural recipient of the Near Surface Research Award is to be revealed at SEG Near Surface Technical Section’s Evening Reception during the SEG annual meeting. Other NSTS activities at SEG annual meeting include the annual evening reception that will take place on Tuesday night from 7-11 PM at Eddie Deen’s, which is less than a half mile from the conference center. As always, it is free to SEG NSTS members, SEG members can join on the spot. We will also conduct the former business meeting and treat it a bit differently this year by focusing on a specific topic and use the time for group discussions and planning. All are welcome to attend and are encouraged to attend if you are at the SEG annual meeting. This open Near Surface meeting will take place on Tuesday night right after the technical sessions have ended at 5:30 PM, location is TBD but will likely be the conference center.
The SEG NSTS currently has a contest for the best student chapter newsletter article. The article should detail interesting near-surface geophysical research, projects or even community service with which an SEG student chapter is actively involved. This is a nice opportunity to highlight your student chapter and promote it across the globe. Plus, there is some cash too. $250 USD to the winning SEG student chapter. If you know someone who might be interested in submitting an article please have them contact NS@seg.org. Best of Luck!

If you have content you’d like included in the NSTS newsletter, please send contributions to a.klotzsche@fz-juelich.de with copy to ns@seg.org

On a closing note, I am personally excited that the NSTS has passed a membership milestone. We now have over 500 members and growing steadily. Welcome to our new members. Please feel free to contact us at any time at NS@seg.org or lwhitesell@seg.org. We are glad to have you and are excited to see what can accomplish together!

Phil Sirles
Chair, SEG Near Surface Technical Section
Overview of This Issue of the NS Views

- Feature Article: Brady Flinchum - SEG Near Surface Research Award Winner 2016
- HAROLD MOONEY NOMINATIONS OPEN UNTIL 15 JULY
- Founders of Near-Surface: Leaders, Mavericks, and Icons
  - Louise Pellerin
  - Don Steeples
- My Dog Ate my Homework
- Join SEG Near Surface Geophysics Technical Section
- SEG Publications Near Surface Related Special Issues Release Schedule
- Calendar of Upcoming Events
Feature Article: Brady Flinchum - SEG Near Surface Research Award Winner 2016

Biography
I have always been a curious and enthusiastic individual who loves physics and mathematics. When I discovered the University of Nevada Reno (UNR) offered a geophysics degree, a subject that applied physics and mathematics to understand the Earth—I enthusiastically selected my major and never looked back. In 2011, the summer before I graduated, I was selected as an Incorporated Research Institutions for Seismology (IRIS) intern. I studied slow slip earthquakes along the Cascadia Subduction Zone. Upon my return to UNR at the end of summer I began working on a research project simulating earthquakes and the ground motion response of the Las Vegas basin, which led to my first publication. In 2012 I graduated with a B.S. degree in geophysics and I was employed by Multi-Phase Technologies (MPT) as a staff geophysicist. I worked on a variety of projects such as using electrical resistivity to locate abandoned mine tunnels and monitoring heat sources between two wells using time-lapse resistivity measurements.

I left MPT to pursue my Ph.D. at the University of Wyoming. I am currently in my third year and part of the Wyoming Center for Environmental Hydrology and Geophysics (WyCEHG). I am interested in using near-surface geophysical methods as an imaging tool to provide new and unique perspectives of the subsurface that will improve understanding of hydrologic systems, ecosystems, weathering and erosional processes in the top 10 to 100 meters of Earth’s subsurface. Furthermore, I am interested in improving the ability to estimate the spatial distribution of parameters influencing groundwater flow and storage, specifically porosity. I am trying to exploit the sensitivity of seismic velocities in the vadose zone and surface nuclear magnetic resonance’s unique ability to determine pore scale properties in the saturated zone to provide spatially exhaustive estimates of porosity. Currently, I am working with an extensive geophysical data set comprised of 25 seismic refraction profiles, 27 electrical resistivity lines and 5 surface nuclear magnetic resonance soundings in a granite catchment in the Laramie Range, Wyoming. I am using these data, in combination with borehole data, to image subsurface structure, characterize preferential flow paths, and estimate porosity on large scales (100’s of meters).

Application abstract
Fresh water, or the lack of it, impacts almost every environment on Earth—its availability governs ecosystems, influences human activity and sculpts landscapes. Groundwater is a significant piece of the fresh water reservoir and in this project I focus on improving the ability to estimate the spatial distribution of parameters influencing groundwater flow and storage, specifically porosity. Although a unique porosity exists in the subsurface, it is difficult to characterize lateral distributions of porosity at depths greater than a few meters. In an attempt to provide porosity estimates across large spatial scales (100’s of meters) in the saturated and unsaturated zones I will rely on non-invasive geophysical measurements—but estimates of porosity from different geophysical measurements do not always agree. I compared seismically estimated porosities using a 2D rock physics Bayesian inversion to estimates from surface nuclear magnetic resonance (NMR) on a sandstone and a fractured granite aquifer. The seismically estimate porosities were 5 times higher in the granite aquifer and 3 times lower in the sandstone aquifer (Flinchum et al., 2015). In this study, I seek to understand why seismically estimated porosities are different from NMR-derived porosities—can the difference provide additional information about the aquifer? I hypothesize the difference between the two measurements can be used to differentiate between shallow confined and unconfined aquifers because confining pressure affects seismically estimated porosities but will not affect surface NMR estimates.

To address the hypothesis, I propose a combined geophysical approach using p-wave, s-wave velocities and surface NMR data ground-truthed by lab measurements done on samples. The seismic data will be used to estimate porosity in the unsaturated zone and the surface NMR data will constrain estimates in the saturated zone. I will collect geophysical data on two geologically distinct sites: a confined sandstone aquifer and an unconfined weathered and fractured granite aquifer. To collect samples I will use a geoprobe and a backpack drill and measure porosities in the laboratory by drying and weighing known sample volumes. To obtain porosities at depths greater than the geoprobe can sample, I will utilize existing boreholes and a downhole NMR logging system. Using this unique data set I will be able to estimate unsaturated and saturated porosity over large spatial scales and improve our ability to characterize shallow groundwater aquifers. The results of this project will improve the understanding of the relationship between hydrophysical properties and near-surface geophysical parameters on different lithologies and at large spatial scales. Currently, we have access and resources to run the required geophysical equipment and only require funding for labor, operation and materials pertaining to the geoprobe data acquisition.
A nomination survey will be sent to all current Near Surface Geophysics Members.

**Harold Mooney Award**
The Harold Mooney Award is presented by the SEG Near Surface Technical Section during its reception and dinner at the SEG annual meeting. The honoree is chosen by his or her peers through nominations from the membership and recommendation to the SEG Near Surface Executive Committee.

The SEG Near Surface Harold Mooney Award was originally presented in recognition of scientific and technical excellence and innovation leading to the advancement of near-surface geophysics. Starting in 2005, the award definition was expanded and is now presented to an individual in recognition of long-term, tireless, and enthusiastic support of the near-surface geophysics community through education, outreach efforts, professional service, or development of opportunities with other professional disciplines that employ geophysics.

All nominations should include full name, contact information (email and phone) as well as some supporting documentation. All nominees should be a member of SEG. Nominations should be sent to ns@seg.org.

**Mooney Award Recipients**

- 2015 Koya Suto
- 2014 Jan van der Kruk
- 2013 Lee Slater
- 2012 Klaus Holliger
- 2011 Jon Nyquist
- 2010 John Bradford
- 2009 Louise Pellerin
- 2008 Jianghai Xia
- 2007 Deborah Underwood
- 2006 Bill Doll
- 2005* Phillip Romig, Jr.
- 2004 Ken Stokoe
- 2003 Jim Hunter
- 2002 Mats Lagmanson
- 2001 Charles Stoyer
- 2000 No record
- 1999 Gary Olhoeft
- 1998 Doug Crice
- 1997 Duncan MacNeill
- 1996 Peter Annan
- 1995 Rick Miller

*Award definition revised this year.
The near-surface geophysics community has a rich history; our field is growing quickly and our activities are increasingly varied. In many ways those in the NS community whose professional lives, like mine, started in the 1980’s occupy a unique position - we are too young to claim to be among the modern founders of the NS community, but we can look back to the days when we worked alongside these pioneers and, if we were fortunate enough, were mentored by them. Today, we find working for us an amazingly talented and diverse group of people with capabilities at their fingertips that we could only dream of when we entered the field. Looking forward it is clear that whatever the future holds, it will be different than it was then and different than it is now. We can expect the activities encompassed by the near-surface geophysics community to continue to grow - in scope as well as complexity.

It is important to know where we came from to understand where we are going. As a Society and members of the broad NS community, it is valuable to look back and visit from time to time with those who came before us. The instrumentation, methods, and ideas that make near-surface geophysics what it is today would not be were it not for the brilliant, pioneering geophysicists we will visit with here. The NS community has an interesting and unique story to tell. The Founders of NS Interview Series is one way to do so. We hope you will enjoy the interviews and biographical sketches in this and future issues of Near Surface Views from the leaders, mavericks, and icons of Near Surface geophysics.

John Lane
**Founders of Near-Surface: Louise Pellerin**

![Image of Louise Pellerin]

**How and when did you get involved in near-surface geophysics?**
During the summer between my junior and senior year I got a job as a geological field assistant and carried a geologist's rocks for most of the summer. The last few weeks they needed a geophysical assistant and I got to run a Crone shoot-back system - it was a mining application, but very near surface. In graduate school I was actively looking for an environmental problem and was able to map a paleochannel controlling contaminant flow with TEM.

**Thinking back to when you were a child, what did you want to be when you 'grew up'?**
An actress!

**What can you tell us about the early days of NS?**
It was a small community and much of the methodology was borrowed from mineral exploration. Almost all of my work in the early days was related to pollution and buried waste. I clearly remember being told that you can't have a career in finding something that is going to cost more money to extract, as opposed to a resource that will generate money. My response was that the environmental sciences will grow because the need is real and geophysics has a role.

**Did you travel a lot? What was your favorite field location/assignment?**
Yes! I spent a lot of time working in the DOE complex especially at the INEL, Savannah River and Brookhaven. After leaving government service (USGS and LBL) I became more involved in regional groundwater studies, which were all in interesting location. I spent over a year with the Hydrogeophysics Group at the Univ of Aarhus, Denmark, which was the best.

**In your early days, how did you balance work versus personal /family time?**
My husband is also a geophysicist, we met on a field crew, and we have no children that made it easier than most couples. We have an innate understanding of the lifestyle that goes with our chosen profession; conversations while one of us is in the field are usually about data and weather. Work has been important in both of our lives and we naturally found a balance.

**How would you or did you explain your job to a child?**
I have been actively involved introducing girls to science. I would talk about finding buried treasure in mineral exploration, then talk about finding water in the ground and then buried waste and contamination. This would open up the discussion to many avenues from the use of our resources to caring for the Earth to technical aspects of data. Many times I took girls out with a proton-precession magnetometer, were they could push the button and plot the data as we walked across a pipeline. They could locate the pipeline from the peak in the data and the conversation then extended to the rest of the subsurface, data scatter, and error bars.

**How has the NS geophysics field changed since you became involved?**
Instead of rescaling traditional exploration methods for NS applications, instruments, software and geophysicist are highly specialized.

**What do you feel was your most significant career accomplishment or favorite paper?**
I have always been interested in bridging the gap between research and applied and have gone back and forth for the past 30+ years. At times I have been solidly in the space of theory & modeling and other times living in pure data acquisition. Both are important and filled with challenges, but filling the gap has always been the most fulfilling for me - using new technology/software for a new application. I never have a favorite. Who can have a favorite child, dog or food?
What was the most embarrassing moment of your career? Did you ever ‘blow-it’, and if so, care to share the story?
Siting a drill hole in a vertical fault...

What did you enjoy most about your career in NS? Least?
I enjoy the challenges and variety of NS problems. I have not enjoyed navigating the politics and economics of the NS. In government science funding is a challenge, and in the private sector the political, economic concerns are equal if not greater than the technical aspects of the problem.

What are the challenges and opportunities that lie ahead for NS? Low-hanging fruit? Moonshot?
Being a westerner, I believe hydrogeophysics is going to the biggest opportunity in NS in the next 20 years. The challenge will be getting the water districts to accept geophysics as an effective and efficient tool to meet regulatory standards. New small, inexpensive, low-power sensors are on the horizon and have lots of exciting applications, especially with monitoring, and the software will follow. Availability of 2-D and 3-D software that can run on a good laptop so that the practitioner can run theoretical simulations to optimize survey design would be great. Software is in the academic sector, but not readily available to the practitioner and rarely in the budget so multiple challenges.

What advice would you give a student or young professional considering entering the NS field today?
Follow your curiosity and passion!

Are you still working or retired? How are you balancing work vs personal /leisure time today?
I started a new company at 60 years old, but my mother is 103 and going strong so I figure I have lots to do yet and have no plans to retire. My husband, who just retired, will be joining me after some reasonable decompression time. Green Geophysics is growing, and I have lots of plans for the future. New regulations for sustainable groundwater use in California will most likely put hydrogeophysics in high domain in the next 20 yrs and I would like to be a player in that game!

Do you have a favorite photograph or momento? What is the back story?
As I said I don’t have favorites, but this is dear to my heart – being in the field at the Summer of Applied Geophysical Experience (SAGE) field program in New Mexico, USA. I think this is 2008, but could be any of many years! It looks like we were recording Geometrics AMT Stratagem data (orange box).

Do you have a favorite quote or saying, ‘life’ motto, or other pearls of wisdom you’d like to share?
‘Life is too short to work with jerks or on boring projects.’

What are your hobbies? What are you reading now?
Walking my two German Shepherd dogs, Tessa & Cowboy, cooking, traveling, and enjoying the company of friends.
Philip K Dick’s Man in the High Castle and Edward Larson’s An Empire of Ice

Suggested Reading

Honors and Awards
Louise was awarded Life Membership by the SEG in 2014. Life Membership may be conferred on persons who have voluntarily rendered exceptionally meritorious service to the Society that, in the unanimous opinion of the Honors and Awards Committee and the Board of Directors, warrants recognition.
Year born: 1945 in Hays, Kansas
MS Geology (1970), Kansas State Uni
MS (1974) and PhD in Geophysics (1975), Stanford University

PhD Advisor: David M. Boore

Dissertation topic:
“2-D cross-sectional view of Long Valley, California, magma chamber using teleseismic P-wave delays.”

First job as NS geophysicist:
Kansas Geological Survey, Research Associate, Groundwater Section

How and when did you get involved in near-surface geophysics?
In 1969 I did an MS thesis on a DC resistivity project to detect an alluvial buried valley in Kansas. It did not work very well because the alluvial groundwater within the buried valley was high in chlorides, so there was not much electrical contrast with the surrounding shale bedrock. Ten years later I went back and tried seismic P-wave refraction, but that did not work because of a low-velocity layer about half way between the bedrock and the land surface. Thirty years later, I went back with my grad students and we developed a good profile of the valley with shallow seismic reflection. Normal bedrock depth was about 15 meters, whereas the bedrock in the valley was about 35 meters deep.

Thinking back to when you were a child, what did you want to be when you ‘grew up’?
A farmer

What can you tell us about the early days of NS?
No computer, not even a pocket calculator. No modeling. Undependable analog electronics. Sparse literature, and few near-surface colleagues. Very challenging physically, intellectually, and sometimes emotionally. But the challenges were what made it fun!

Did you travel a lot? What was your favorite field location / assignment?
I have been in all 50 states in the U. S and in 29 countries, virtually all of it at someone else’s expense. And the variety of project opportunities was amazing—everything from tunnel detection to incipient sinkholes beneath railroads to treasure hunts.

In your early days, how did you balance work versus personal / family time?
I did not balance it well at all. For example, when our older son was walking across the stage at his high school graduation ceremony, I was in a North Korean tunnel in the Demilitarized Zone on a consulting job for the U. S. Army. But my wife did an excellent job of raising our kids in deference to my professional career.

How would you or did you explain your job to a child?
I have found the best way is to mention trying to detect clandestine tunnels under international borders using techniques analogous to those used to image a baby in the mother’s womb.

How has the NS geophysics field changed since you became involved?
Computers galore. Modeling before and after field work, with stunning graphics. Dependable, miniaturized digital electronics. Plentiful scientific literature, and lots of excellent, helpful near-surface colleagues. Still can be very challenging physically, intellectually, and sometimes emotionally. But the challenges still make it fun!

What do you feel was your most significant career accomplishment or favorite paper?
The data for that paper are still pretty much state-of-the art, despite being collected in 1984 with a 12-bit, 24-channel seismograph. We were able to get a clear image of bedrock at depths from five to 15 meters, and the P-wave reflection had
a larger amplitude than any other wave on both the shot gathers and the common midpoint gathers. That paper showed what was possible with shallow seismic reflection under favorable geologic conditions and the data gave me confidence that we were on the right track to make meaningful contributions to the science of NS geophysics.

What was the most embarrassing moment of you career? Did you ever ‘blow-it’, and if so, care to share the story?
I was bird-dogging a shallow seismic-reflection crew at a proposed low-level rad waste site. I looked at the first few shot records and told the crew’s quality control geophysicist that I thought the records were clipped (i.e., ground motion too strong to be recorded accurately). He confidently said that they were only clipped on playback, which would not have been a major problem. I made the mistake of believing him and not insisting to see the actual digital numbers at that moment in the field. More than a million dollars and a year later, I was asked to critique the processed seismic sections, in which coherent wave trains in the upper 50 msec looked suspicious to me. Then I insisted on seeing the original digital field data so I could look at the digital numbers. Indeed, virtually every shot record had digitally clipped data in the earliest 50 msec of record, rendering the whole data set invalid and useless in the upper 70 meters of depth section, which was our primary target depth.
When digitally clipped data are processed, the clipped spots act like impulse functions. When an impulse function is convolved with a filter operator during processing, the filter operator is replicated in the data at each clipped point. Consequently, the upper 50 msec in the processed seismic sections was composed entirely of filter operators that stacked coherently. The dataset was proprietary, but I used the lesson learned to purposely record a clipped dataset and process it as a pitfall example. The resulting example is in Sloan, Steven D., Don W. Steeple, and Peter Malin, 2008, Acquisition and processing pitfall associated with the clipping of near-surface seismic reflection traces, Geophysics, 73(1), W1-W5.

What did you enjoy most about your career in NS? Least?
I truly enjoyed supervising theses of students, many of whom are now familiar names in NS geophysics. For example, Rick Miller, John Bradford, Steve Sloan, and Brad Birkelo have been elected to leadership positions within the SEG. And Julian Ivanov and Greg Baker have taught numerous short courses in NS seismology. There are about 50 others who have also been very successful.
I probably least enjoyed the rat race for grant money, particularly reading reviews done by people who saw no justification for geophysical exploration of the upper 100 meters of the earth’s subsurface. This was common in the 1970’s and 1980’s.

What are the challenges and opportunities that lie ahead for NS? Low-hanging fruit? Moonshot?
The challenges remain convincing engineers and bureaucrats (and others) that NS geophysics does work most of the time with the right technique(s) and a competent practitioner. The low-hanging fruit is more and better education, including wider exposure in the refereed literature. The moonshot is robotic field work coupled with artificial intelligence.

What advice would you give a student or young professional considering entering the NS field today?
Do it! Near-surface geophysics will be alive and well long after the last barrel of oil has been pumped from the ground. Potable water will be the most crucial natural resource of the latter half of the 21st century and beyond.

Are you still working or retired? How are you balancing work vs personal /leisure time today?
I retired from the University of Kansas in February of 2016, and I am now just a wheat farmer. If I don’t live too long, I can now afford it. The concept of leisure time is foreign to me.

Do you have a favorite quote or saying, ‘life’ motto, or other pearls of wisdom you’d like to share?
“The trouble with quotes on the internet is that it’s difficult to determine whether they are genuine.” -Abe Lincoln

What are your hobbies? What are you reading now?
Pheasant hunting, arc welding, woodworking. I do not read anything that I do not have to read because I have a mild case of dyslexia, so reading is difficult and not enjoyable for me.

Honors and Awards
- Honorary Membership for distinguished technical contributions, Society of Exploration Geophysicists, 2009
- Society of Exploration Geophysicists Award of Appreciation In Recognition of Serving as Fall 2007 Distinguished Lecturer, November, 2008
- Society of Exploration Geophysicists Distinguished Lecturer, Fall, 2007
- Honorary Professor, Jilin University, Changchun, Peoples Republic of China, 2004
- Guest Professor, China University of Geosciences (Wuhan), P. R. of China, 2004
- Van Sant Award for Excellence, Dept of Geology, The University of Kansas, 1999
- Awarded Fellowship in the Geological Society of America (GSA), 1997
- Life Awarded Membership, Society of Exploration Geophysicists (SEG), for exceptionally meritorious service, 1996
- Frank R. Frischknecht Award, Near Surface Geophysics Section of SEG, 1996
Do you have a favorite photograph or momento? What is the back story?

**Figure 1** Rick Miller running from buffalo gun.

**Figure 2** Version two of autojuggie.

**Figure 3** Homemade seismograph made from a transducer, stereo amplifier, bass speaker, dowel rod, oatmeal box, all-thread bolt, and motor taken from a barbecue rotisserie. 1 Motion sensor. 2 Low-pass filter circuit. 3 Audio amplifier. 4 Power supply. 5 Bass speaker connected to dowel rod. 6 Dowel rod balanced on nail pivot-point with felt-tip marker attached to far end. 7 Oatmeal box mounted on an all-thread bolt. 8 Motor to rotate oatmeal-box drum.

**Selected Readings**


My Dog Ate my Homework - How to overcome obstacles throughout your academic and professional careers

Welcome to the newest section designed to help you discover news ways to bounce back from research drawbacks, better manage your workflow, and get advice from known professionals in the community. Each quarter will focus on different and sometimes perpetual issues that people encounter throughout their work with methods to effectively overcome those barriers.

People often stress how important first impressions are when you meet someone for the first time, but what about your first impression as a speaker before your oral presentation? If you are presenting a paper at the Annual Meeting in Dallas this year, consider eliminating these five phrases from your presentation to strengthen your delivery and reaffirm your confidence in the work.

CAUTION: The Deadliest First Sentence of a Presentation! (So Why is Everyone Using It?)


We've all heard the axiom that “it’s not so much how you start but how you finish that matters.”

That’s probably true when it comes to most things in life. It’s not true though in public speaking.

How you come out of the gate is of the utmost importance. Each year, I probably coach a couple of hundred people preparing to give a speech or presentation. I am always struck at the numbing similarity of people’s opening line. On their first take, more than 75% of my trainees begin the exact same way, using precisely the same words that serve to:

- Sap their conviction
- Undermine their authority
- Apologize for taking up the audience’s time

If you’re looking to exhibit confidence and command and boost your executive presence, make sure you don’t begin with:

“So… I just thought I’d kind of quickly walk you through….”

I’m sure this sounds familiar. It’s ubiquitous because when it comes to public speaking, we learn primarily from observing others. Done correctly, that can be great. The flip side is, we pick up everybody else’s bad habits. Beginning this way will make your boat sink before you even leave the dock.

Breaking down this ubiquitous opening line word by word might further explain why it should be expunged from your routine.

SO - As I have stated in previous posts, the word “so” is the ultimate in empty calories. It serves absolutely no purpose, and yet many of us fall into the bad habit of starting virtually every sentence with it. I’ve noticed that it is particularly prevalent in the tech sector. The only thing worse than “so” is when the speaker elongates the “so” to “sooooo” and stretches the sound out for a couple of seconds, or when “so” is accompanied by its trusty companion “um,” as in “so, um…”

JUST - This implies you’re about to give the audience a half-hearted effort, as in, “I’m just going to give this a quick glance.” By using this word, you’re already setting limitations on what you are presenting and signaling to the listener that he/she shouldn’t expect too much. “just” = nothing special.

THOUGHT - “I thought” or “I think” has wormed its way into our hearts and communication styles. It’s another lazy word that implies “just good enough.” Whenever I hear someone say that they “thought” they would start by doing something, I always imagine them having picked their presentation strategy out of a hat an hour earlier. Just think how we use this word in everyday life:

“what are you doing today Diane?”

“I don’t know. I thought I’d go to the mall.”

There’s just not a lot of conviction in her desire to go to the mall. It implies, “unless I can think of something better.”

KIND OF - When it comes to conviction strippers, this, and its first cousin “sort of” are the hands-down winners. Are you going to “kind of” give the audience your report or are you really going to give it to them? I’ve heard this filler du jour used in many self-sabotaging ways, like “this is kind of where we’re going with this year’s strategy.” I guess if you intentionally want to equivocate on something then it makes sense, but if displaying certainty is your goal, avoid saying it.
QUICKLY - Here’s the deadly apology word. Telling your audience you’re going to be quick implies that you don’t deserve to have the floor. It’s saying to your audience, “I know you’re likely to be bored by what I’m saying, so if I do this really quickly, you’ll be bored for less time.” Remember, it’s often the speakers who take their time with the material and feel comfortable pausing that project the most confidence and authority.

What could be a simple alternative to the deadliest of opening lines? Try, “This morning I want to share with you our strategy for the rest of the year.” It’s a simple fix that helps you project more gravitas and boosts your executive presence, and in business, that is of vital importance.
Join SEG Near Surface Geophysics Technical Section

http://seg.org/News-Resources/Near-Surface

JOIN THE SEG
NEAR SURFACE
TECHNICAL
SECTION

Recognized as a leading global society for applied near-surface geophysics, SEG’s Near Surface Technical Section features:

• Multiple business and technical meetings
• Oral, poster, and special sessions at the SEG Annual Meeting
• Special articles and issues in The Leading Edge (TLE), Interpretation, and GEOPHYSICS
• The Near Surface Technical Section newsletter—Near Surface Views—published quarterly


INSPIRE THE FUTURE OF NEAR-SURFACE GEOPHYSICS

Donate now to the SEG Near Surface Geophysical Research Award Fund.

This important initiative enables academically exceptional graduate and undergraduate applicants to conduct geophysical research projects around the world by offsetting expenses for field data acquisition, laboratory experiments, computer software, or other activities. All applicants are considered, with graduate students given greater funds and priority.

Your gift is vital to the advancement of the global near-surface geophysical community. Across this discipline, novel applications and innovative methods and techniques are developed and shared for the benefit of professional, future near-surface geophysicists and society as a whole. In order to maximize the number of available awards, we respectfully ask you to consider a donation to help us meet our goal of growing the endowment to $100,000.

Find out more about the award and donate now at www.seg.org/News-Resources/Honors-and-Awards/Near-Surface-Research-Award.

Please note that the SEG Foundation imposes a 5% Development Personnel Fee on gifts of $200 or more that are distributed to a specific program or activity.
2. Gravity, Electrical, and Magnetic Methods and their Applications - Geophysics: **September-October 2016**
3. Near-surface Imaging and Interpretation - Interpretation: **August 2016**
4. Hydrogeophysics - TLE: **September 2016**
5. Characterizing the Subsurface with Multiples and Surface waves - Interpretation: **November 2016**

### Calendar of Upcoming Events

<table>
<thead>
<tr>
<th>Events</th>
<th>Location</th>
<th>Dates</th>
<th>Submissions</th>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th International Conference on Environmental and Engineering Geophysics</td>
<td>Beijing, China</td>
<td>26-29 June 2016</td>
<td>Closed</td>
<td>Early registration ended</td>
</tr>
<tr>
<td>Multichannel analysis of surface Waves (MASW) Workshop FREE</td>
<td>Lawrence, USA</td>
<td>14-15 July 2016</td>
<td>N/A</td>
<td>First come basis</td>
</tr>
<tr>
<td>Asia Oceania Geosciences Society 13th Annual Meeting</td>
<td>Beijing, China</td>
<td>31 July - 5 Aug 2016</td>
<td>Closed</td>
<td>Early registration ended</td>
</tr>
<tr>
<td>ASEG 25th International Geophysical conference and Exhibition</td>
<td>Adelaide, Australia</td>
<td>21-24 Aug 2016</td>
<td>Closed</td>
<td>Early registration ended</td>
</tr>
<tr>
<td>35th International Geological Congress (IGC)</td>
<td>Cape Town, South Africa</td>
<td>27 Aug to 4 Sep 2016</td>
<td>Closed</td>
<td>Early registration ended</td>
</tr>
<tr>
<td>EAGE Near surface Geoscience 2016</td>
<td>Barcelona, Spain</td>
<td>4-8 Sep 2016</td>
<td>Closed</td>
<td>Early registration ends: 15 July 2016</td>
</tr>
<tr>
<td>The 43rd International Association of Hydrogeologists congress</td>
<td>Montpellier, France</td>
<td>Sep 25 - 29, 2016</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Society of Exploration Geophysicists Annual Meeting</td>
<td>Dallas, USA</td>
<td>16-21 Oct 2016</td>
<td>Closed</td>
<td>Registration is open</td>
</tr>
<tr>
<td>AGU Fall Meeting</td>
<td>San Francisco, USA</td>
<td>12-16 Dec 2016</td>
<td>3 Aug 2016</td>
<td>Will open mid-August 2016</td>
</tr>
<tr>
<td>6th International symposium on three-Dimensional electromagnetics</td>
<td>Berkeley, USA</td>
<td>28-30 March 2017</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>International Conference on Engineering Geophysics</td>
<td>Al Ain, United Arab Emirates</td>
<td>8-11 Oct 2017</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Near Surface Asia Pacific Conference</td>
<td>Cairns, Australia</td>
<td>17-19 July 2017</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Groundwater resources serve as a vital source of regional water supply. The lack of proper management of the available groundwater resources can lead to serious environmental issues such as land subsidence or seawater intrusion. Before sustainable management of groundwater resources can be established, it is required to have an accurate assessment of the groundwater system. This proposed session focuses on the assessment of groundwater resources with a focus on issues of near-surface investigation and modeling. This session welcomes studies related to numerical modeling and field investigation. Traditional hydrogeological approaches, geophysical approaches, and geochemical approaches are welcome. We especially encourage interdisciplinary studies that apply state-of-the-art hydrogeological and/or modeling approaches.

Conveners: Dr. Ping-Yu Chang (pingyuc@gmail.com) (National Central University, Taiwan), Prof. Liang-Cheng Chang (lcchang31938@gmail.com) (National Chiao Tung University, Taiwan), Prof. Cheinway Hwang (cheinway@mail.nctu.edu.tw) (National Chiao Tung University, Taiwan), Dr. JuiPin Tsai (skysky2cie@gmail.com) (University of Arizona, United States), Prof. Hwa-Lung Yu (hlyu@ntu.edu.tw) (National Taiwan University, Taiwan)

Invited Speaker: Yu-Feng Forrest Lin, hydrogeologist and assistant section head, Hydrogeology and Geophysics Section, Illinois State Geological Survey/Prairie Research Institute, University of Illinois at Urbana-Champaign

43rd International Association of Hydrogeologists
The 43rd IAH (International Association of Hydrogeologists) congress will be held in Montpellier, France the 25 to 29th September 2016. (http://www.60iah2016.org/en/programme/main-topics-and-provisional-sessions).

A “Hydrogeophysics” session (Topic 8, session 7) will be focus on both recent methodological/instrumental developments and relevant case studies. Your contribution to this session will be greatly appreciated.

The deadline for the short abstract submission is February the 28th (on-line submission, about 300 words). (http://www.60iah2016.org/en/abstract-submission-guideline).

Feel free to disseminate this call of abstracts to your colleagues.

Best regards

Lee SLATER, Konstantinos CHALIKAKIS, and Roger GUERIN Rutgers University Newark (USA), UMR EMMAH - Avignon University (France), and UMR METIS - UPMC Paris-6 University (France)
NEAR SURFACE GEOPHYSICS TECHNICAL SESSIONS

The SEG Near Surface Technical Section has eight technical sessions this year at the SEG Annual Meeting. Technical sessions range from engineering geophysics to humanitarian geophysics and many different methods and applications in between. Please join us in Dallas, Texas for all of our technical sessions!

SEG-AGU Hydrogeophysics:
The Hydrogeophysics special session will highlight papers on the application of near-surface geophysics to hydrologic problems. The session will include papers that report new methods for analysis and interpretation of hydrogeophysical data, development of cutting-edge instruments, and presentation of novel case studies.

Engineering Geophysics:
The Engineering special session will highlight the application of near-surface geophysics to engineering and geologic problems associated with civil and geotechnical investigations. This session is intended to include presentations regarding cutting edge development of and use of new instrumentation, unique case studies in difficult urban settings, as well as new approaches to visualize geophysical data in engineering formats.

Surface Waves:
The Surface Wave special session will highlight most recent developments for shear-wave velocity (Vs) profiling and case histories for uses and applications.

GWB - Humanitarian Geophysics:
The SEG Foundation’s Geoscientists Without Borders program has provided funding for humanitarian projects around the globe. The program has helped to raise awareness of humanitarian issues and the role geophysics can play in solving problems that lead to humanitarian need. This special session will highlight case studies where humanitarian problems are approached from a geophysics perspective and how various geophysical methods can be utilized to address humanitarian need.

Register Now: http://seg.org/Events/Annual-Meeting

Questions: contact ns@seg.org
SAVE the DATE

NEAR SURFACE
Asia Pacific Conference
17-19 JULY 2017
CAIRNS, AUSTRALIA

Major topics include......
Landslides and Geohazards
Forensic Applications
UXO
Airborne EM and Groundwater
General Hydrogeophysics
Shallow Marine Geophysics
Archaeometry
Volcano, Regolith, and Mine-Site Geophysics
.....and more
APPLIED GEOPHYSICS
ENGINEERING • MARINE • OIL & GAS

LOCATIONS

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston</td>
<td>July 21st</td>
</tr>
<tr>
<td>Midland</td>
<td>July 26th</td>
</tr>
<tr>
<td>Austin</td>
<td>July 28th</td>
</tr>
</tbody>
</table>

TOPICS

- Engineering Applications
- Environmental Applications
- Marine Geophysics
- Oil & Gas Exploration
- Borehole Geophysics
- Future Geophysical Trends

PRESENTED BY:

Collier Consulting

GEO Survey Systems
To contribute material to the NS views send an Email to

Anja Klotzsche (a.klotzsche@fz-juelich.de)

All members are welcome to submit content of interest to the Near Surface community. Note, that we also have a new section “What’s hot” where new methods, new developments, new technology, new equipment, or new NS event can be presented. Feel free to send articles to this new section. Please keep messages brief, provide contact information, and (if available) a web address for additional information.

Reminder: The best Student Chapter of the year will be awarded with $250 US. Good Luck!