

Letter From the President,

Jan van der Kruk

Dear NSGS members, I am very pleased to introduce to you the new executive committee of NSGS: Klaus Holliger as President-Elect, Darcy McPhee as Vice-President, Larry Bentley as Treasurer, James Irving as Secretary, Deborah Underwood as Webmaster, Emily Hinz as Newsletter Editor, Rob Jacob as Past-President and myself as President. I would like to thank outgoing member Wendy Wempe for her contributions during the last years in the NSGS executive committee.

The 2009 SEG meeting in Houston was a great success, and the NSG meeting and Reception were well attended. I would also like to thank all reviewers who reviewed the SEG expanded abstracts. As a token of appreciation we have published the names of all reviewers in this newsletter. At the last NSG meeting we already discussed several ideas for the 2010 SEG meeting in Denver. We hope that many of you are planning to participate and submit abstracts!

Our initiatives for this term are the following:

We continue to educate, motivate and encourage students to join us in the near-surface geophysics section.

Our newsletter Editor, Emily Hinz, one of our most active NSGS students, has done a great job in designing and organizing our electronic newsletter. We plan to extend the scope of our newsletter e.g. by including PhD thesis titles. We encourage you to submit other ideas and/or material for upcoming newsletters.

We plan to improve our visibility by updating our homepage. I have already seen drafts of our new website designed by Deborah Underwood and it is looking great! We plan to include a new logo on our new website and to be present on Facebook and LinkedIn. If students want to be involved in these goals, please let us know!

We plan to continue and improve collaboration with other near surface groups of societies such as EEGS, AGU, EAGE, AAPG.

Please do not hesitate to contact any of us if you have suggestions about material for upcoming newsletters or the NSG section in general. We are looking forward seeing many of you at the upcoming meetings.

With best wishes for the new Year!

Jan van der Kruk

President, Near Surface Geophysics Section of SEG

Status of 2009 Presidential Initiatives

Rob Jacob

The electronic newsletter has been finalized and is in full production mode (except for advertising). We have continued to collaborate with AGU-NS group and EEGS, while we have continued to work on relationships with EAGE and AAPG. Our work with our fellow societies in the SEG, such as the Mining and Geothermal and Gravity and Magnetism sections, should result in jointly organized future workshops.

The routine publication avenues have been expanded to include a SEG book(s) based on NSGS workshops at various meetings that will highlight a different method within near surface geophysics, the first coming out of the 2009 Workshop on Near Surface Seismology and Ground Penetrating Radar. Some of the standing committees are in better shape than others, the experiences learned this past year toward gaining new members to these committees has been discussed with the current president and Rob will continue to help out toward this objective. Continued work on the new / updated NSGS website that is beginning to mirror the new / updated SEG website. And finally the differentiators between NSGS and other near surface geophysical groups were finalized so that the Executive Committee would be able to use these in long-term planning for the section.

Treasury Report

Larry Bentley

Bank Account Balance	
Balance 1 July, 2008	32,064.79
Balance 30 June, 2009	36,407.06
Difference	4,343.27

July 1, 2008 - June 30, 2009

Revenue		% Revenue
Dues collected	3,840.00	31.0
Advertising	5,250.00	42.3
Sponsorship of annual meeting & banquet	808.00	6.5
Student travel sponsorships	0.00	0.0
SEG anniversary award	2,500.00	20.2
Total Income	12,398.00	79.8
Expenses		% Expenses
Newsletter production	1,914.27	22.3
Postage	933.35	10.9
Operating expenses	397.97	4.6
Luncheon and annual meeting	2,674.73	31.1
Student awards	1,000.00	11.6
SEG fees	1,680.00	19.5
Total Expenses	8,600.32	100.0
Net Income-Revenue*	3797.68	

*Note that the net revenue does not match the change in the bank balance, because of outstanding invoices and payments.

Without the one-time SEG Anniversary Award, the NSGS had a modest positive

cash flow this year. The largest change to the 2009-2010 financial outlook is that the newsletter has gone to e-mail format. This will eliminate the large newsletter production costs. At this time it is unclear what will happen to the newsletter advertisement revenue. Also, sponsorships were down for this report, but 2009-2010 is already a better year.

NSG's New Liaison: SEG 2nd Vice President

John Bradford



When I learned that I had been elected 2nd Vice President of the SEG, I was both honored and surprised. Now given the responsibility, I take the job seriously and will do my utmost to serve the community well. In my short time in office I have already come to appreciate the excellence of the SEG organization which is facilitated by a motivated and effective staff.

When the Near Surface Geophysics Section was formed, the founders sought a greater voice in the governance of the SEG. The de facto policy since that time, has been to elect one vice president from the near surface community.

In practice, the 2nd Vice President serves as a representative for a broader spectrum of special interest groups within the SEG that include such technical specialties as geothermal and mining, and gravity and magnetics. Maintaining effective representation of all members is necessary. The current organization does not guarantee that this will continue in the future.

My top priority this year will be developing and implementing a formal structure within the SEG to ensure representation for the near surface community and other groups that have adequate numbers and interest. The primary objectives of this work are:

1. to strengthen the impact of SEG activities in areas beyond oil and gas
2. to promote networking and technology transfer

to provide input into governance mechanisms to give a stronger voice to special interest groups

Intersociety collaboration is a second area that I feel is of significant importance, especially to our relatively small and diverse near surface geophysics community. Collaboration for the sake of collaboration is not the goal here, but rather facilitating

communication between researchers and practitioners over a range of disciplines and working in disparate geographic locations. The ultimate objective is advancing and promoting our science most effectively. I will be working to facilitate communication and collaboration globally to include organizations with which SEG has had long standing relationships as well as developing new ties such as working with the Chinese Geophysical Society through SEG's newly established Beijing office. In all, it looks to be an exciting and busy year!

SEG 2009 -- Houston, TX

Thanks!

Thanks to the SEG 2009 NSGS abstract reviewers (in no particular order):

Baishali Roy

Les Beard

Ben Sternberg

Carlyle Miller

Christina Chan

Doug Crice

Deborah
Underwood

Darcy McPhee

Dwain Butler

Yih Jeng

Daryl Tweeton

Greg Hodges

Jamie Harris

H.C. Clark

James Irving

John Bradford

Julian Ivanov

Jianghai Xia

Klaus Holliger

Laura Sherrod

Larry Bentley

Megan Carr

Nedra Bonal

Oderson A. de
Souza Filho

Oz Yilmaz

Louise Pellerin

Presanta Yeluru

Ralph Bridle

Rick Miller

Ross Groom

Partha Routh

Rob Jacob

Roger Young

Sandra Takata

Lewis Somers

Steve Danbom

Robert Szerbiak

Theodore (Ted)
Asch

Les Davis

Tim Long

Tom Dobecki

George Tsoflias

NSG Section Meeting and Reception

By Rob Jacob & Darcy McPhee

The annual SEG NSGS reception was held at Zula restaurant on Tuesday evening. Roughly 50 NSGS members attended the dinner buffet accompanied by live jazz at this local Houston restaurant. The dinner was free to all NSGS members. The NSGS appreciated sponsorship of this event by several companies including Battelle, Petros Eikon, Zonge Engineering, Sensors and Software, Geometrics, Geonics, and Green Engineering.

The dinner kicked off with a few words from Rob Jacob, during which he reviewed the Executive Committee progress during the past year and then had the honor to present this year's awards and student scholarships. The 2009 Harold Mooney Award went to Louise Pellerin (see photo) and the 2009 Frank Frischknecht Award went to Susan Hubbard. The student travel scholarships went to Khan Jadoon (Forschungszentrum Juelich), Dylan Mikesell (Boise State Univ.), and Cezar Iacob (Univ. of Bucharest). We congratulate these awardees.



Louise Pellerin, 2009 Mooney Award recipient, with Rob Jacob



Student scholarship recipient Dylan Mikesell with Rob Jacob



Rob Jacob with student scholarship recipient Cezar Iacob



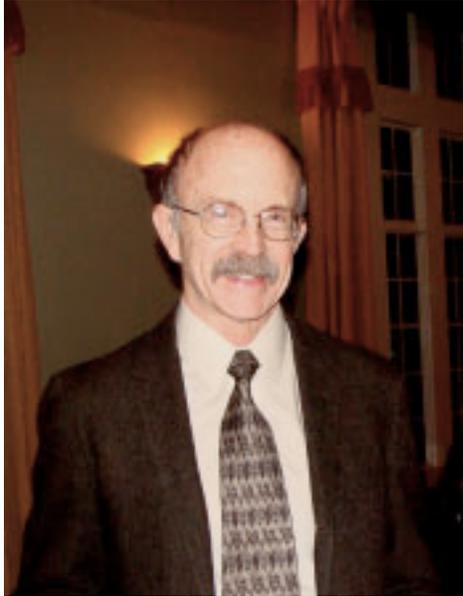
Student scholarship recipient K. Jadoon with Rob Jacob



A few members stop for a picture at the NSG business meeting.

In Memoriam: Dr. Robert Young

1943 - 2009



Dr. Roger Young, a former NSGS president, unexpectedly passed away on October 13th. Dr. Young received a B.S. in Geology, with High Honors, in 1965 from Wesleyan University, and his M.S. in Geophysics in 1968 from Stanford University. Roger began his professional career in geophysics at Mobil Oil in Dallas shortly after graduation from Stanford. He received his Ph.D. in Physics (Geophysics) in 1979 from the University of Toronto. He was a Research Geophysicist with Phillips Petroleum from 1979 to 1982, a Senior Research Geophysicist from 1982-1986, and a Senior Research Fellow at Curtin University, Perth, Western Australia from 1986-1990. He came to Oklahoma University's School of Geology and Geophysics as an Associate Professor in 1990. Many M.S. and Ph.D. students completed their degrees under his direction.

He held positions in, and received awards from many international geophysical societies. He was an active researcher who published numerous papers, and in recent years became best known for his work in near-surface geophysics. Roger was president of Near Surface Geophysics Section of SEG in 2001-2002. In 2008, he received the Stubbeman-Drace Presidential Professorship, given to outstanding faculty selected on the basis of teaching, willingness to mentor, and dedication to research, creative activity and service. This description of the basis for awarding these Presidential Professorships summarizes Dr. Young's career at OU perfectly. A

memorial service was held on Friday, October 23, 2009, in the Oklahoma University Memorial Student Union.

OpenEM.org, A Home for Electromagnetic Geophysics



OpenEM.org

open source, open data, and open exchange in electromagnetic geophysics

OpenEM.org is a community resource for electromagnetic geophysics. The OpenEM virtual institute as it develops will include several continuously evolving core resources:

a repository for community-supported open source software for EM data analysis, forward and inverse modeling and interpretation

links to data management centers with extensive collections of unrestricted EM data sets and derived data products

tools for requesting access to shared EM instruments both through the National Geoelectromagnetic Facility and through a clearinghouse for PI-maintained instruments that may be available for loan

a community forum for free exchange of technical information

Support for special interest groups (SIGs) within EM geophysics

collaborative workgroup tools to promote multi-institutional experiment planning and execution

hosted “webinars” on EM geophysics, to serve as a national “departmental” monthly seminar series

academic-industry showcase of EM geophysics products and services

EM geophysics job postings, studentships, postdoctoral opportunities OpenEM is open to everyone. While it is designed primarily to serve the interests of US-based EM geophysicists, there are no restrictions on access by any individual or group no matter their geographic location. OpenEM is dedicated to free exchange of information, to establishing and promoting open standards for software

interoperability, data exchange, and model definition. Our goal is to make EM geophysics accessible as widely as possible; to take it out of the specialist laboratory and into the field. The OpenEM virtual institute spans the full range of terrestrial, airborne and marine EM geophysics, including DC resistivity, induced polarization methods, passive and controlled source EM, transient/time domain EM, magnetotellurics including CSAMT, AMT and RFMT, and geomagnetic depth sounding and related methods.

Introducing the 2010 NSGS Executive Committee

Jan van der Kruk

President



Jan van der Kruk received a M.Sc. (1995) in electrical engineering and a Ph.D. (2001) in geophysics from Delft University of Technology, The Netherlands. He has been Lecturer and Senior Researcher in the Applied and Environmental Geophysics Group, ETH Zurich, Switzerland from 2001-2008. Since 2008 he is a research group leader at the Forschungszentrum Jülich, Germany, and holds a professorship position at the RWTH Aachen University, Germany.

His current research interests include the development and improvement of numerical modeling, imaging, and inversion of multi-offset, multi-component surface and crosshole GPR and seismic data for hydrogeophysical characterization. He was recipient of the Best Paper Award 2000 from the Department of Applied Earth Sciences, Delft University of Technology and received in 2006 an Honorable Mention in the category of Best Paper in Geophysics. Jan was associate editor of Geophysical Prospecting from 2001-2008 and has been associate editor of Geophysics since 2008. He is a member of the EAGE since 1997, IEEE GRSS since 2000, SEG since 2001, AGU and DGG.

Klaus Holliger

President-Elect



Klaus Holliger received M.Sc. (1987) and Ph.D. (1990) degrees in geophysics from ETH Zurich and a postgraduate degree in economics (2000) from the University of London. He did an extended postdoc at Rice University in Houston, Texas, and joined ETH Zurich's newly founded Applied and Environmental Geophysics Group as a lecturer in 1994, became senior lecturer in 1996, and was named professor in 2002. Klaus has also worked for shorter periods of time at the USGS, Imperial College, and the University of Cambridge. Four years ago, he accepted a chaired professorship at the

University of Lausanne. He just finished a term as vice-dean of research and is now the director of the university's geophysics institute.

He recently became editor-in-chief of Journal of Applied Geophysics and previously served as associate editor of Geophysics, Water Resources Research, and Geology. Klaus is broadly interested, has worked and published in a variety of fundamental and applied research domains. To date, he has published more than 90 peer-refereed papers. Currently, his main research interests are the inherently trans-disciplinary fields of environmental geophysics in general and hydrogeophysics in particular. He has been the primary supervisor of more than twenty M.Sc. and Ph.D. students, five of whom were awarded high-level distinctions, and six postdocs, of whom two have already been nominated professors themselves and one has advanced to become the director of the Schlumberger Cambridge Research.

Robert Jacob

Past President



Rob is an assistant professor in the Geology Department at his alma-mater, Bucknell University, where he received his B.Sc. in 1997 in Geology with an Environmental Concentration and conducted several research projects using near-surface geophysics. Rob received a M.Sc. degree (2003) and a Ph.D. (2006) degree in Environmental Geophysics and Hydrology from Brown University, where his dissertation focused on using GPR data to non-invasively observe unsaturated hydrologic processes. He has periodically worked as a geophysical consultant since returning to graduate school and has conducted multiple geophysical studies for archeological,

planetary and environmental projects throughout the United States and in Argentina. He held a post-doctoral research appointment at Brown University for 2 years working on a wide variety of projects and developing a state-wide soil moisture network.

Currently, he broadly applies geophysical methods (gravity, magnetics, DC resistivity, EM, GPR, and seismic measurements) to a variety of near surface (~100 m deep) questions in Central PA, and specifically research to non-invasively observe unsaturated hydrologic processes. Rob worked for 4 years as an environmental / geophysical consultant at Roy F. Weston, Inc (now Weston Solutions) in West Chester, PA. The projects ranged from small to large scale and involved collecting, analyzing, interpreting and reporting on geophysical, geotechnical and hydrogeologic investigations. Rob is a member of SEG, AGU, EEGS, & SSSA.

Darcy McPhee

Vice President



Darcy's research interests involve the development and utilization of gravity, magnetic, and EM interpretation and measurement techniques for solving subsurface geologic problems. Her current research primarily focuses on earthquake hazards, groundwater resources, and 3D geologic mapping, and her previous research focused on investigating the relationship between ultra-low frequency electromagnetic waves and earthquakes with emphasis on data collection and processing. She graduated from University of Pennsylvania with a BA in Physics, and

then went on to get a Ph.D. in Geophysics from Stanford University (2002). Darcy currently works as a research geophysicist at the U.S.

Larry Bentley

Treasurer



Larry received his B.A. (1971) in Physics from Hamilton College and his M.Sc. (1974) in Geology and Geophysics from the University of Hawaii. He worked for 10 years with Western Geophysical Company as a party manager, supervisor and research geophysicist. In 1985, Larry returned to university to study subsurface flow and transport modeling. He received his Ph.D. degree from the Department of Civil Engineering at Princeton University in 1990. After a one-year post-doctoral fellowship at the University of Vermont, he joined the faculty of the University of Calgary in 1991. He is currently a professor in the Department of Geology and Geophysics. His research interests include hydrogeology, groundwater modeling, and near-surface geophysical applications in hydrogeology. He has been a member of the SEG since 1998. Larry has served the NSG Section as Vice President and will begin his second term as treasurer.

James Irving

Secretary



James Irving received a B.Sc. degree in Earth Sciences from the University of Waterloo (1997), a M.Sc. degree in Geophysics from the University of British Columbia (2000), and a Ph.D. degree in Geophysics from Stanford University (2006). After spending three years as a post-doc at the University of Lausanne, Switzerland, he recently took up an Assistant Professor position at the University of Guelph, Ontario, Canada. His main research interest is hydrogeophysics, in particular the investigation of stochastic data inversion and assimilation strategies.

Emily Hinz

Newsletter Editor



Emily is a student working on her Ph.D. in geophysics at Boise State University in Boise, Idaho. Her research focuses on plume mapping and subsurface characterization using time-lapse GPR attenuation. She is also exploring the use of electroseismic conversion as an additional tool to map thin plumes and clay layers. She received her B.Sc. in Geoscience and Computer Science (2005) and her M.Sc. in Geoscience (2007) from the University of Texas at Dallas. Emily is also a 2009-2010 NSF GK-12 fellow helping to bring science into K-12 classrooms around the Boise area.

Upcoming Meetings & Deadlines

SEG Course: Near-Surface Seismology

February 8-9, 2010

Houston, TX

Taught by Gregory S. Baker (former NSGS President)

Who should attend:

Geologists and geophysicists, both in industry and academia. Materials covered will be valuable to both explorationists and geophysicists who have interest in the upper 200m of the subsurface.

Objectives:

This course is designed to provide background information to help professionals and academics use and understand near-surface seismology techniques. We will cover the following:

- Basic near-surface seismic theory

- Instrumentation: including sources, seismographs, and sensors

- Seismic refraction: including the generalized reciprocal method (GRM), and refraction tomography

- Seismic surface waves: including spectral analysis of surface waves (SASW) and multichannel analysis of surface waves (MASW)

- Seismic reflection: including common-offset and common-midpoint (CMP)

- Seismic data integration and interpretation, including pitfalls and case histories

Course lectures will involve both PowerPoint presentations as well as “in class”

paper exercises focused on interpretation and pitfalls. Due to the numerous data processing, analysis, and interpretation software packages available and necessary for in class work (and their associated licensing!), we will not be doing any computer-based data processing or analysis. However, appropriate step-by-step analyses of the procedures (including examples) will be covered.

The [registration form](#) and a more detailed [description](#) of the course are available online.

4th International Conference on Environmental and Engineering Geophysics (ICEEG)

June 14 - 17, 2010

Chengdu, China

As many of you probably remember, Chengdu was the location of the devastating 7.9 magnitude earthquake that occurred on May 12, 2008 killing more than ten thousand people. Although the general focus of this conference is near-surface geophysics, many of the presentations will revolve around the topic of hazard discrimination and evaluation using geophysics.

Prior to the conference NSGS will jointly sponsor a near-surface geophysics workshop with the China University of Geosciences at their Wuhan campus conference facility. NSGS will work with the SEG and conference organizers to assemble an SEG book based on the workshop and selected papers presented at the conference.

For more information you can contact Jianghai Xia (conference co-convener) Jxia@kgs.ku.edu or go to <http://www.iceeg.cn/>

Symposium on the Application of Geophysics to Environmental and Engineering Problems (SAGEEP)

April 11 - 15, 2010

Keystone, Colorado

An NSGS business meeting will be held sometime during the conference (time/place TBA). All members are welcome and encouraged to attend. More information on the conference can be found at <http://www.eegs.org/>.

European Geosciences Union General Assembly (EGU)

May 2 - 7, 2010

Vienna, Austria

Abstract deadline is January 18, 2010

More information can be found at <http://meetings.copernicus.org/egu2010/>.

XIII International Conference on Ground Penetrating Radar (GPR 2010)

June 21 - 25, 2010

Lecce, Italy

Abstract deadline is January 15, 2010

More information can be found at <http://www.ibam.cnr.it/gpr2010/>.

AGU Western Pacific Geophysics Meeting (WPGM)

June 22 - 25, 2010

Taipei, Taiwan

More information can be found at <http://www.agu.org/meetings/wp10/>.

International Conference on Computational Methods in Water Resources (CMWR 2010)

June 21 - 24, 2010

Barcelona, Spain

Abstract submissions are now closed.

More information can be found at <http://congress.cimne.com/CMWR2010>.

The Meeting of the Americas (AGU joint assembly)

August 8 - 13, 2010

Foz do Iguassu, Brazil

More information can be found at <http://www.agu.org/meetings/ja10/>.

Society of Exploration Geophysicists (SEG)

October 17-22 , 2010

Denver, Colorado

More information can be found at <http://www.seg.org>.
