EAPS SEMINAR

Thursday, 3/21, 3:30 pm, HAMP 1252
Steven Semkin, Arizona State Univ. & Earthscope National Office, “The Design and Implementation of Place-Based, Culturally Relevant Geoscience Curriculum and Assessment.” (See attached flyer for more information)
Refreshments, 3:00-3:30, HAMP 2201

EAPS ARMCHAIR TRAVELER SERIES

Friday, March 22, 12:00-1:00, HAMP 2201
Zachary Umperovitch, American Road Trip Series
(See attached flyer for more information)

EAPS PRESENTATIONS


Angel Torres-Valcarcel, EAPS PhD candidate, offered a presentation, March 6, "How to build a Compost" to preschool students from "Centro Niños en Acción" at Trujillo Alto, Puerto Rico.

Angel Torres-Valcarcel, EAPS PhD candidate, offered a presentation, March 12, "Compost" to third grade students from an elementary school at Trujillo Alto, Puerto Rico.

Angel Torres-Valcarcel, EAPS PhD candidate, offered a presentation, March 14, "Compost" to ninth grade students from Venus Gardens middle school at San Juan, Puerto Rico.

EAPS PUBLISHED ARTICLES


HEAD POSITION INTERVIEWS

The two candidates for the EAPS Dept. Head Position and their interview dates in the department are:

Wed. March 27: Prof. John Cushman
Prof. Cushman is a University Distinguished Professor in the Dept. of Earth, Atmospheric, and Planetary Sciences and also a Professor of Mathematics at Purdue.

Fri. March 29: Prof. Indrajeeet Chaubey
Prof. Chaubey is a Professor of Eco-hydrology with joint appointments in the Dept. of Agricultural and Biological Engineering and the Dept. of Earth, Atmospheric, and Planetary Sciences at Purdue, and is a University Faculty Scholar.

The Curriculum Vitae for the two candidates are available with Wanitta Thompson in HAMP Rm 2169C.

THANK YOU TO ALL!!

EAPS VETERAN DONATION DRIVE FINAL RESULTS!

Thank you to everyone who contributed to this initiative. Without your generosity, this would not have been possible. Our original goal was to collect 100 items, but after a quick tally, we accumulated 150 items! Tremendous job!
Daniel Moser, Cloud Microphysics Group

CAMPUS NEWS

OPPORTUNITIES for PURDUE FACULTY
Global Business Engagement (GBE) Initiative
GBE leverages Purdue’s assets—our global brand, international students (and their parents), alumni, technology, research parks, training, services, connections with foreign universities—to reach and attract foreign executives. We also add a business engagement dimension to selected Purdue initiatives and collaborate with foreign organizations, e.g., universities, research institutes, national and sub-national government agencies, science and technology transfer offices, etc. see attachment for more details on what GBE can do for you.
(See attached flyer for more details)
EAPS FACULTY AND GRADS

PGS — 11th Leonards Lecture and PGS Workshop

The Purdue Geotechnical Society is pleased to announce the 11th edition of the Purdue Geotechnical Workshop and 11th G.A. Leonards Lecture that will take place on Friday, April 19, 2013 on the Purdue campus in West Lafayette, Indiana. The 2013 PGS workshop is entitled “SOILMAKERS: ENGINEERING SOIL FOR GEOENVIRONMENTAL APPLICATIONS”. The theme of the workshop is inspired by the topic of this year’s Leonards Lecture, in honor of Professor G.A. Leonards, a Purdue geotech faculty member from 1946 to 1991 and a great of the geotechnical engineering profession. The 11th G.A. Leonards Lecture entitled “ORGANOCLAYS: NOVEL BARRIER MEDIA FOR MANAGING GROUNDWATER FLOW AND TRANSPORT AT NAPL-SITES” will be delivered by Dr. Craig Benson, P.E., DGE, NAE, Wisconsin Distinguished Professor at the University of Wisconsin-Madison, a world-known expert, researcher and educator in the field of environmental geotechnics. The lecture, which is free and open to the public, will take place in the Krannert Auditorium at 4:30 p.m. The PGS is thrilled that Prof. Benson has agreed to present this year’s Leonards Lecture as he embodies many of the qualities that made G.A. Leonards a legend as a professor and an engineer.

The workshop will precede the Leonards Lecture, starting at 8 a.m. in the Purdue Memorial Union. The program includes two keynote lectures: one by Prof. Krishna Reddy of the University of Illinois at Chicago, on modifying cover soil for controlling methane in landfills; the second by Dr. David Espinoza of Geosyntec Consultants who will tell us a tale of sludge lagoons. Other nine shorter presentations complete the program and cover a variety of exciting topics.

Support for the PGS workshop and Leonards lecture is provided, at the time of this announcement, by the following sponsors: Earth Exploration, ECS Ltd, Fugro Consultants, Golder Associates, Hayward Baker, Nicholson Construction, and Patriot Engineering & Environmental.

Three attachments: Leonards Lecture; PGS workshop program; & Registration Form. Information can also be found at https://eng.purdue.edu/PGS or by contacting Philippe Bourdeau at bourdeau@ecn.purdue.edu

NASA Langley Research Center

The Langley Aerospace Research Student Scholars (LARSS) Research Internship Program

The NASA LARSS internship program is a paid (stipend) research experience open to U.S. citizens who are full-time undergraduate (juniors and seniors) and graduate students. http://www.nianet.org/larss

(See the attached flyer for details)

NASA Planetary Science Summer School Applications

NASA is accepting applications from science and engineering post-docs, recent PhDs, and doctoral students for its 25th Annual Planetary Science Summer School, which will hold two separate sessions this summer (July 29-August 2 and August 12-16) at the Jet Propulsion Laboratory in Pasadena, Calif. During the program and pre-session webinars, student teams will carry out the equivalent of an early mission concept study, prepare a proposal authorization review presentation, present it to a review board, and receive feedback. By the end of the session, students will have a clearer understanding of the life cycle of a space mission; relationships between mission design, cost, and schedule; and the tradeoffs necessary to stay within cost and schedule while preserving the quality of science. Applications are due April 5, 2013. Partial financial support is available for a limited number of individuals. Further information is available at http://psscisel.jpl.nasa.gov

Office of Interdisciplinary Graduate Programs (OIGP) Reception and Celebration

Faculty and students are invited to join the Office of Interdisciplinary Graduate Programs (OIGP) for a reception in celebration of interdisciplinary graduate student research on Monday, April 1, 2013. For details, please visit: https://www.gradschool.purdue.edu/whatsnew/OIGP.pdf. Poster and Award Application information for students can be found at: https://www.gradschool.purdue.edu/oigp/calendar/reception.cfm

The US Department of Energy’s Geothermal Technologies Program and Oak Ridge Institute for Science Education are pleased to announce the 2013 Geothermal Student Competition

The Challenge: The Competition seeks to engage students in a collaborative exercise to develop a business plan for developing a geothermal enterprise. Applicants are encouraged to consider a candidate resource in their home state/region, though convincing plans for any domestic target will be considered.

For more information please see the attachment or contact Dr. Desmond Stubbs, Program Manager by email: geothermalstudentcompetition@orise.orau.gov
SI-linked courses for fall 2013 are the following and are noted in the Look Up Classes link in Banner: MA 153, 158, 161, 162; CHM 111, 115, 116; MGMT 200, 201; CS 159; PHYS 172; BIOL 110, 203; and another course is waiting for approval.

Planning Your LBC Journey?
Come to a help session on Tuesday, March 26, from 5:30-6:30 in Stanley Coulter 231. Students who have completed the Learning Beyond the Classroom certificate will be there to give one-on-one help in figuring out how you can complete the program. Information: http://science.purdue.edu/Current_Students/learning-beyond-the-classroom/index.html.

Global Partners Wanted
Global Partners is a mentoring program designed to assist first-year students with their adjustment to their new academic and social environments at Purdue and the College of Science. GP matches first-year students participating in the College of Science Global Partnerships learning community with successful student partners enrolled in the same major. The main objective of the program is to provide incoming freshmen with the opportunity to build a relationship with a College of Science role model, while receiving academic and social support, as they make their transition to college life.

- Enrolled in a major in the College of Science with the classification of sophomore or above (as of fall 2013) and a cumulative GPA of 2.5 or better.
- Strong interpersonal skills.
- Interest in working with people from diverse backgrounds.
- Eager to help new students adjust to the Purdue campus, academic demands of college, and life away from home.

Responsibilities
- Attend a monthly program with mentee.
- Meet with mentee for at least 1 hour every week. This can be studying together, shopping, eating, etc.
- Attend the fall mentoring partner orientation.

In addition, there will also be opportunities for Global Partners to participate in:
- “Chat Sessions” with incoming international students
- “English Conversation Groups”
- Campus tours for prospective international students
- Meet and greet learning community students upon arrival at Purdue

If you can commit to the position responsibilities of a global mentoring partner, please complete the application at the following link by Sunday, March 24th: https://purdue.qualtrics.com/SE/?SID=SV_eFjGWltyE6kzOw0B

March Birthdays
Elizabeth McNie – 11th
Greg Michalski – 17th
Larry Braile – 21st
Megan Sapp Nelson – 24th
Joseph Francisco – 26th
IMPORTANT NOTICE ABOUT THIS NEWSLETTER

This newsletter is used as the primary information source for current and upcoming events, announcements, awards, grant opportunities, and other happenings in our department and around campus. Active links to additional information will be provided as needed. Individual email announcements will no longer be sent unless the content is time-sensitive. We will continue to include our publications, presentations and other recent news items as well. Those using paper copies of the newsletter should go to our newsletter archive on the EAPS website at www.purdue.edu/eas/ and Click on News to access active links as needed. Material for inclusion in the newsletter should be submitted to Wanitta Thompson (thompsow@purdue.edu) by Friday noon of each week for inclusion in the Monday issue.

If it is in the newsletter, we assume you know about it and no other reminders are needed. For answers to common technology questions and the latest updates from the EAPS Technology Support staff, please visit http://www.purdue.edu/eas/info_tech/index.php.

Also, as an additional resource for information about departmental events, seminars, deadlines, etc., see our departmental calendar at http://calendar.science.purdue.edu/eas/seminars.
Places—localities given meaning or value by human experience—matter deeply to Indigenous and historically situated peoples. Place also matters in the Earth and environmental sciences because Earth processes are contingent on place, and because we teach and learn these sciences in places. The set of meanings and attachments we affix to places comprise the sense of place, which encapsulates the human connection to place. In the case of students whose cultures and identities are deeply rooted in place, such as Native Americans, science teaching that contradicts or minimizes their senses of place may deter them from scientific study and careers.

Place-based teaching—fully situated in place, transdisciplinary, experiential, and relevant—reconnects students and teachers alike with real places. Indigenous ways of teaching and learning have always been place-based. Place-based content and teaching methods are informed by integration of local content and locally situated ways of understanding and naming Earth systems and processes; connecting scientific and humanistic ways of knowing and understanding the Earth; analyzing issues of local relevance; teaching and learning in the outdoors and community; promoting creativity, service learning, and life-long learning; and freely acknowledging the beauty of the places we study.

Enhancement of students’ senses of place is an expected and measurable learning outcome of place-based education. Change in sense of place can be quantitatively and qualitatively assessed. Studies involving culturally diverse students in Southwest-based Earth system science courses show significant enhancement of sense of place and positive responses to place-based teaching. Current work involving Tribal College faculty and Native American students reveals motive and means for cultural validation of mainstream assessment tools such as the Geoscience Concept Inventory, rendering them more meaningful, more relevant, and hence more effective for teaching geoscience to Native American and other strongly place-based student populations.
Explore the world with our colleagues who will present pictures, videos and stories from their travel to areas unlike Indiana. Hear about where they went, why they went, and learn about interesting landscapes, various cultures, and exciting experiences.

This is an informal brown bag gathering

http://www.youtube.com/watch?v=hvhqLQwJ6f4
Opportunities for Purdue faculty

Overview of GBE

Our mission is to stimulate engagement between Purdue and foreign companies and to generate more foreign investment and trade for Indiana.

GBE leverages Purdue’s assets—our global brand, international students (and their parents), alumni, technology, research parks, training, services, connections with foreign universities—to reach and attract foreign executives. We also add a business engagement dimension to selected Purdue initiatives and collaborate with foreign organizations, e.g., universities, research institutes, national and sub-national government agencies, science and technology transfer offices, etc. China is our current priority country but we plan to add other fast-growing foreign markets in the future.

How can faculty benefit?

GBE markets Purdue research, faculty expertise and faculty-created technology to foreign companies in the following primary areas:

1. **Research support.** For faculty whose research is approximately 2-3 years from market introduction, GBE finds potential foreign partners/collaborators to support additional R&D needed to reach a level of development so that the technology can attract corporate investors or licensees. Such collaborators could be foreign universities, research institutes, or even selected companies, with costs of such joint translational research supported either directly by the partners or via grants from public agencies, from either foreign or U.S. sources.

2. **Sponsored research.** GBE identifies the R&D priorities or technical challenges faced by foreign firms, matches those needs with faculty expertise and Purdue facilities, and facilitates interaction with the foreign firm. The goal is to develop sponsored research projects for faculty consistent with faculty research priorities.
3. **Consulting contracts.** In cases where foreign firms need short-term or very focused advice or know-how in meeting technical issues, faculty consulting contracts present another opportunity.

4. **Technology licensing.** For faculty members who have already disclosed and patented their discoveries via the Office of Technology Commercialization, foreign firms represent a new source of potential licenses, royalties and wider commercialization. Even after IP rights are secured, there may be a need for the foreign company to engage with the Purdue inventors to help further develop or refine the technology.

5. **Business development.** If a faculty member has formed or is part of the founding team of a venture to commercialize his/her technology, GBE helps the firm find sources of foreign capital, markets, partners, service providers to jumpstart global growth.

6. **Graduate student recruitment.** GBE encourages foreign firms to consider upgrading their competitiveness by supporting their employees to secure Purdue graduate degrees. This creates potential graduate student research support, especially if the foreign student can help conduct research relevant to his employer.

**How does GBE generate the above opportunities?**

- We solicit and learn of specific R&D or technical needs of foreign firms, and share these needs with faculty to assess their interest in research or consulting.
- We develop summaries of Purdue translational research and intellectual property assets and translate these and distribute to foreign via multiple channels.
- We welcome and organize visits by foreign business delegations, e.g., Chinese Ministry of Commerce delegation in summer of 2012.
- We organize delegations of Purdue faculty, OTC staff, and executives of Research Park companies to foreign countries, which include meetings with executives/officials/research groups.
- We tap into a network of alumni, foreign universities, service, and government agencies to identify, qualify and interact with foreign executives.
- We leverage existing Purdue relationships with foreign universities, companies, research institutes to find and connect with foreign companies, e.g. Colombia initiative, Purdue’s U.S.-China EcoPartnership.
- We connect with the parents of our international students on how Purdue can help them grow their business (via workshops here and direct contact).
How can faculty get involved?

- If your research has reached a pre-commercial stage (an estimated 2-3 years from market introduction) and you are seeking partners/resources for R&D to move closer to commercial interest, please either call (4-0614) or send me an e-mail (mvanfleet@purdue.edu) so we can discuss the potential for foreign support of this additional research.
- If OTC has already protected your discoveries and you would like to discuss licensing your technology to a foreign company, let me know and we can discuss with your OTC contact.
- If we inquire about or alert you to interests of a foreign company in your research expertise (for R&D or consulting) please respond.
- Please consider joining a delegation to a foreign country to market your research capability, technology, company, etc.
- Please consider meeting foreign firms visiting Purdue that have interests matching your own in the opportunity areas above.
- If you have been approached by or know foreign firms and you could use any assistance in contacting them, ongoing communication or strategy, GBE can assist with counsel, translation, etc.

It would be our privilege to help you accelerate the development and impact of your research.

Mark Van Fleet,

GBE Executive Director

mvanfleet@purdue.edu

765-494-0614
Developing Intercultural Competence in Higher Education: Have we already arrived—or have we yet to begin?

Wednesday, March 20
10:00 am • STEW 218AB

Mitchell R. Hammer
President, IDI, LLC; Hammer Consulting, LLC; and Safe Dialogue, LLC
Professor Emeritus, American University, Washington DC

Dr. Hammer's presentation will address such questions as how prepared are our universities in helping student's navigate cultural differences domestically within the United States and globally? What is the role of faculty, administration and staff in building intercultural competence across the university experience, and in meeting our institutional responsibilities. What teaching and learning strategies and experiences are successful in developing intercultural competence? In addition, Dr. Hammer will present recent findings on how universities are systematically developing intercultural competence based on insights from their use of the Intercultural Development Inventory (IDI).
Purdue University
Discovery Park
April 25-26, 2013
9 a.m. - 3 p.m.

Engage future nanoscientists!

NanoDays™

Educational Activities About Nanoscale Science and Engineering For Students in Grades K-12

Volunteer today at the website below.
nano.purdue.edu/nanodays

The first 100 volunteers to participate in NanoDays will receive a free t-shirt!
The NASA Langley Research Center (Hampton, VA) offers paid, year-round (3 sessions), highly competitive research internships for exceptional students to work with Langley engineers and scientists on some of the Nation’s most important, difficult, and challenging problems. The LARSS program emphasizes multi-disciplinary and collaboratively developed solutions to problems in such broad areas as (1) flight, including entry, descent, and landing, in all atmospheres; (2) Earth systems science, including the characterization of all atmospheres; (3) affordable, safe, and sustainable space exploration systems and technology; and (4) materials and structural concepts, analysis, and integration.

ELIGIBILITY REQUIREMENTS
- U.S. Citizenship
- Full-time student status at an accredited U.S. college or university
- Classification as a rising undergraduate junior or senior, or graduate student (master’s or doctoral level)
- Cumulative 3.0 GPA on a 4.0 scale

PROGRAM SESSION DATES
  Application Deadline: Oct. 11, 2012
- 2013 Summer Session (10 weeks) June 4 – Aug. 9, 2013
  Application Deadline: Feb. 1, 2013
- 2013 Fall Session (15 weeks) Sept. 4 – Dec. 13, 2013
  Application Deadline: June 26, 2013

CONTACT INFORMATION
Debbie Murray
LARSS Program Coordinator
Phone: 757-864-5215
Fax: 757-864-9701
Deborah.B.Murray@nasa.gov

Find additional LARSS information, application, and deadlines at http://www.nianet.org/larss
Controlling flow and transport of NAPL and aqueous-phase contaminants simultaneously can be challenging, particularly at locations where hydrological isolation is not practical or will adversely affect the surrounding hydrological environment. One strategy is the variably permeable reactive barrier (VPRB), which blocks the flow of NAPL, allows the flow of water, and sorbs dissolved organic constituents in water passing through the barrier.

This presentation describes a case history where organoclay was evaluated as a VPRB medium to manage creosote NAPL and dissolved polycyclic aromatic hydrocarbons (PAHs) in groundwater at a former railroad tie-treating facility. Both NAPL and dissolved-phase PAHs from the facility were seeping into a bay on Lake Michigan, severely affecting water quality and public use of the lake. The VPRB was required to block flow of both NAPL and dissolved-phase PAHs into the lake without appreciable impact on local groundwater flow patterns. Three commercially available organoclays were evaluated. Each was found to be nearly impermeable to NAPL (NAPL conductivities less than 10^{-8} cm/s) and very permeable to groundwater (hydraulic conductivities on the order of 0.1-1 cm/s), permitting a barrier that blocks NAPL flow while permitting free flow of ground water and removing dissolved PAHs. Water migration in NAPL-solvated organoclay was minimal, but PAHs were released into water contacting NAPL-solvated organoclay. Column tests using dissolved PAHs showed that breakthrough of PAHs did not occur for at least 240 pore volumes of flow (PVF) for two of the organoclays and that all three organoclays maintained high hydraulic conductivity even though they were sorbing PAHs. Numerical simulations showed that an organoclay barrier at the tie-treating site should have a service life of approximately 10 yr.

*Introduction by Purdue University Faculty (TBA)*

*Presented in conjunction with the 11th Purdue Geotechnical Society Workshop
“Soilmakers – Engineering Soil for Geoenvironmental Applications”*

The PGS was founded in May 2003 to enhance the strong bond and working relationship among alumni, faculty, students, and staff of the Geotechnical Engineering group at Purdue University for the benefit of all.

https://engineering.purdue.edu/PGS
Craig H. Benson, PhD, PE, DGE, NAE

Craig H. Benson is a Wisconsin Distinguished Professor at the University of Wisconsin-Madison, where he serves as Director of Sustainability Research and Education for campus and is Chair of the Departments of Civil and Environmental Engineering and Geological Engineering. Dr. Benson has a BS from Lehigh University and MSE and PhD degrees from the University of Texas at Austin.

Dr. Benson has been conducting experimental and analytical research in geoenvironmental engineering for nearly three decades, with the primary focus in sustainable infrastructure, beneficial use of industrial byproducts, and environmental containment. His research includes laboratory studies, large-scale field experiments, and computer modeling.

Dr. Benson has received several awards for his work, including the Ralph Peck Award, the Huber Research Prize, the Alfred Noble Prize, and the Croes (twice), Middlebrooks, Collingwood, and Casagrande Awards from the American Society of Civil Engineers and the Award of Merit and Outstanding Practical Paper Award from ASTM. Dr. Benson is former Editor-in-Chief of the ASCE/Geo Institute *Journal of Geotechnical and Geoenvironmental Engineering* and currently serves as President Elect of the Geo-Institute and Vice Chair of the Executive Committee of ASTM Committee D18 on Soil and Rock. Dr. Benson is a member of the National Academy of Engineering and the University of Texas Academy of Distinguished Alumni.

*Program is supported, at time of this announcement, by the following sponsors:*


**2013 - Purdue Geotechnical Society Program and Leonards Lecture Committee:**

Antonio Bobet, Philippe Bourdeau, Vincent Drnevich, Marka Santagata, Joseph Sinfield, Alain El Howayek, Ahmadreza Hedayat, Yazen Khasawneh, Leila Sadeghi, Sriram Valavala (Purdue University, Civil Engineering); Mike Wigger (Earth Exploration); Tom Robertson (Purdue University, Conferences and Continuing Education)

[https://engineering.purdue.edu/PGS](https://engineering.purdue.edu/PGS)
The Leonards Lecture was established in 2003 in honor of Professor Gerald A. Leonards, one of the giants of the geotechnical engineering profession.

Professor Gerald A. Leonards was born on April, 29, 1921 in Montreal, Quebec, Canada. He obtained his BSCE at McGill University in 1943 and received both MSCE and PhD from Purdue in 1948 and 1952, respectively. He was a faculty member at Purdue from 1952 to 1991, when he was named Professor Emeritus.

Professor Leonards' research interests were very wide and he made pioneering contributions to knowledge on strength and compressibility of compacted clay soils, strength and consolidation of natural deposits, cracking of earth dams, frost action, analysis of buried conduits, pile foundations, stability of slopes and embankments on soft clays, stress-deformation and liquefaction of sand, and methodologies for investigating failures. He published extensively nationally and internationally. His 1962 book on "Foundation Engineering" quickly became a standard reference worldwide.

Throughout his career, Dr. Leonards' insight and expertise was sought on earthwork and foundation projects all over the world, a number of which involved the investigation of failures. He was appointed as the only non-European to sit on an official government commission in Italy to investigate ways to stabilize the Tower of Pisa.

Over his career Dr. Leonards received numerous awards from professional societies. In 1980 he was honored by the American Society of Civil Engineers by being asked to present the Terzaghi Lecture and also received the Terzaghi Award in 1989. In 1988 he was elected to the National Academy of Engineering.

From the students' perspective, "GAL" was a dedicated professor and researcher, who never missed an opportunity to learn more about his chosen field and to share his views on new developments. His influence continues to be felt through the impact he had on his students and colleagues.

Adapted from text by V.P. Drnevich for Geotech Hall of Fame Web Site

Previous G.A. Leonards Lecturers

| 1st Leonards Lecture | May 22, 2003 | Milton Harr |
| 2nd Leonards Lecture | May 11, 2004 | Victor Milligan |
| 3rd Leonards Lecture | May 16, 2005 | Robert Holtz |
| 4th Leonards Lecture | March 31, 2006 | Michele Jamiolkowski |
| 5th Leonards Lecture | May 7, 2007 | Suzanne Lacasse |
| 6th Leonards Lecture | April 18, 2008 | Jean-Lou Chameau |
| 7th Leonards Lecture | April 24, 2009 | Bernard Amadei |
| 8th Leonards Lecture | May 1, 2010 | Richard D. Woods |
| 9th Leonards Lecture | April 8, 2011 | Herbert Einstein |
| 10th Leonards Lecture | April 13, 2012 | Carlos Santamarina |
Purdue Geotechnical Society Workshop Program
Friday April 19, 2013
East Faculty Lounge, Purdue Memorial Union, Purdue University, West Lafayette, IN
Theme: Soilmakers – Engineering Soil for Geoenvironmental Applications

7:30 a.m.  Breakfast: coffee, juice, rolls, fruit, etc.
8:00 a.m.  Opening of Workshop  : Philippe L. Bourdeau, Purdue University  
            Welcome: Rao S. Govindaraju, Head, School of Civil engineering, Purdue University

MORNING SESSION
Moderator: TBA;  Coordinator: Leila Sadeghi, Purdue University

8:20 a.m.  Keynote: USE OF BIOCHAR IN LANDFILL COVER SYSTEMS TO ENHANCE METHANE OXIDATION  
            Krishna R. REDDY, University of Illinois at Chicago
9:10 a.m.  Selected BioEngineering Case Studies  
            Donald H. GRAY, University of Michigan
9:30 a.m.  The Coupled Hydro-thermo-mechanical Process in Soils and its Implications for Emerging Geotechnical Engineering Practice  
            Xiong (Bill) YU, Case Western Reserve University
9:50 a.m.  The Use of Tire Shred in Geotechnical Applications  
            Malek SMADI, Geotill, Inc.
10:10 a.m.  BREAK
10:40 a.m.  Results From the New Indiana Geothermal Monitoring Network: Implications for How and Where Soil Modifications Can Improve the Performance and Affordability of Geothermal Heat Pumps  
            Kevin ELLETT, Indiana Geological Survey
11:00 a.m. Study of Geoenvironmental Influences on Raman Spectroscopy Monitoring of Natural Attenuation of Chlorinated Solvent  
            Chike MONWUBA, Purdue University
11:20 a.m. Incorporating Sustainability in Remediation of Indian Ridge Marsh Site, Chicago, IL  
            Erin YARGICOGLU, University of Illinois at Chicago
11:40 a.m. GROUP PHOTO, PMU STEPS
12:00 a.m. LUNCH  – West Faculty Lounge, Purdue Memorial Union

AFTERNOON SESSION
Moderator: Michael S. Wigger, Earth Exploration, Inc.;  Coordinator: Sriram Valavalal, Purdue University

1:10 p.m.  Keynote: CLOSURE DESIGN AND CONSTRUCTION OF CONTAMINATED SOFT SLUDGE LAGOONS: A TALE OF INNOVATION, POOR FIELD EXECUTION AND FINAL REDEMPTION  
            R. David ESPINOZA, Geosyntec consultants
2:00 p.m.  Underground Injection and Sequestration and Underground Sources of Drinking Water (Protecting Valuable Resources)  
            Richard T. BROWN, Subsurface Technology, Inc.
2:20 p.m.  Important Role of Filters in Hydraulic Soil Structures – Design and Construction, Evaluation, and Case Histories from Embankment Dams  
            Hamid FALLAH, Purdue University
2:40 p.m.  The Design of Permeable Reaction Barriers (PRBs) for the Remediation of Chlorinated Solvent Plumes  
            John A. MUNDELL, Mundell & Associates
3:00 p.m.  BREAK
3:20 p.m.  PANEL DISCUSSION  
            Moderator: Vincent P. Drnevich, Purdue University  
            Panelists: TBA
4:00 p.m.  WORKSHOP CLOSURE
Registration Form

Name: ____________________________________________

Organization: _____________________________________

Address 1: _______________________________________

Address 2: _______________________________________

City: ____________________________________________________________________________

State: __________ Zip Code: _______________________

Phone: ____________________________________________

Email: ____________________________________________

Fax: ____________________________________________

Spouse/Guest Name: _______________________________________

[ ] I require auxiliary aids/services due to a disability. Please contact me at the above address.

Meal Preference: _____ Vegetarian _____ Beef _____ Fish

Meal Preference Guest: _____ Vegetarian _____ Beef _____ Fish

Register me for:

[ ] Geotechnical Workshop and Dinner $190 ______

[ ] Spouse/Guest (Reception and Dinner only) $50 ______

[ ] Workshop only $150 ______

[ ] Full Time Student (Workshop and Dinner) $40 ______

[ ] Full Time Student (Workshop only) $35 ______

[ ] Student Spouse/Guest (Recept.& Dinner) $25 ______

Total Enclosed: $ ______

Payment is required upon submission of registration.

Payment Methods:

[ ] Enclosed is my check payable to Purdue University.

Charge: [ ] MasterCard [ ] VISA [ ] Discover [ ] AmEx

# _________________________ Exp. Date: __________

Name on Card _______________________________________

Signature _______________________________________

Complete a form for each participant. Submit by mail, fax, or online:

CEC Business Services
Purdue University
Stewart Center, Room 110
128 Memorial Mall
West Lafayette, IN 47907-2037
Fax: (765) 494-0567 or Online:
http://www.conf.purdue.edu/PGS

Purdue is not responsible for costs due to cancellation.

Registration should be received by April 8, 2013.

A block of rooms has been held at the Union Club Hotel, a full-service, 192-room hotel located in the Purdue Memorial Union. MasterCard, Visa, Discover, and American Express are accepted. Rooms are held until 6 p.m. unless guaranteed. For information or to make a reservation, call (765) 494-8913 or (800) 320-6291. For other accommodations close to the Purdue campus, visit:

http://www.homeofpurdue.com/hotelsandmotels.html

Soilmakers: Engineering Soil for Geoenvironmental Applications

11th Purdue Geotechnical Society Workshop
and the
Eleventh G.A. Leonards Lecture
Organoclays: Novel Barrier Media for Managing Groundwater Flow and Transport at NAPL-Contaminated Sites

by
Dr. Craig H. Benson, P.E., DGE, NAE
University of Wisconsin - Madison

April 19, 2013

Workshop:
Friday, 8 a.m. - 4 p.m.
Purdue Memorial Union, East Faculty Lounge
Purdue University
101 N. Grant Street, West Lafayette, IN 47907

Lecture (Free and Open to the Public):
Friday, 4:30 p.m.
Krannert Auditorium
Purdue University
403 W. State Street, West Lafayette, IN 47907

Reception and Banquet:
Friday, 7:00 p.m.
Purdue Memorial Union, East Faculty Lounge
101 N. Grant Street, West Lafayette, IN 47907

Organized by
Purdue Geotechnical Society

Purdue University is an equal access/equal opportunity university
https://engineering.purdue.edu/PGS

0.6 CEUs/6 PDHs are available for this Workshop.
Dear Colleagues:
The US Department Energy’s Geothermal Technologies Program and Oak Ridge Institute for Science Education are pleased to announce the 2013 Geothermal Student Competition.

**The Challenge:**
The Competition seeks to engage students in a collaborative exercise to develop a business plan for developing a geothermal enterprise. Applicants are encouraged to consider a candidate resource in their home state/region, though convincing plans for any domestic target will be considered.

**Who Should Apply?**
The Competition is open to undergraduate and graduate students in science, engineering, and business programs of study.

**Where do I Apply?**
The Competition application, guidelines, and further details can all be found on the Competition website [http://orise.orau.gov/geothermal](http://orise.orau.gov/geothermal)

**How does the Competition work?**
Students will prepare a concept paper with the guiding topic: Innovative geothermal project proposal (related to electricity production—not primarily to direct use applications although these may be combined with electricity production) in your selected locale. Students are required to show evidence that existing data, or new data was used to support their approach. The seven most compelling and competitive applications will be selected through a screening process described in the evaluation section of this document.

**Seven Semi-Finalist Awards**
Each Semi-finalist will receive a total award of $5,500, where $5000 is expected to be used as planning funds (stipend) and $500 is to be used to startup a geothermal club on your campus

For more information please contact Dr. Desmond Stubbs, Program Manager by email: [geothermalstudentcompetition@orise.orau.gov](mailto:geothermalstudentcompetition@orise.orau.gov)

We look forward to receiving highly competitive and innovative ideas from your students!

Regards,
Desmond Stubbs, PhD
4th Annual
Midwest Graduate Research Symposium

Saturday
April 20, 2013
8:00A.M. – 7:30P.M.

FREE

*Open to All Graduate Students from All Study Areas*

Registration Deadline: March 29, 2013

• Register for free online by visiting www.utoledogsa.com → Participant Registration
• For complete information, visit: www.utoledogsa.com/information

• Awards for both oral & poster presentations
• Nationally Recognized Keynote Speaker
• No registration fee
• Breakfast, Lunch, and Dinner Provided
• Semi-Formal Dinner
• Oral & Poster Presentation
• Great Networking Opportunity

Sponsored and Organized by the University of Toledo Graduate Student Association

E-mail: graduatestudentassociation@gmail.com
Call out for oral presentations and posters

Who can present? **Undergraduate** and **graduate** students doing computational research in **ANY** field.

**Monetary awards** for 1st, 2nd, and 3rd place oral a poster presentations.

Absolutely **FREE**!

**Coffee breaks and lunch** included for enrolled participants!

Special Keynote speakers

*Kurt Bryan*
Professor of Mathematics at the Rose-Hulman Institute of Technology

*Mark Lundstrom*
Don and Carol Scifres Distinguished Professor of Electrical and Computer Engineering at Purdue University

*Juan Wachs*
Assistant Professor in the Industrial Engineering School at Purdue University

**Deadline for Abstracts March 18th, 2013**

**Registration and Abstract Submission:**

http://csec2013.wordpress.com/