EAPS MEETINGS & EVENTS

FALL FACULTY MEETING SCHEDULE
Tuesday, Oct. 27th and Dec. 1st
HAMP 3201
3:00-4:30 PM

DEAN’S VISIT TO DEPARTMENT
April 21, 2016
1:30 - 4:00 PM

COLLOQUIA

Blair Schoene
Princeton University
“Constraining Crustal Evolution on Very Short and Very
Long Timescales”
Thursday, October 8, 2015
3:30 PM
PHYS 203

*Refreshments at 3:00 PM in PHYS 242

EAPS NEWS

DR. WEST ATTENDS 66TH HIGHWAY GEOLOGY SYMPOSIUM

Terry West attended the 66th Highway Geology Symposium (HGS), from September 22nd - 24th, 2015 in Sturbridge, MA and presented the oral paper “Evaluation of D-cracking Durability of Indiana Carbonate Aggregates for use in Concrete” by B. Desta, T. West, J. Olek and N. Whiting. The full length paper is available on the Highway Geology Symposium website. Mr. Desta is a Ph.D. candidate in Civil Engineering at Purdue and Jan Olek serves as his major professor. Dr. West also attended the National Steering Committee of the organization, the 15 member committee that governs HGS.

Dr. ZHUANG INVITED TO NASA GODDARD SPACE FLIGHT CENTER

Upon invitation and sponsored by the NASA Goddard Space Flight Center, on September 2nd - 4th, Prof. Qianlai Zhuang visited the Center and presented a research seminar, entitled “Quantifying greenhouse gases cycling in the Arctic.” He also had an extensive discussion on potential collaborative research to quantify the global carbon and methane cycling and its feedbacks to the atmospheric climate and chemistry with the Center scientists.

DR. HARBOR RECEIVES HONORARY DOCTORATE FROM STOCKHOLM UNIVERSITY

Dr. Jonathan Harbor, Purdue professor of Earth, Atmospheric, and Planetary Sciences, was selected as a 2015 honorary doctor for Stockholm University in the category of Natural Science. Harbor and his seven fellow honorees were chosen because they contributed in distinctive ways to the University’s activities in research and education.

Dr. Harbor is a leading researcher in physical geography and an innovator in education and academic leadership. His collaborations with Stockholm University have produced joint publications, combined graduate and post-doctoral student mentoring, and joint field and online teaching. As a Marie-Curie Fellow, he helped invigorate Stockholm University alumni relations programs and launched a pilot program connecting PhD students with local teachers and children.

EAPS OMBUDSMAN

What is an Ombudsman? The ombudsman are an informal, neutral, confidential resource for people in the department, especially students, to raise questions or concerns about any aspect of their academic experience. The EAPS ombudsman is Barbara Gibson (HAMP 2169B; barbara@purdue.edu) – please feel free to contact her if needed.
The Department of Earth Atmospheric and Planetary Sciences (EAPS) hosted an awards ceremony and reception for the 2015 EAPS Outstanding Alumni. This award was presented to Ms. Michele Gutenkunst Mouri (MS 2006) and Dr. Dibyajyoti (Diby) Tripathy (PhD 2007). The two were honored and presented awards for their outstanding professional achievements since graduating from Purdue.

To view the complete article, please click here: http://www.eaps.purdue.edu/news/articles/2015/2015-outstanding-alumni.html

*UNDERGRADUATE NEWS*

**WORKFORCE RECRUITMENT PROGRAM**

Are you a student or recent graduate with a disability looking for a job or internship in 2016? Apply now to the Workforce Recruitment Program (WRP). The program is for college students with disabilities helps in finding a job or internship!

WRP provides students with disabilities in all fields of study the opportunity to market their abilities to a wide variety of potential employers; sharpen their interview skills during a personal meeting with a WRP recruiter; and gain valuable skills, experience, and contacts on the job. Purdue students who have participated in WRP in the past have received multiple offers for full time jobs and internships.

**APPLY NOW:** Create an account at www.wrp.gov by October 16, 2015.

- Register with the Disability Resource Center, Young Hall 8th floor for accommodations and support and to receive information about job/internship opportunities.
- Have your resume reviewed at the CCO, Young Hall 132 and upload it to your application.
- Attend a WRP Callout Informational Meeting: **Tuesday September 22** and **Wednesday September 23**, 5:30 PM Young 268

Applicants for the program must:

- have a disability, be a U.S. citizen, AND
- be enrolled at Purdue University on a substantially full-time basis (unless the severity of the disability precludes the student from taking a substantially full-time load) to seek a degree OR
- be enrolled at Purdue University as a degree-seeking student taking less than a substantially full-time load in the enrollment period immediately prior to graduation OR
- have graduated from Purdue University within the past year.

Short interviews will take place between mid-October and **November 2015** by phone. Companies can access your application for various positions for one year. WRP opens you up to multiple job and internship opportunities with just one application. If you are an eligible student, contact Ali Mears alimears@purdue.edu for questions or assistance creating your account.

*POST-DOCTORAL RESEARCH SCIENTIST IN HURRICANE MODELING AND DATA ASSIMILATION*

The School of Meteorology of University of Oklahoma has an opening for a post-doctoral research scientist in the area of hurricane modeling and data assimilation. Working with one of the leading teams in data assimilation and hurricane modeling, successful candidates will conduct research to advance the science in hurricane
dynamics/thermodynamics, predictability, modeling and data assimilation.

The candidate will conduct research to investigate the mechanism of hurricane intensification, in particular the impact of outflow on hurricane intensification, through ensemble-based data assimilation and ensemble simulations, study the impact of data from field experiments on the estimation and prediction of hurricane outflow and intensification, and advance ensemble-based data assimilation and simulation systems for hurricanes.

Desired Qualification:

• Education and Experience:
  Ph.D. in atmospheric science, Meteorology, Engineering, Computer Sciences, Physics, mathematics or related disciplines
  Experience in numerical modeling

• Skills and Proficiencies:
  Demonstrated ability to work independently and collaboratively
  Excellent written and oral communication skills
  Fortran 90/95 programming experience in UNIX/LINUX environment
  Familiarity with scripting and plotting languages

Salary will be competitive based on experience and qualification. University of Oklahoma offers competitive benefits. Position is open now until filled.

To apply for the position, please submit electronic applications, including a letter of research interest and experience, CV, and three names of references including their contact information to Prof. Xuguang Wang, at, xuguang.wang@ou.edu.

2. The attached document is an advertisement for a faculty position in Sediment Dynamics at the University of Louisiana at Lafayette.

FACULTY POSITION IN SEDIMENT DYNAMICS AT THE UNIVERSITY OF LOUISIANA AT LAFAYETTE

The School of Geosciences at the University of Louisiana at Lafayette invites applications for an assistant professor-level, tenure track position in Environmental Science that will begin in August 2016.

Responsibilities include teaching, research, and mentoring at the undergraduate and graduate level. The successful candidate will be expected to develop an independent, externally-funded research program. He/she must have academic training and experience in sediment dynamics, soil or sediment biogeochemistry, soil or sediment transport and/or pollution, or a closely-related field. Skills that include sediment-water interactions, modeling of sediment transport and/or the fate of contaminants, as well as the ability to translate research interests into aspects of Gulf Coast geosciences will be advantageous. Postdoctoral experience is preferred and a Ph.D. is required at the time of hire.

The School of Geosciences (http://geology.louisiana.edu/) combines the programs of Geology (B.S. and M.S. degree programs) and Environmental Science (B.S.) and includes 13 full time faculty members, 8 instructors and staff, and approximately 170 undergraduate majors and 70 graduate students. There are many opportunities for collaboration within other departments and colleges, as well as with local industry, institutes, and centers. The University of Louisiana at Lafayette is a public research university with High Research Activity with accreditation from the Southern Association of Colleges and Schools Commission on Colleges. UL Lafayette is the largest of nine universities in the University of Louisiana System. Located mid-way between New Orleans and Houston, Lafayette is a city of 120,000, one of Louisiana’s fastest growing areas, and is a hub for numerous cultural festivals and activities (http://lafayette.travel/).

Please see attached position announcement for additional details.

~ ~ ~ ~ ~ ~

NATIONAL LABS AT PURDUE DAY EVENT
OCT. 6th-7th, 2015

NASA’s Jet Propulsion Laboratory’s Rashmi Shah (PhD 2014, AAEN) and Jeffrey Stuart (PhD 2014, AAEN) will be hosting a Tech Talk at the National Labs @ Purdue Days event October 6th–7th, 2015. They will be giving presentations entitled “Technologies That We Use and Avenues for Future Development” on October 6 at 9:30 AM and 4:30 PM and “Career Paths with JPL” at 10:30 AM and 3:30 PM. There will also be a panel discussion at 1:30 PM and will include individuals from all the labs in attendance.

There will be a career fair on October 7th from 10:00 AM to 3:00 PM.

~ ~ ~ ~ ~ ~

RESEARCH ROUNDTABLE PRESENTED BY THE PURDUE SOCIETY OF PROFESSIONAL ENGINEERS (PSPE) AND TAU BETA PI
Purdue Memorial Union
November 10, 2015
9:00 AM-4:00 PM

Designed to connect students with exciting research projects and bring together a multitude of groups and programs currently in progress at Purdue. Research and program staff will be there to talk with you about available research internships and jobs.

*Please see attached flier for more details.
NASA INTERNSHIPS, FELLOWSHIPS & SCHOLARSHIPS
VIRTUAL CAREER FAIR

The NASA Internships, Fellowships and Scholarships Virtual Career Fair will connect students in real time with representatives from all 10 NASA centers nationwide. There is no cost or travel associated with their participation in this NASA-sponsored online event. Participants will only need a laptop or tablet, and a strong internet connection.

Thursday, Oct. 8, 2015
1:00-4:30 PM EST

Register now: [http://app.brazenconnect.com/events/nasa-online-fair](http://app.brazenconnect.com/events/nasa-online-fair)

GRADUATE NEWS

PURDUE NURSING: GRADUATE STUDENTS-CHILD WELLNESS DAY

October 23, 2015
10:00 AM-4:00 PM
Nursing Center for Family Health-Lyles Porter

Please see attached flier for more details.

BIRTHDAYS

Wen-wen Tung Oct. 8th

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/](http://www.purdue.edu/eas/) and Click on News to access active links as needed. Material for inclusion in the newsletter should be submitted to Fallon ([fmcquern@purdue.edu](mailto:fmcquern@purdue.edu)) by 5:00pm on Thursday 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](http://www.purdue.edu/eas/info_tech/index.php).

Also, as an additional resource for information about departmental events, seminars, etc., see our departmental calendar at [http://calendar.science.purdue.edu/eas/seminars](http://calendar.science.purdue.edu/eas/seminars).
Sept. 22  Subashini Subramanian, PhD Candidate  
“Land Surface Effects on the Post Landfall Characteristics of Tropical Cyclones”  
**Tuesday, 4:30PM, Room 2201/HAMP**

Sept. 24  Dr. Joseph Morris, Lawrence Livermore National Laboratory  
“Hydraulic Fracture Simulation: Rising to the Challenge of Unconventional Reservoirs”  
**EAPS Energy Colloquium**

Oct. 1  Prof. Nathan Sheldon, University of Michigan  
Title: TBA  
**Host: Horgan**

Oct. 8  Prof. Blair Schoene, Princeton University  
“Constraining Crustal Evolution on Very Short and Very Long Timescales”  
**Host: Caffee**

Oct. 15  Prof. Qianlai Zhuang, Purdue University  
Title: TBA  
**Host: Caffee**

Oct. 20  Haylee Dickinson, PhD Candidate  
“Inferred Rheology and Petrology of the Southern California and Northwest Mexico Mantle from Postseismic Deformation Following the 2010 El Mayor-Cucapah Earthquake”  
**Tuesday, 4:00PM, Room 2201/HAMP**

Oct. 22  Prof. Victor Gensini, College of DuPage  
“Tornadoes: Past, Present and Future”  
**Host: Agee**

Oct. 27  Anthony Ingrafea, Cornell University  
Title: TBA  
**EAPS Energy Colloquium**  
**Tuesday, 7:00PM, Room 112/PHYS**

Oct. 29  Prof. Jerry DeGraff, AEG-Jahns Lecturer,  
“Effective Monitoring for Environmental and Engineering Geology Projects, Case Histories in Mining, Groundwater Contamination and Hot Springs Migration”  
**Host: West**

Nov. 5  Prof. Kim Novick, Indiana University  
“Mechanisms Limiting Forest Carbon Uptake and Water Use During Drought”  
**Host: Welp**

Nov. 10  Kimberly Hoogewind, PhD Candidate  
Title: TBA  
**Tuesday, 4:00PM, Room 2201/HAMP**
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Title</th>
<th>Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 12</td>
<td>Dr. Dave Finnegan, US Army Corps of Engineers</td>
<td>Host: Elliott</td>
<td>“Automated LiDAR Scanning of a Tidewater Glacier: Helheim Glacier, Southeast Greenland”</td>
<td></td>
</tr>
<tr>
<td>Nov. 19</td>
<td>Prof. Susan Brantley, Pennsylvania State University</td>
<td>Host: Melosh</td>
<td>Title: TBA</td>
<td></td>
</tr>
<tr>
<td>Dec. 3</td>
<td>Prof. Paul Staten, Indiana University</td>
<td>Host: Wu</td>
<td>“Metrics, Mechanisms, and Magnitudes of Tropical Widening in a Warming Climate”</td>
<td></td>
</tr>
</tbody>
</table>
How continental crust is created, preserved and recycled, and whether or not these processes have changed through Earth history are important for a) understanding the geochemical and petrological stratification of the crust and b) quantifying long term geochemical and isotopic cycling in the Earth’s crust and mantle. Developing models for crustal evolution requires robust geo-chronology on both the short and long timescales, targeting relatively rapid geologic phenomena (e.g. magma production and differentiation) as well as long term secular change. This contribution highlights recent efforts to better apply high-precision U-Pb geochronology to continental magmatic systems and to develop techniques comparing magmatic systems through Earth history. Models describing the transfer of mass and heat through the crust during orogenesis demand age constraints with increasing precision and accuracy. While modern ID-TIMS U-Pb geochronology can resolve the timescales of zircon crystallization in single pulses of magma, much work is needed to relate dates to processes such as magma production, transport, differentiation, and emplacement. Our recent work focuses on integrating zircon crystallization ages and geochemistry to both understand the growth history of single zircons on <50 ka timescales and to build a framework for longer timescale geochemical evolution of two Alpine magmatic systems. To compare differences in magmatic differentiation during crustal magmatism from the Archean to present, we develop statistical methodologies for analyzing large geochemical databases (Earthchem, etc.). Substantial differences in both crustal inputs (basalts) and indicators of differentiation to high-Si compositions suggest either secular changes in magmatic/metamorphic processes during crustal genesis and modification, or preservation bias. These results motivate further detailed investigation of Archean terranes, although robust comparison between any number of orogenic belts, Archean or modern, require geochronology with precision that is relevant to tectonomagmatic processes. Sub-million year precision is now achievable in Archean rocks by ID-TIMS U-Pb geochronology, but necessitates careful integration of field, geochemical, and geochronological data with numerical modeling studies.

Thursday, October 8, 2015
3:30 p.m., Room 203 PHYS

Refreshments at 3:00pm, Room 242 PHYS
Tenure track position in Sediment Dynamics

The School of Geosciences at the University of Louisiana at Lafayette invites applications for an assistant professor-level, tenure track position in Environmental Science that will begin in August 2016. Responsibilities include teaching, research, and mentoring at the undergraduate and graduate level. The successful candidate will be expected to develop an independent, externally-funded research program. He/she must have academic training and experience in sediment dynamics, soil or sediment biogeochemistry, soil or sediment transport and/or pollution, or a closely-related field. Skills that include sediment-water interactions, modeling of sediment transport and/or the fate of contaminants, as well as the ability to translate research interests into aspects of Gulf Coast geosciences will be advantageous. Postdoctoral experience is preferred and a Ph.D. is required at the time of hire.

The School of Geosciences (http://geology.louisiana.edu/) combines the programs of Geology (B.S. and M.S. degree programs) and Environmental Science (B.S.) and includes 13 full time faculty members, 8 instructors and staff, and approximately 170 undergraduate majors and 70 graduate students. There are many opportunities for collaboration within other departments and colleges, as well as with local industry, institutes, and centers. The University of Louisiana at Lafayette is a public research university with High Research Activity with accreditation from the Southern Association of Colleges and Schools Commission on Colleges. UL Lafayette is the largest of nine universities in the University of Louisiana System. Located mid-way between New Orleans and Houston, Lafayette is a city of 120,000, one of Louisiana’s fastest growing areas, and is a hub for numerous cultural festivals and activities (http://lafayette.travel/).

To be considered for this position, send as a single PDF file that includes your name in the title, an application letter, CV, separate statements of teaching and research interests, and the names and contact information (post and email) of three references to nadean@louisiana.edu. The review process will continue until the position is filled. To ensure full consideration, receipt of the complete application material is required before October 16, 2015. Questions regarding these positions can be directed to Dr. David Borrok (dborrok@louisiana.edu; phone 337-482-2888). The University of Louisiana at Lafayette is an Equal Opportunity Employer and encourages applications from minority group members and women. For information regarding safety at the University of Louisiana at Lafayette, and to review the Annual Security Report, please go to http://police.louisiana.edu/jeanne-clery-act.
NASA INTERNSHIPS, FELLOWSHIPS & SCHOLARSHIPS
VIRTUAL CAREER FAIR

NASA’S JOURNEY TO
MARS

REGISTER NOW
https://app.brazenconnect.com/events/nasa-online-fair

Thursday, October 8, 2015
1:00 - 4:30 PM EST

Launch your career with a NASA internship! Connect with NASA centers and engage with recruiters and former interns to learn about student opportunities at the agency.

Participating Centers

NASA Headquarters
Ames Research Center
Armstrong Flight Research Center
Glenn Research Center
Goddard Space Flight Center
Jet Propulsion Laboratory

Johnson Space Center
Kennedy Space Center
Langley Research Center
Marshall Space Flight Center
Stennis Space Center

Photo: NASA
Do you picture research in your future? Well, you’re at the right university! Designed to connect students with a plethora of exciting research projects, the Purdue Research Roundtable brings together a multitude of groups and programs currently in progress at Purdue. Researchers and program staff will be there to talk with you about available research internships and jobs. If you are looking to get involved with a research project, whether for tech elective credit, a summer fellowship, or internship, come to the Roundtable, and see what’s available for you.

**Research Roundtable**

- Where? Purdue Memorial Union South Ballroom
- When? November 10th, 2015, 9:00AM – 4:00PM
- Need more information? Use the links below or contact murray71@purdue.edu

**Research Subjects:**
(Not limited to)
- Human Centered Design
- Computer Graphics
- Product Lifestyle
- Microstructure Testing
- Energetic Materials
- Robotics
- Information Security
- Circuits & Systems
- Visualization
- Aviation
- Energy
- Medical Devices
- INSPIRE

**Colleges Recruited:**
- College of Engineering
- Purdue Polytechnic Institute
- College of Science
- College of Agriculture

**Years Recruited:**
- Freshman
- Sophomores
- Juniors
- Seniors
- Graduates

Facebook: https://www.facebook.com/PUResearchRoundtable

Purdue CCO: https://www.cco.purdue.edu/Calendar/Default.aspx?id=1622
The Purdue Graduate Student Government and the Purdue School of Nursing have come together to offer a Child Wellness Day for the children of Purdue Graduate Students. Services offered are:

- Physical Exams
- Immunizations
- Hemoglobin and Lead Screening
- Well Child Health Education
- Child Safety Education
- Hearing screen
- Nutrition screening

**TRANSPORTATION**

- PVCC will provide a van that will pick up every 1/2 hour at PVCC and the Lyles Porter building and drop off at the clinic. Please provide car seats in order to utilize the van service.
- Parking is available all day long at the Harrison Street Parking Garage, need for “A” permit is waived for the day.

If your children have health insurance, please bring insurance card. Please bring copy of your children’s immunizations.

Questions: Jennifer Coddington- jsundell@purdue.edu or Liz O’neil oneile@purdue.edu