EAPS WEEKLY NEWSLETTER
9 Oct. 2017 | EAPS on Facebook | EAPS on Twitter

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DEPARTMENT NEWS

INSIDE EAPS NEWSLETTER
Read all of the latest news in our department magazine, Inside EAPS, including Antarctica research, public outreach, and clean energy for hybrid vehicles. The latest version of Inside EAPS newsletter can be found here: https://goo.gl/47U9VP

BE SURE TO CHECK OUT ALL OF THE EAPS COMMUNICATIONS MEDIA!
Facebook
Twitter
Department Magazine
Website News

EAPS MEETINGS & EVENTS

EAPS FACULTY MEETINGS

October 31, 2017
December 5, 2017
3:00 PM
HAMP 3201

EAPS PRIMARY COMMITTEE MEETINGS

October 17, 2017
3:00 PM
HAMP 3201

CoS FALL FACULTY MEETINGS

November 28, 2017
3:30 PM
LWSN 1142

EAPS COLLOQUIA

Cliff Johnston
Purdue University
Thursday, October 12, 2017
3:30 PM
HAMP 1252

http://www.eaps.purdue.edu/
**EAPS OMBUDSMAN**

What is an Ombudsman? The ombudsmen 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 ombudsmen are Barbara Gibson (HAMP 2169B; barbara@purdue.edu) and Ken Ridgeway (HAMP 3277B; ridge@purdue.edu) – please feel free to contact either of them if needed.

**EAPS FACULTY/STAFF RESOURCE FUND**

**Guidelines:**

The EAPS Faculty and Staff Resource Fund provides faculty and full-time, permanent staff with a simple, open, and transparent way to request resources they need to be productive in their work. This is not intended to replace other sources (e.g., grants, discretionary accounts, and start-up, competitive programs on campus, and usual supplies and expenses), rather it is to meet occasional needs that are important for individual productivity and advancement in cases where these other sources are not available to an individual. Examples include professional development course tuition, office needs, and professional conferences.

**Procedure:**

Applications to the fund should be sent via email (as a pdf) to the Assistant Department Head. Requests must include the following items and not exceed one page.

- applicants name, position title, email address
- a detailed, one paragraph description of what is being requested
- a short explanation of how this will help the individual be productive in their work
- amount requested (this program will accept requests between $200 and $2,000)
- time constraints on what is being requested (e.g., a deadline for registration)

Request deadline is the **20th** of each month. Decisions will be made by the 5th of the following month. All requests will be reviewed by a group including the Assistant Department Head, the Business Manager, and at least two members of the EAPS Executive Committee.

**STUDENT NEWS**

**IMAGING FELLOWSHIP OPPORTUNITY AT HARVARD UNIVERSITY**

Harvard University is seeking life and physical scientists with an interest in imaging to develop innovative imaging technologies, lead biological investigations using these technologies, or both, for an exciting position as a John Harvard Distinguished Science Fellow (JHDSF).

Fellows will work as independent researchers; receive funding to run a small research group; and will be appointed for a three-year term (two year extension after review).

Candidates should have recently completed a PhD in Chemistry, Physics, Biology, Engineering or related areas, or should complete a PhD by the time their appointment begins.

Application Deadline is **October 29, 2017**

[Learn more and apply](https://academicpositions.harvard.edu/postings/7801)
OFFICE OF UNDERGRADUATE RESEARCH (OUR) SCHOLARSHIP

The Office of Undergraduate Research (OUR), in partnership with the colleges, announces a research scholarship program to recognize undergraduate student engagement in original research, scholarship, or creative work under the guidance of a Purdue faculty or approved research mentor.

Please find the attached flyer announcing the OUR Scholarship program for Spring 2018. The application opens today and the deadline is Friday, October 20.

An applied research project, which is administered by the Oak Ridge Associated Universities (ORAU), is available at the Technical Support Center (TSC) of the Office of Water, Office of Ground Water and Drinking Water, U.S. Environmental Protection Agency, in Cincinnati, Ohio. Under the guidance of a mentor, the participant will gain experience and educational benefits from this project looking for unregulated contaminants in drinking water.

DOWNUNDER GEOSOLUTIONS (DUG)

Ali Bakir, an EAPS alum, works for DownUnder Geosolutions (DUG), a geophysical service company based in Houston, TX. He and Ms. Phoebe Goh will be on campus October 31 for an Open House and to conduct interviews on November 1, 2017. DUG is hiring MS and PhD students with geophysics, physics, electrical engineering, or math degrees, or similar degrees with strong signal processing skills. They are mainly interested in students graduating in 2018 (see attached flyers).

On the evening of Tuesday, October 31, at 5:15 pm in Room 2201, DUG will have an Open House to talk about the company, available job opportunities, and answer any questions you may have. Food will be provided.

http://www.eaps.purdue.edu/
Applicants must first visit the TTU employment website at http://jobs.texastech.edu. Once there, go to “Search Jobs”, search for requisition number 11599BR, and provide the required information. Afterwards, applicants must submit a letter of application, curriculum vitae, a statement of teaching and research interests, names and contact information (including e-mail address) of at least three professional references. These documents must be uploaded to the employment website. Inquiries regarding the position should be sent to dustin.sweet@ttu.edu.

Review of applications will begin November 27, 2017, and will continue until the position is filled.

PRESIDENT HARRY S. TRUMAN FELLOWSHIP IN NATIONAL SECURITY SCIENCE AND ENGINEERING

Sandia National Laboratories is seeking applicants for the President Harry S. Truman Fellowship (in National Security Science and Engineering). Candidates must meet the following requirements, to apply:

- Ph.D. awarded within the past three years at the time of application or completed Ph.D. requirements by commencement of appointment; with strong academic achievement and evidence of exceptional technical accomplishment, leadership, and ability to team effectively
- Candidates must be seeking their first national laboratory appointment (no previous postdoctoral appointments at a national laboratory)
- Ability to obtain a DOE “Q” clearance, which requires US citizenship

For more information, please see the attached flyer and/or visit—
http://sandia.gov/careers/students_postdocs/fellowships/truman_fellowship.html

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 http://www.eaps.purdue.edu/news/newsletters.html and Click on News to access active links as needed. Material for inclusion in the newsletter should be submitted to Fallon McQuem (fmcquem@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.eaps.purdue.edu/resources/information_technology/index.htm

Also, as an additional resource for information about departmental events, seminars, etc., see our departmental calendar at http://www.EAPS.purdue.edu/events-calendar.html

http://www.eaps.purdue.edu/
Aug. 22  Ki-Hong Min, Kyungpook National University
        **Tuesday, 4:00PM, Room 2201/HAMP**
        Host: Sun

Aug. 24  Roland Stull, University of British Columbia
        Host: Tanamachi

Aug. 31  Tim Cronin, MIT
        Host: Chavas

Sept. 7  Vince Agard, MIT
        Host: Chavas

Sept. 14 Amir Allan, University of Utah
        Host: Ridgway

Sept. 21 Ed Harvey, U.S. National Park Service, Water Resources Division
        **Cancelled**
        Host: Frisbee

Sept. 28 David Minton, Purdue University

Oct. 5  Devon Orme, Montana State University
        Host: Ridgway

Oct. 12 Cliff Johnston, Purdue University

Oct. 19 Chanh Kieu, Indiana University
        Host: Chavas

Oct. 24 Zhou Lyu, PhD candidate
        **Tuesday, 4:00PM, Room 2201/HAMP**
        Advisor: Zhuang

Oct. 26 Julie Castillo-Rogez, Jet Propulsion Laboratory, NASA
        Host: Minton

Oct. 31 Tong Yu, PhD candidate
        **Tuesday, 4:00PM, Room 2201/HAMP**
        Advisor: Zhuang

Nov. 2  Scott Collis, Argonne National Laboratory
        Host: Tanamachi

Nov. 9  Jack Kaye, Earth Science Division, NASA
        Host: Zhuang

Nov. 16 Xiangdong Zhang, University of Alaska, Fairbanks
        Host: Zhuang

Nov. 30 Rossella Guerrieri, CREAF, Univ. Autònoma de Barcelona
        Host: Michalski

Dec. 7  Sarah Feakins, University of Southern California
        Host: Welp/Huber
Reflections on the Solid-water Interface:
The Good, the Bad, and the Ugly

Cliff Johnston
Purdue University

Much of my work has focused on the interaction of water and organics with clay minerals and hydrous oxides at the molecular scale. Clay minerals are naturally occurring nanomaterials whose primary particles range in size from Ångstroms to microns. Because of their small size, expansive surface areas, anisotropic shape and reactive surfaces, the importance of these ubiquitous nanoparticles has been recognized in a wide range of disciplines from soil science, energy production, and geotechnical engineering. Furthermore, they are spatially distributed from deep within the Earth’s crust to Martian landscapes and span length scales that extend from a few nanometers to processes that are evident from satellite-based observation of the Earth. Clay minerals are the most abundant naturally occurring nanomaterials known to humans with densities of particles that can approach $10^{22}$ clay particles/m$^3$ in soil and subsurface environments as well as comprising a significant fraction of the nanoparticles found in the atmosphere.

In this talk, I will present several ‘good’, ‘bad’ and ‘ugly’ examples of work in this space related to environmental science, energy, and human health.
GEO-JUNKIES, TECH-HEADS AND MATH WIZARDS LOOKING FOR CAREER OPPORTUNITIES?

Discover the challenging career opportunities available in geophysics. Please see Kathy Kincade (Room 2169D/HAMP) to sign up for an interview.

Date: Wednesday, November 1st 2017
Time: 8.00am – 1.00pm
Venue: Room 2173 HAMP Bldg

Students who do not require a work-visa sponsorship are encouraged to reserve an interview.

**Please bring along a copy of your CV and all official/unofficial transcripts.

Join TeamDUG

DUG
DownUnderGeosolutions
GEO-JUNKIES, TECH-HEADS AND MATH WIZARDS LOOKING FOR CAREER OPPORTUNITIES?

Discover the challenging career opportunities available in geophysics.

Join us at our information session!

Date: Tuesday, October 31st 2017
Time: 5.15pm - 6.30pm
Venue: Room 2201 HAMP Bldg

Please RSVP to Kathy Kincade (kkincade@purdue.edu) no later than October 20 if you plan to attend the presentation.
Oak Ridge Institute of Scientific Education (ORISE)
Internship Opportunity

U.S. Environmental Protection Agency (Cincinnati, OH)
Office of Water

General
An applied research project, which is administered by the Oak Ridge Institute for Science and Education, Department of Energy, is available at the Technical Support Center (TSC) of the Office of Water, Office of Ground Water and Drinking Water, U.S. Environmental Protection Agency, in Cincinnati, Ohio. Under the guidance of a mentor, the participant will gain experience and educational benefits from this project performed at TSC.

Fellowship Research Description
The Safe Drinking Water Act (SDWA), as amended in 1996, requires the U.S. EPA to monitor up to 30 emerging contaminants in drinking water every five years. The U.S. EPA implements this requirement through the Unregulated Contaminant Monitoring Rule (UCMR). The data assists the U.S. EPA Administrator in determining whether to regulate an emerging contaminant. TSC implements the UCMR program and manages the key components of this complex regulatory effort. Currently, implementation of the fourth UCMR (UCMR 4) takes place from 2017 through 2021. TSC anticipants the development of the fifth UCMR (UCMR 5) will begin in 2018.

The participant will research the quality control (QC) data trends of newly developed analytical methods. This information lets the U.S. EPA evaluate the accuracy and precision of the methods with nationwide drinking water occurrence data from several different laboratories. The participant will also develop problem solving skills through involvement in several areas of the UCMR program and by encountering complex issues that arise during the implementation of an environmental rule. Additional research and project opportunities include:

- Learning about the SDWA, the UCMR program and the UCMR data system.
- Researching past UCMR data systems, analyzing the data elements, applying those relationships to the current cycle, and developing a database.
- Analyzing, reviewing and evaluating environmental monitoring data in a database, including contaminant occurrence and exposure estimates, and responding to technical issues associated with these data.
- Writing a formal paper and presenting the information gathered from researching the QC data trends of the analytical methods from the third UCMR (UCMR 3).
- Learning how to perform on-site laboratory and data audits for newly developed analytical methods, and making data reporting easier.
- Participating on the UCMR 5 Workgroup, learning about methods development and the regulatory development process.
Eligibility

- Preference will be given to Environmental Science majors or related fields.
- Individuals must have at least a Bachelor degree by the start date.
- Individuals must have received their degree within three years of the start date.
- Candidates should possess good oral and written communication skills.
- Candidates must have strong technology skills and be skillful in Microsoft Office, specifically Word, Excel and PowerPoint. Preference will be given to those who also have some skill in database development and/or management (Microsoft Access or other).
- The participant will be selected based upon academic records, recommendations, research interests, compatibility of interests with research programs/projects at TSC, and interview(s) with TSC staff.
- The program is open to all qualified individuals without regard to race, sex, religion, color, age, physical or mental disability, national origin, or status as a Vietnam era or disabled veteran. U.S. citizenship or lawful permanent resident status is preferred (but can also hold an appropriate visa status, however, an H1B visa is not appropriate). **The intern does not become a U.S. EPA employee.**

Contact Information

Brenda Parris  
U.S. EPA, Office of Ground Water and Drinking Water (OGWDW)  
Technical Support Center (MS-140)  
26 W. Martin Luther King Dr.  
Cincinnati, Ohio 45268  
Phone: (513) 569-7961  
Email: parris.brenda@epa.gov

Deadline & Submission Requirements

- Information required in application – such as: resume, cover letter, copy of official transcripts, and references or faculty endorsement.

Additional Information

- Please see the UCMR Website for more information [https://www.epa.gov/dwucmr](https://www.epa.gov/dwucmr)
- The appointment is for full-time research that must be conducted at TSC in Cincinnati, Ohio.
- Anticipated starting stipend is between $42,261 and $74,965. The participant will receive a monthly stipend based upon educational level and prior experience.
- The appointment is for one year and may be renewed yearly for an additional three to four years upon recommendation of TSC.
- The participant must show proof of health insurance or must purchase it through ORISE.
- The selected candidate must submit official transcripts from all schools before the start date.
OUR Scholarship Announcement: Spring 2018

The Office of Undergraduate Research (OUR), in partnership with the colleges, announces a research scholarship program to recognize undergraduate student engagement in original research, scholarship, or creative work under the guidance of a Purdue faculty or approved research mentor. The scholarship is in the amount of $500 for the Spring 2018 semester and is non-renewable.

Student Qualifications

- Must be enrolled full-time in an undergraduate degree-seeking program in good academic standing at the Purdue University – West Lafayette campus (includes PharmD students who have not been awarded a bachelors degree)
- Preference given to students with a cumulative GPA of 2.75 or above

Program Components

1. Research progress and reflection report at the end of each semester
2. Research dissemination through either oral paper presentation or research poster at the Purdue Undergraduate Research Conference on April 10, 2018
3. Attendance at three approved seminars on research or research-related topics

Application

1. Student information form
2. Project information
4. Students will be notified no later than Friday, December 15, 2017

Apply online at http://bit.ly/OURScholarship

DEADLINE is Friday, October 20, 2017 at 11:59pm

Questions? Contact the Office of Undergraduate Research

https://www.purdue.edu/research/Ugrad/

Email: ugresearch@purdue.edu | Office: 134 Duhme Hall | Phone: (765) 494-6503
President Harry S. Truman Fellowship in National Security Science and Engineering

Seeking Applicants!

Sandia National Laboratories is seeking applicants for the President Harry S. Truman Fellowship (in National Security Science and Engineering). Candidates for this position are expected to have solved a major scientific or engineering problem in their thesis work or have provided a new approach or insight to a major problem, as evidenced by a recognized impact in their field.

The Fellowship provides the opportunity for new Ph.D. scientists and engineers to pursue independent research of their own choosing that supports Sandia's national security mission. The appointee is expected to foster creativity and to stimulate exploration of forefront science and technology and high-risk, potentially high-value research and development.

Sandia’s research focus areas are: bioscience, computing and information science, engineering science, materials science, nanodevices and microsystems, radiation effects and high energy density physics, and geosciences. To learn more about additional R&D programs that support Sandia’s mission areas, please visit: sandia.gov/missions

The Truman Fellowship is a three-year appointment. The salary is $111,200 plus benefits and additional funding for the chosen proposal. The deadline is November 1 of each year and normally begins on October 1 the following year.

Requirements:

Candidates must meet the following requirements:

• Ph.D. awarded within the past three years at the time of application or completed Ph.D. requirements by commencement of appointment; with strong academic achievement and evidence of exceptional technical accomplishment, leadership, and ability to team effectively

• Candidates must be seeking their first national laboratory appointment (no previous postdoctoral appointments at a national laboratory)

• Ability to obtain a DOE “Q” clearance, which requires US citizenship

For more information, visit: http://sandia.gov/careers/students_postdocs/fellowships/truman_fellowship.html

Equal opportunity employer/Disability/Vet/GLBT 07/2017

Sandia National Laboratories is a multimission laboratory managed and operated by National Technology and Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International, Inc., for the U.S. Department of Energy’s National Nuclear Security Administration under contract DE-NA-0003525. SAND2017-5483 HR
Seeking Applicants!

We are now accepting applications for the 2018 Jill Hruby Fellowship in National Security Science and Engineering. The Hruby Fellowship is one of Sandia National Laboratories' most prestigious postdoctoral fellowships. This fellowship aims to develop women in the engineering and science fields who are interested in technical leadership careers in national security. Jill Hruby is the first woman to have been appointed director of a large, multidisciplinary national security laboratory and has been a driving force for other women at Sandia and across the country to follow careers in technical leadership.

Jill Hruby Fellows have the opportunity to pursue independent research that supports Sandia's purpose: to develop advanced technologies to ensure global peace. In addition to receiving technical mentorship, Jill Hruby Fellows participate in a unique, prestigious leadership development program. To be considered for this fellowship, applicants must display excellent abilities in scientific and/or engineering research and show clear promise of becoming outstanding leaders. Fellows may work at either of Sandia's principal locations in New Mexico and California. All qualified applicants will be considered for this fellowship.

Sandia's competitive wage and benefits package includes an annual salary of $111,200; flexible work arrangements; 11 paid holidays; three weeks of vacation; health, vision, and dental insurance; and a 401(k) savings plan with company match.

Qualifications we Require

• Ph.D. conferred within the past three years or completion of Ph.D. requirements by commencement of appointment Fall 2018
• Evidence of strong academic achievement, exceptional technical accomplishment, leadership and ability to team effectively
• No previous postdoctoral appointments at a national laboratory (internships excluded)
• Ability to obtain and maintain a DOE security clearance, which requires US citizenship
• Research in areas relevant to national security

Qualifications we Desire

• Creativity and self-motivation
• Good communication skills
• Interest in management/leadership
• Ability to work in a team-oriented, dynamic environment
• Demonstrated interest and/or experience in service to the nation
• Broad-based background and extensive knowledge in one or more of the following areas: bioscience, computing and information science, engineering sciences, geoscience, materials science, nanotechnology and microsystems, and radiation effects and high energy density sciences

The Hruby Fellowship is a three-year appointment and normally commences on October 1, although exceptions may be made to accommodate special circumstances.

For more information, please visit:
http://www.sandia.gov/careers/students_postdocs/fellowships/hruby_fellowship.html

Equal opportunity employer/Disability/Veteran/GLBT 07/2017
Sandia National Laboratories is a multimission laboratory managed and operated by National Technology and Engineering Solutions of Sandia, LLC., a wholly owned subsidiary of Honeywell International, Inc., for the U.S. Department of Energy’s National Nuclear Security Administration under contract DE-NA-0003525. SAND2017-7511 HR