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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 COLLOQUIA

Tong Yu
PhD Candidate
Tuesday, Oct. 31, 2017
4:00 PM
HAMP 2201

http://www.eaps.purdue.edu/
CONGRATULATIONS TO FALLON MCQUERN!

On Oct. 21, 2017, Fallon graduated from Western Governors University (WGU) with her Bachelor of Science in Business/Human Resource Management. This spring 2018, she will begin her Master of Science in Communication at Purdue University.

PROFESSOR WEST--BANQUET SPEAKER AT AEG

Terry West was the banquet speaker at the monthly meeting of the Chicago Chapter of the Association of Environmental and Engineering Geologists (AEG), on Tuesday, October 17, 2017. The title of the presentation was “Rockfall Fatalities, The Georgetown Incline, I-40 West of Denver: Two Court Cases and Slope Remediation”. Attendees included professional geologists and civil engineers plus students from several local universities.

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 Ridgway (HAMP 3277B; ridge@purdue.edu) - please feel free to contact either of them if needed.

CONSTRUCTION PROJECTS FOR CE

Please review the attached list of upcoming constructions projects for the HAMP building.

EAPS FACULTY/STAFF RESOURCE FUND

Guidelines:

The EAPS Faculty and Staff Resource Fund 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)

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

**TUTORS NEEDED FOR EAPS COURSES!**

The Purdue University Athletic Department is seeking students to tutor EAPS courses. Tutors are needed for EAPS 104, EAPS 116, and EAPS 120. Tutors must have no lower than a B in the respective course(s). This position is paid! If you are interested, please contact Candace Britten: Tutor Mentor Coordinator @ cbritten@purdue.edu.

**PHD STUDENT POSITION AVAILABLE AT DEPT. OF METEOROLOGY - STOCKHOLM UNIVERSITY**

A 4-year fully-funded PhD student position is available at the Department of Meteorology, Stockholm University. They are looking for talented candidates interested in the role of large-scale atmospheric processes in controlling polar amplification and Arctic climate change. The successful candidate will form part of a team of 4 PhD students within the context of ACAS, a multidisciplinary project looking at Arctic climate change from multiple perspectives.

For more information and application instructions please follow this link: [https://goo.gl/T97h8H](https://goo.gl/T97h8H)
Questions may be directed to Prof. Rodrigo Caballero ([rodrigo@misu.su.se](mailto:rodrigo@misu.su.se))

Rodrigo Caballero | [https://goo.gl/YvgCyA](https://goo.gl/YvgCyA)
Department of Meteorology (MISU), Stockholm University S-106 91 Stockholm, Sweden

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**2018 COLLEGE OF SCIENCE GRADUATE STUDENT INTERNATIONAL TRAVEL AWARDS**

Deadline: **December 1, 2018**

2 or 3 awards ranging up to $800 for international Travel will be awarded

Please see attached for more information.

**WIESS POST-DOCTORAL RESEARCH FELLOWSHIP**

The Department of Earth, Environmental and Planetary Sciences at Rice University is inviting applications for the Wiess Post-Doctoral Research Fellowship. They are seeking candidates with independent research interests that intersect with one or more faculty within our department. Applicants must have a Ph.D. awarded within three years of the time of appointment.

The research fellowship will be supported for two years, pending satisfactory progress during the first year. It covers an annual stipend of $60,000 with a benefits package and an additional annual discretionary research allowance of $3,500.

Applicants are requested to develop a proposal of research to be undertaken during the fellowship period. The principal selection criteria are scientific excellence, a clearly expressed research plan to address questions at the forefront of their field of study, and research synergies with at least one faculty. The proposed research should, however, encompass independent research ideas and explore new directions beyond the applicant's Ph.D. Preference will be given to applicants whose proposals demonstrate independence and originality, and also the potential for collaboration with one or more faculty in the Department of Earth, Environmental and Planetary Sciences.

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http://www.eaps.purdue.edu/
Applicants are required to submit:

- A cover letter
- A research proposal of no more than 3 pages (single-spaced), including figures
- A current CV, including a list of publications

All three documents should be submitted as a single PDF file to the chair of the fellowship search committee (esci-postdoc@rice.edu) by **10 November, 2017**. In addition, letters of reference should be submitted by three referees to the same email address and by the same deadline.

The highest ranked applicants will be invited to visit Rice in early 2018. Following acceptance, the appointment may begin any time before **1 January, 2019**.

Please click on the link for additional information: https://earthscience.rice.edu/open-positions/

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**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 flier and/or visit—

http://sandia.gov/careers/students_postdocs/fellowships/truman_fellowship.html

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**DISCOVERY PARK & THE COLLEGE OF SCIENCE SOCIAL HOUR AT NINE IRISH BROTHERS**

Dean Wolfe and Tomás Díaz de la Rubia would like to invite you to the next Discovery Park Social Hour on **Monday, November 13th from 4:30-6:30 PM**. This DP Social Hour will be hosted jointly by Discovery Park and the College of Science, with future events hosted with other colleges across campus. Free HORS D’ŒUVRES!

Come network your ideas, connect with other faculty and researchers, or find your next collaborator. The event kicks off at 4:30 p.m. at Nine Irish Brothers, located at 119 Howard Street in West Lafayette.

Please see attached flier for further details.

http://www.eaps.purdue.edu/
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
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<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
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<td>Aug. 22</td>
<td>Ki-Hong Min</td>
<td>Kyungpook National University</td>
<td>Sun</td>
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<td></td>
<td><strong>Tuesday, 4:00PM, Room 2201/HAMP</strong></td>
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<td>Aug. 24</td>
<td>Roland Stull</td>
<td>University of British Columbia</td>
<td>Tanamachi</td>
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<td>Aug. 31</td>
<td>Tim Cronin</td>
<td>MIT</td>
<td>Chavas</td>
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<td>Sept. 7</td>
<td>Vince Agard</td>
<td>MIT</td>
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<td>Sept. 14</td>
<td>Amir Allan</td>
<td>University of Utah</td>
<td>Ridgway</td>
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<td>Sept. 21</td>
<td>Ed Harvey, U.S. National Park Service, Water Resources Division</td>
<td>Host: Frisbee</td>
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<td><strong>Cancelled</strong></td>
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<td>Sept. 28</td>
<td>David Minton</td>
<td>Purdue University</td>
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<td>Oct. 5</td>
<td>Devon Orme</td>
<td>Montana State University</td>
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<td>Oct. 12</td>
<td>Cliff Johnston</td>
<td>Purdue University</td>
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<td>Oct. 19</td>
<td>Chanh Kieu</td>
<td>Indiana University</td>
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<td>Oct. 24</td>
<td>Zhou Lyu, PhD candidate</td>
<td>Advisor: Zhuang</td>
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<td>Oct. 26</td>
<td>Julie Castillo-Rogez, Jet Propulsion Laboratory, NASA</td>
<td>Host: Minton</td>
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<tr>
<td>Oct. 31</td>
<td>Tong Yu, PhD candidate</td>
<td>Advisor: Zhuang</td>
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<td><strong>Tuesday, 4:00PM, Room 2201/HAMP</strong></td>
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<td>Nov. 2</td>
<td>Scott Collis</td>
<td>Argonne National Laboratory</td>
<td>Tanamachi</td>
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<tr>
<td>Nov. 9</td>
<td>Jack Kaye, Earth Science Division, NASA</td>
<td>Host: Zhuang</td>
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<tr>
<td>Nov. 16</td>
<td>Xiangdong Zhang</td>
<td>University of Alaska, Fairbanks</td>
<td>Zhuang</td>
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<td>Nov. 30</td>
<td>Rossella Guerrieri, CREAF, Univ. Autònoma de Barcelona</td>
<td>Host: Michalski</td>
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<tr>
<td>Dec. 7</td>
<td>Sarah Feakins</td>
<td>University of Southern California</td>
<td>Welp/Huber</td>
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Nitrogen is an essential element for the global biogeochemical cycle. It is a key nutrient for organisms and N compounds including nitrous oxide significantly influence the global climate. The activities of bacteria and archaea are responsible for the nitrification and denitrification in a wide variety of environments, so microbes play an important role in the nitrogen cycle in soils. To date, most existing process-based models treated nitrification and denitrification as chemical reactions driven by soil physical variables including soil temperature and moisture. In general, the effect of microbes on N cycling has not been modeled in sufficient details. Soil organic carbon also affects the N cycle because it supplies energy to microbes. In my study, a trait-based biogeochemistry model quantifying N\textsubscript{2}O emissions from the terrestrial ecosystems is developed based on an extant process-based model TEM (Terrestrial Ecosystem Model). Specifically, the improvement to TEM includes: 1) Incorporated the N fixation process to account for the inflow of N from the atmosphere to biosphere; 2) Implemented the effects of microbial dynamics on nitrification process; 3) fully considered the effects of carbon cycling on N nitrogen cycling following the principles of stoichiometry of carbon and nitrogen in soils, plants, and microbes. The difference between simulations with and without the consideration of bacterial activity lies between 5% ~25% based on climate conditions and vegetation types. The trait based module allows a more detailed estimation of global N\textsubscript{2}O emissions.
Radar Science and Code: Building Knowledge Beyond the Case Study

Scott Collis
Argonne National Laboratory

The amount of data collected by radar networks and research radars around the world is vast. And the use of this data is further complicated by a wide variety of data formats and standards. However the combination of open source, good software engineering, open data and a renaissance in HPC for Python has made the use of these data possible. This presentation will showcase several examples of using the Python-ARM Radar Toolkit (Py-ART) to extract geophysical meaning from radar data sets. From decadal multi-Doppler observations in Darwin to cell tracking in Houston and data quality in Oklahoma this talk will not only showcase the "what" but the "how". The talk will conclude by presenting the five year roadmap for Py-ART and our vision for the future of the open source radar community.
2018 College of Science Graduate Student International Travel Awards

**Deadline: December 1, 2018**

For travel between January 1, 2018 and June 30, 2018

~ 2 or 3 awards ranging up to $800 for international travel will be awarded

**Prerequisites:**
- must be a full-time PhD student within the Department in the College of Science
- must be making an oral or poster presentation at an international conference

**Priority will be given to:**
- travel to make an oral presentation at a conference
- attendance at an interdisciplinary conference
- students who have passed their prelims

**To apply, please send electronically as one file:**
- CV (2 page limit)
- brief summary of research (1 page limit)
- brief statement of purpose for attending conference specifying whether your presentation is oral or poster
- provide web link to conference
- letter of support from research advisor

Send applications to Robin Sipes at rsipes@purdue.edu
Upcoming CE Projects

2131/2135 Lab Remodel:
- Tentative Start Date = 12/18/17
- Tentative End Date = 6/15/18

Basement/Ground Floor Renovation:
Areas affected by Phase (1): B146 / B150 / B157 / B289
- Movers for Phase (1) = 10/24/017
- Tentative Construction Start Date Phase (1) = 11/6/17
- Tentative Construction End Date Phase (1) = 2/16/18

Areas affected by Phase (2): G146 / G157 / G159 / G277 / Courtyard
- Tentative Date - Movers for Phase (2) = 2/19/18
- Tentative Construction Start Date Phase (2) = 2/26/18
- Tentative Construction End Date Phase (2) = 6/22/18
The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) seeks to fill a Post-Doctoral Research Associate position for its collaborative research as a Cooperative Institute with the National Oceanic and Atmospheric Administration (NOAA) Office of Oceanic and Atmospheric Research (OAR) National Severe Storms Laboratory (NSSL) in Norman, Oklahoma. The Post-Doc will contribute to NSSL’s Warn-on-Forecast (WoF) and Verification of the Origins of Rotation in Tornadoes Experiment – Southeast (V-SE) programs.

Background:
The vision of the WoF program is to develop a probabilistic storm-scale, ensemble-based forecast system with the goal of increase warning lead times for threats related to severe and hazardous convective weather, e.g., tornadoes, large hail, damaging winds, and flash floods. Prediction of severe storms can be particularly challenging in the SE U.S.; this is one motivation for the V-SE program. The low-CAPE, high-shear regime common in the SE promotes smaller storm updrafts that are poorly resolved in current models. Coarse model resolution also limits forecasts of fine-scale planetary boundary layer (PBL) processes important to storm initiation and evolution. This motivates exploration of the impact of finer model resolution on storm prediction in the SE U.S. Toward that end, scientists at the Earth System Research Laboratory Global Systems Division (GSD) are developing a scale-aware PBL scheme to better leverage finer model grids.

Responsibilities:
The incumbent will use EnKF data assimilation to generate analyses and probabilistic short-range forecasts of convective events; collaborate with NOAA Storm Prediction Center forecasters to evaluate the impact of reducing model grid spacing from 3 km to 1 km; collaborate with GSD scientists to evaluate the impact of scale-aware PBL physics; publish the results in peer-reviewed literature; and present at conferences.

Required Qualifications:
1. A Ph.D. (or be in the final stages of dissertation completion before applying) in meteorology, atmospheric science or related area.
2. Research experience with storm-scale numerical weather prediction and ensemble data assimilation.
3. Experience with Linux/Unix, programming (e.g., Fortran, C, C++), and scripting (e.g. Python, NCL).
4. Excellent oral and written communication skills (including papers published in or submitted to refereed journals) and the ability to work both independently and cooperatively with others.

The beginning salary range will be $54,000-$57,000 per year (depending on qualifications) with University of Oklahoma benefits. Information on benefits may be found at http://hr.ou.edu/Employees/New-Employees-at-OU/OU-Benefits-Overview. Start date for the position will be as soon as the candidate can begin work. The position will remain open until filled.

This position is a full-time, one-year appointment and is funded by a partnership between NOAA and the University of Oklahoma through CIMMS. The appointment may be extended for one additional year subject to satisfactory performance and funding availability.

To apply for the position, please forward your resume, cover letter and list of three references to:

Tracy Reinke, Executive Director, Finance and Operations
University of Oklahoma CIMMS
120 David L. Boren Blvd., Suite 2100
Norman, OK 73072-7304
treinke@ou.edu
ATTN: WoF V-SE 07-17
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
JOIN US FOR A SOCIAL HOUR

co-hosted by

DISCOVERY PARK & THE COLLEGE OF SCIENCE

NINE IRISH BROTHERS
119 Howard Avenue, West Lafayette

✦ FREE HORS D’OEUVRES ✦

November 13, 2017
4:30-6:30 p.m.

Network your idea.
Find areas to collaborate.