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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 SEMINAR

Hiroki Sonie
University of Wisconsin, Madison
Thursday, January 11, 2018
3:30 PM
HAMP 1252

http://www.eaps.purdue.edu/
What is an Ombudsman? The ombudsmen are 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.

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, 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

CONTINUING STUDENT SCHOLARSHIP APPLICATION PROCESS

Students with a minimum 2.75 cumulative GPA are strongly encouraged to apply for 2018-19 College of Science scholarship consideration. The priority deadline to apply is February 1, 2018. Essays should be copied and pasted into the application to minimize submission issues and loss of information. The College of Science scholarship selection process is holistic and thus factors other than a student’s GPA are considered in the selection of scholarship recipients. Only those students receiving a scholarship offer will be contacted at the conclusion of the selection process in early April.

Trustee and Presidential Scholarship reminder--

Recipients of a Trustee or Presidential Scholarship must complete a minimum of 30 new credit hours and earn a minimum 3.0 cumulative GPA at the end of each academic year to remain eligible for their scholarship. If lost, either scholarship may be regained if scholarship requirements are met at the end of the subsequent academic year. The lost

http://www.eaps.purdue.edu/
yearly year of eligibility will not be added to a student’s remaining years of eligibility.

GRADUATE STUDENT EXPO DATES:
February 9, 2018
February 10, 2018

CONGRATULATIONS TO JORDYN MILLER

Jordyn recently received a CUAHSI Pathfinder Fellowship. CUAHSI stands for Consortium of Universities for the Advancement of Hydrologic Science, Inc. This $5,000 fellowship will be used to pay for her to travel to the University of Minnesota where she is collaborating with Trinity Hamilton to develop and test a new technique using DNA markers to quantify the amount of recharge occurring from melting alpine glaciers and identify the role of this recharge in regional groundwater through the mountain-block. This is an exciting opportunity to use tracers which may be more unique to glacial meltwater than traditional environmental isotopes.

CIMMS JOB OPENINGS

Please see attached fliers for more information about open positions with CIMMS.

COLLEGE OF SCIENCE GLOBAL DIALOGUES PROGRAM

Begins: 1/15/18

Attention: College of Science sophomores, juniors, and seniors: You are invited to apply for the College of Science Global Dialogues program.

See attached fliers for more information!

GRADUATE ADMINISTRATIVE ASSISTANT POSITION

The Energy Center (Discovery Park) is looking to hire one or two currently enrolled Purdue STEM graduate students (25 CUL or and 50 CUL; 0.25FTE or 0.5 FTE). They will work with the Energy Center director and managing director, interact with Purdue faculty, students, and corporate sponsors to coordinate center activities. Applicants should have excellent interpersonal and organizational skills, be self-motivated, pay attention to details, have the ability to work independently, and have excellent written and verbal communication skills.

Please send your resume/cv and a short paragraph describing your skills to energy@purdue.edu and subject heading ‘GradStudentHelp’.

GLOBAL SCIENCE PARTNERSHIPS LEARNING COMMUNITY

Attention: all first year college of science students!

See the attached flier for information about free dinners, trips, and activities that are designed to help you learn about other cultures...while having fun!

POC: Terry Ham: hamt@purdue.edu or globalsciencepartners@purdue.edu

2018 SUMMER RESEARCH EXPERIENCES FOR UNDERGRADUATES PROGRAM

The 2018 Summer Research Experiences for Undergraduates (REU) Program in climate change in semi-arid regions hosted by the Environmental Science Institute at the University of Texas at Austin. The program is currently in its 15th year, with 130 alumni, many of whom have presented the results of their REU research at national conferences and/or published in peer reviewed journals.

The program is aimed at rising juniors and seniors and open to students who are US citizens in good academic standing. We especially invite applications from members of traditionally underrepresented groups.

Please feel free to download the program flyer and share widely with students who may be interested in this program. Program information, including the online application, can be found on our website.

http://www.eaps.purdue.edu/
SULI PROGRAM FOR UNDERGRAD STUDENTS

The Science Undergraduate Laboratory Internship (SULI) program encourages undergraduate students to pursue science, technology, engineering, and mathematics (STEM) careers by providing research experiences at the Department of Energy (DOE) laboratories. Selected students participate as interns appointed at one of 17 participating DOE laboratories/facilities. They perform research, under the guidance of laboratory staff scientists or engineers, on projects supporting the DOE mission.

The SULI program is sponsored and managed by the DOE Office of Science’s, Office of Workforce Development for Teachers and Scientists (WDTS) in collaboration with the DOE laboratories/facilities.

Applications for the SULI program are solicited annually for three separate internship terms. Internship appointments are 10 weeks in duration for the Summer Term (May through August) or 16 weeks in duration for the fall (August through December) and spring (January through May) Terms. Each DOE laboratory/facility offers different research opportunities, not all DOE laboratories/facilities offer internships during the fall and spring Terms.

The link below goes to a summer undergraduate internship opportunity with the US Department of Energy, sent to me by our recent colloquium speaker, Dr. Scott Collis (who is one of the available mentors at nearby Argonne National Laboratory). The application deadline is 12 January, 2018.

Please disseminate to any EAPS undergrads you think might be interested. DOE does work involving virtually all sub-disciplines within EAPS (atmospheric science, geology, environmental science, hydrology, etc.). Please direct any questions about the internship directly to SULI, or see their FAQ.

https://science.energy.gov/wdts/suli/

EXPLORATION SCIENCE SUMMER INTERN PROGRAM

APPLICATION DEADLINE: January 19, 2018

Applications are ow being accepted for the exploration science summer intern program. The Lunar and Planetary Institute (LPI) is hosting a special summer intern program to involve students in activities that support missions to the Moon that utilize the Orion crew vehicle, the Deep Space Gateway, and robotic assets on the lunar surface. It is a unique opportunity to integrate scientific input with exploration activities in a way that mission architects and spacecraft engineers can use. Activities may involve assessments of landing sites and traverse plans for multiple destinations that are responsive to NASA objectives. The LPI invites applications from graduate students in geology, planetary science, and related programs.

The Exploration Science Summer Intern Program builds on the success of the Lunar Exploration Summer Intern Program that was designed to evaluate possible landing sites on the Moon for robotic and human exploration missions. Over a five year period (2008–2012), teams of students worked with LPI science staff and their collaborators to produce A Global Lunar Landing Site Study to Provide the Scientific Context for Exploration of the Moon. The program for 2018 is designed to have the same impact on future exploration activities. This will be a unique team activity that should foster extensive discussions among students and senior science team members.

The 10-week program runs from May 29, 2018, through August 3, 2018. Selected interns will receive a $5,883 stipend, and up to a $1,000 travel expense reimbursement for U.S. citizens, or $1,500 for foreign nationals.

Applications are only accepted using the online application form found at the LPI’s Exploration Science Summer Intern website: https://www.lpi.usra.edu/exploration_intern/

For more information, contact:
Brittany McNeal
Exploration Science Summer Intern Program
ExplorationIntern@lpi.usra.edu

http://www.eaps.purdue.edu/
SUMMER 2018 @ NASA AIRBORNE STUDENT AIRBORNE RESEARCH PROGRAM

Application deadline is Jan. 31, 2018

Applications are open for the summer 2018 @NASAAirborne Student Airborne Research Program (SARP)! It’s a great opportunity for undergrads to experience research on the DC-8!

https://t.co/dzXHR4yh7d
https://t.co/8t3IESjatu
https://airbornescience.nasa.gov/ngc/content/National_Suborbital_Research_Center_SARP_2017

WOMEN IN SCIENCE FELLOWSHIP PROGRAM

L’Oréal USA for Women in Science The L’Oréal USA For Women in Science fellowship program honors female scientists at a critical stage in their careers with grants of $60,000 each. Candidates are selected from a variety of fields including the life and physical/material sciences, technology (including computer science), engineering, and mathematics. Candidates must have completed their PhD and have started in their postdoctoral position by the application deadline.

Deadline: February 2

PURDUE TO ADD TWO-FACTOR AUTHENTICATION FOR ALL FACULTY AND STAFF DURING SPRING SEMESTER

Coming soon, all of Purdue’s faculty and staff will need to begin using two-factor authentication, known at Purdue as BoilerKey, to log into the new employee portal, SuccessFactors, improving security of personal and University data alike. Signup for BoilerKey is now ready for all Purdue employees at www.purdue.edu/boilerkey. Purdue faculty and staff can expect reminders to sign up in the form of direct emails, social media posts and Purdue Today articles to give instructions on how and where to sign up throughout the coming spring semester. The employee portal allows employees to create leave requests and check paystubs. It also handles many of the University’s business functions.

What is two-factor authentication?

BoilerKey adds a second login requirement to go with your password. At Purdue, it’s a numerical code randomly generated on a smartphone app called Duo or a key fob. Essentially, even if someone were to get a hold of your password (if you fall for a phishing email, for instance), your account would still be protected because only you can physically access your smartphone or key fob to get the necessary login code.

BIRTHDAYS

Matthew Huber  Jan. 10

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

http://www.eaps.purdue.edu/
Jan. 11    Hiroki Sone, University of Wisconsin, Madison    Host: Mitchell
Jan. 18    Mingsong Li, Pennsylvania State University    Host: Zhang/Ogg
Jan. 25    Deanne Rogers, Stony Brook University    Host: Scudder
February 1  Geochronology Candidate    Host: Welp
February 8  Geochronology Candidate    Host: Welp
February 15 Geochronology Candidate    Host: Welp
February 22 Geochronology Candidate    Host: Welp
March 1     Linda Kah, University of Tennessee, Knoxville    Host: Horgan
March 8     Morgan O’Neill, University of Chicago    Host: Acosta/Chavas
March 22    Aneesh Subramanian, Univ. California-San Diego    Host: Tung
March 29    Julie Brisset, University of Central Florida    Host: Minton
April 5     Richard Neale, NCAR    Host: Acosta
April 12    Sagnik Dey, Centre for Atmospheric Sciences, IIT    Host: Harshvardhan
April 19    Jonathan AJO-Franklin, Lawrence Berkeley National Lab    Host: Mitchell
April 26    Erich Peitzsch, USGS Northern Rocky Mountain Science Center    Host: Miller
Ductile Deformation of Seemingly Brittle Rocks - Application to Geomechanics and Faults

Hiroki Sonie
University of Wisconsin, Madison

Laboratory testing of shale gas reservoir rocks reveals that although these rocks exhibit typical brittle characteristics, viscoelastic deformation is also an inherent property of the rock. The time-dependent deformation is strongly dependent on composition and the viscoelastic behavior can be described as a power-law function of time. By applying linear viscoelastic theory, we evaluate the effect of ductile deformation in modifying the in-situ stress over time. Calculations suggest that a significant portion of an applied stress could be relaxed over engineering to geological time-scales, highlighting the importance of capturing the slight ductile characteristics of rocks in solving long-term geomechanical problems. I will also discuss some numerical results on how viscoelastic deformation may affect the temporal and spatial evolution of shear stress along faults, and reflect on its possible impact in earthquake mechanics.
CIMMS Research Associate - MRMS/WDSS-II

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma currently is seeking a research associate to collaborate with scientists in the National Severe Storms Laboratory’s (NSSL) Warning Research & Development Division on the development and testing of Multi-Radar Multi-Sensor (MRMS) severe weather applications.

The duties of this position are:
1. Development of new applications and techniques for the analysis of MRMS and WSR-88D data;
2. Development and review of current and new radar-based algorithms within the Warning Decision Support System-Integrated Information (WDSS-II);
3. Evaluation of existing products and applications, specifically focusing on data quality control and short-term nowcasting (0-2 hour) of convective events;
4. Acquire and apply expertise in severe local storms and the warning-decision-making process;
5. Attend meetings and professional conferences to present research results and interact with collaborators and users;
6. Review technical and professional publications and attend seminars to stay abreast of current developments in meteorological and remote sensing science.

The minimum qualifications for the position are:
1. A Masters Degree in Meteorology, Atmospheric Science, Geographic Information Systems, or related area;
2. Computer programming experience (e.g. C++, Java, Python);

Applicants should identify expertise with any of the following areas: Computer Programming; Visualization; Geographic Information Systems; Warning Decision Making; Weather Radar; MRMS; WDSS-II. Good oral and written communication skills are needed for the position. Please indicate experience with Linux (or UNIX) operating systems and programming skills (including web-based and mobile applications).

Normal working hours will be observed except for occasional irregular hours during data collection, warning/forecast experiments or workshops conducted at remote sites. Incumbents will receive training and gain expertise in the latest radar and other remote sensing technology and warning decision-making.

General supervision will be provided by the CIMMS leadership. Technical oversight will be provided by CIMMS staff, NSSL scientists, and NSSL management. Appointee will work under general supervision but is expected to determine action to be taken in handling all but unusual situations. Incumbents in this position are not expected to supervise other employees, but may serve as leaders of technical teams.
The beginning salary will be based on qualifications and experience with University benefits. Information on benefits may be found at http://www.hr.ou.edu/employment/WorkingatOU.asp. The position is expected to begin February 2018.

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: MRMS/WDSSII

The University of Oklahoma is an equal opportunity/Affirmative Action employer.
CIMMS Research Associate – AWIPS2

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma currently is seeking a research associate to collaborate with scientists in the National Severe Storms Laboratory’s (NSSL) Warning Research & Development Division on the implementation of severe weather applications to support research to operations initiative via transition into the National Weather Service’s Advanced Weather Interactive Processing System-2nd generation (AWIPS2) operational software platform.

The duties of this position are:
1. Integration of NSSL’s experimental datasets into AWIPS2;
2. Development of new applications and visualization techniques in the AWIPS2 environment and platform;
3. Support and participate in applied research and development and operational experiments in the Hazardous Weather Testbed;
4. Acquire and apply expertise about severe local storms in the warning decision-making process.

The minimum qualifications for the position are:
1. A Masters Degree in Meteorology, Atmospheric Science, Computer Science/Software Engineering, Geographic Information Systems, or related area;
2. Computer programming experience (Linux, Java, Python, PostgreSQL, Eclipse, etc.);

Applicants should identify expertise with any of the following areas: AWIPS2; Computer Programming; Visualization; Geographic Information Systems. Some knowledge of National Weather Service warning and forecast operations and weather radar would be beneficial. Good oral and written communication skills are needed for the position. Please indicate additional experience with operating systems and programming skills (including web-based and mobile applications) beyond the requirements stated above.

Normal working hours will be observed except for occasional irregular hours during data collection, warning/forecast experiments, or workshops conducted at remote sites.

General supervision will be provided by the CIMMS leadership. Technical oversight will be provided by CIMMS staff, NSSL scientists, and NSSL management. Appointee will work under general supervision but is expected to determine action to be taken in handling all but unusual situations. Incumbent in this position is not expected to supervise other employees, but may serve as a leader of technical teams.

The beginning salary will be based on qualifications and experience with University benefits. Information on benefits may be found at http://www.hr.ou.edu/employment/WorkingatOU.asp. The position is expected to begin February 2018.
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  
Job Requisition – AWIPS

The University of Oklahoma is an equal opportunity/Affirmative Action employer.
The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma is currently seeking a research scientist to collaborate with scientists in the National Severe Storms Laboratory’s (NSSL) Warning Research & Development Division on the development of scientific applications, algorithms, and applied research that assists forecasters in the warning decision-making process for severe convective weather events. The incumbent will work to develop probabilistic severe convective weather guidance for the Forecasting A Continuum of Environmental Threats (FACETs) project.

The duties of this position are:

1. Developing and/or testing new single radar and multi-sensor (e.g., satellite, lightning, numerical models) techniques for short-term probabilistic prediction and nowcasting;
2. Acquire and apply expertise in severe local storms and the warning-decision-making process;
3. Participate in applied research and operational experiments in the Hazardous Weather Testbed’s Experimental Warning Program that facilitate the evolution of how severe convective weather threats are analyzed and communicated;
4. Attend meetings and professional conferences to present research results and interact with collaborators and users; formally publish results when appropriate;
5. Review technical and professional publications and attend seminars to stay abreast of current developments in meteorological and remote sensing science.

The minimum qualifications for the position are:

1. A Ph.D. Degree in Meteorology, Atmospheric Science, or related area;
2. Experience with scientific programming on UNIX/Linux using a high level language (e.g. C++, Java, Python)
3. Background in radar meteorology and radar analysis
4. Experience with statistical methods or software for meteorological data analysis and visualization
5. Interest in new radar algorithm development for severe storm detection and diagnosis
6. Ability to communicate scientific research through conference presentations, formal publications and technical documents

Applicants should identify expertise with any of the following areas: Severe Local Storms; Machine Learning; Statistics; Warning Decision Making; Weather Radar; Remote Sensing and Satellite. Strong oral and written communication skills are needed for the position. Please indicate experience with Linux (or UNIX) operating systems, programming skills (including web-based and mobile applications) and Geographic Information Systems.

Normal working hours will be observed except for occasional irregular hours during data collection, warning/forecast experiments or workshops conducted at remote sites. Incumbents will receive training and gain expertise in the latest radar and other remote sensing technology and warning decision-making.

Supervision will be provided by CIMMS staff. Technical oversight will be provided by CIMMS staff, NSSL scientists, and NSSL management. Works under general supervision but is expected to determine action to be taken in handling all but unusual situations. Incumbents in this position are not expected to supervise other employees, but may serve as leaders of technical teams and supervise students.
The beginning salary will be based on qualifications and experience with University benefits. Information on benefits may be found at http://www.hr.ou.edu/employment/WorkingatOU.asp. The position is expected to begin February 2018.

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  
reinke@ou.edu  
ATTN: FACETs Scientist

The University of Oklahoma is an equal opportunity/Affirmative Action employer.
In the 21st century, science is no longer just a “subject” to be taken at school or a profession to be pursued. More than ever science is a site of struggle—a space that requires our collective action and our commitment to become more scientifically literate. For example, science is impacting what we eat (e.g. genetically modified organisms; organic vs. pesticide rich foods); medicine (e.g. the mapping of the human genome; pharmaceutical companies' profit vs. universal health care); engineering (e.g. profits vs. ethics; the NGSS for K-12 schools vs. critically deconstructing unfunded policies); environmental sustainability (managed growth vs. climate change; environmental racism); and so on.

For over 5 decades, we have seen great advancements in educational research. Through multicultural education research, we now have a better understanding of the sociocultural, institutional and historical factors that influence students' access and success in schools. Why is then that educational research continues to have so little impact on teachers' practice, student achievement, state/national policy, and on the public at large? In this course, we will review relevant research literature on science education in order to explore these and other important questions. We will also closely examine how promising research on teaching and learning for social justice is being used as a sociotransformative tool. Since the course is designed to be a hands-on and minds-on seminar, at least two culturally/socially relevant science/STEM activities will be modeled and deconstructed in class. Participants will also have multiple opportunities to connect course content and projects to their own working contexts. This broad seminar course is open to all students and a background in science or curriculum is not required. Thus, science will not be used in its traditional content-based disciplinary focus; instead, science will be discussed as a site of social struggle. Students interested in increasing their knowledge of critical cross-cultural education, transformative/activist research, and science literacy for social justice and planet sustainability are encouraged to enroll.
School of Languages and Cultures

Foreign Language Placement Testing

For French, German, Japanese, Latin, Russian, Spanish, and Spanish for Heritage Speakers

Placement Testing during Spring 2018 Semester:

**January:** Mon., 1/8, Tues. 1/9, 6 PM, SC 231

**April:** Wed. 4/4, Thurs. 4/5, Fri. 4/6, 6 PM SC 231

$35 Purdue Students, $55 non-students

**Students billed by Bursar’s Office after testing**

Contact your advisor for eligibility and permission form

Bring to exam:

Form 231 signed by advisor

Purdue ID

For placement questions in other languages, please visit the SLC website:

https://www.cla.purdue.edu/slc/placement/index.html

Questions: Dr. Jason Baumer, jbaumer@purdue.edu