Contents:
Meetings/Events & Dept. News........................................1
Undergrad/Graduate Student News.................................2
University News.....................................................4

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 at:

BE SURE TO CHECK OUT ALL OF THE EAPS COMMUNICATIONS MEDIA!

Facebook
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Department Magazine
Website News

EAPS COLLOQUIA

Harold Brooks
NOAA/NSSL
Monday, March 26, 2018
12:00 PM
HAMP 2201
DR. HARSHVARDHAN’S LECTURE IN QATAR

Dr. Harshvardhan recently gave a lecture on Wednesday, March 7, 2018, at the Qatar Computing Research Institute in Doha, Qatar. The title of his talk was “Evolution of Lofted Aerosol: Results from the Surface, Aircraft and Space.” His abstract is attached at the end of this newsletter.

MS DEFENSES

Patrick Saunders
March 27, 2018
9:00 AM
HAMP 4173

Jessica Bozell
March 28, 2018
3:00 PM
HAMP 2117

Kevin Burris
March 29, 2018
8:00 AM
HAMP 2107

Allison Lafleur
March 29, 2018
3:00 PM
HAMP 4173

Daniel Dietz
March 30, 2018
9:30 AM
HAMP 4173

Mariah Romero
March 30, 2018
12:15 PM
HAMP 2244

PHD DEFENSES

Yang Qu
April 4, 2018
2:00 PM
HAMP 3201

Tong Yu
April 5, 2018
1:00 PM
HAMP 4251

Peng Zhu
April 6, 2018
2:00 PM
HAMP 2201

Jonathan Buzan
April 12, 2018
1:00 PM
HAMP 4251

PURDUE STUDENT PUGWASH CONFERENCE 2018

The 2018 Purdue Student Pugwash Conference, with the theme “Climate Change: How to Sustain Our Future?” is now open for registration. The details of the event are as follows:

April 13-14, 2018
PMU West Faculty Lounge (13th)
STEW 279 (14th)

This conference is co-sponsored by EAPS, along with numerous other Purdue entities. For more information, see the attached flyer.

http://www.eaps.purdue.edu/
2018 NASA PLANETARY SCIENCE SUMMER SEMINAR APPLICATIONS OPEN

NASA is accepting applications – from science and engineering post-docs, recent PhDs, doctoral students, engineering students within 6-9 months of completion of their master’s degree but not planning to pursue a PhD degree, and junior faculty – for its 30th Annual Planetary Science Summer Seminar, which will be held August 6-10, 2018 at the Jet Propulsion Laboratory in Pasadena, Calif. During the program and pre-session webinars, student teams will carry out the equivalent of an early mission concept study, prepare a proposal authorization presentation, present it to a review board, and receive feedback. By the end of the session, students will have a clearer understanding of the life cycle of a space mission; relationships between mission design, cost, and schedule; and the tradeoffs necessary to stay within cost and schedule while preserving the quality of science.

Applications are due April 2, 2018.
http://psss.jpl.nasa.gov

*REGISTRATION APPOINTMENTS*

As a reminder – Please log into Boiler Connect to make a registration appointment for fall 2018 courses.

~SAVE THE DATE~
LAVENDER GRADUATION

April 19, 2018
7:00-9:00 PM
PMU Faculty Lounges

See attached flier for more details!

ASSISTANT PROFESSOR - GEOSPATIAL / REMOTE SENSING ENGINEERING

The State University of New York College of Environmental Science and Forestry (SUNY ESF) in Syracuse, NY, invites applications for an academic-year, tenure-track position at the rank of Assistant Professor in the Department of Environmental Resources Engineering (ERE). The Department seeks applicants to meet teaching and research needs in the area of geospatial engineering with a focus on remote sensing. The position is open to applicants with interdisciplinary backgrounds (e.g., energy, environmental engineering, geography) who possess strong training and expertise in remote sensing and geospatial analysis (e.g., data acquisition and assimilation, data quality, sensor calibration, classification/regression algorithmic development). Candidates with expertise in terrestrial, atmospheric, oceanic or polar remote sensing are encouraged to apply. Applicants must possess advanced skills, knowledge and background to teach courses in both the ERE graduate and the ABET-accredited undergraduate programs. This position will require the ability to work in a collegial manner with a diverse faculty, staff and student body. We are particularly interested in candidates with a commitment to diversity and inclusiveness. For a detailed position description and to apply please visit our website: http://www.esf.edu/hr.

CALLING ALL GRADUATE STUDENTS AND EARLY CAREER SCIENTISTS!

The second ARM Summer Training and Science Applications event on observations and modeling of clouds and precipitation will take place July 14 to 21, 2018. The training will be held at the National Weather Center in Norman, Oklahoma.

Deadline to apply is March 30, 2018.

Sponsored by the ARM Climate Research Facility to support the next generation of atmospheric scientists, this training will cater to graduate students and early career scientists (within four years of receiving their PhD) who are interested in observations and modeling of aerosols and cloud and precipitation processes.

The summer training will provide theoretical and practical instruction on the application of ground-based observations from a wide array of active and passive sensors and will encourage innovative methods for using ARM facilities to address complex scientific inquiries.

Submit your application (i.e., a one-page motivation letter, one recommendation letter, and curriculum vitae [CV]) in a single PDF to Sarah Page 3 of 6
DISCUSSION GROUPS AT PURDUE COUNSELING AND GUIDANCE CENTER

If you are stressed about a romantic breakup, or are grieving the loss of someone important to you, the Purdue Counseling and Guidance Center (PCGC) can help. The PCGC will be offering discussion groups on each of these topics on Wednesday nights, the next being April 25th. Each night will start with a free meal from 6:00 to 6:30pm and the groups will be from 6:30 to 8:00pm.

Topics for the groups are as follows:

* Grief discussion group—opportunity for college students who have experienced the death of someone important to them to talk about their experiences with grieving during college, with an emphasis on the uniqueness of grief.

* Romantic breakup discussion group—opportunity for college students who have recently experienced a breakup to talk about their reactions and responses, with an emphasis on the losses and gains that are often connected with the ending of significant relationships.

Students interested in attending one of these groups must contact the PCGC—spaces are limited. For more information and/or to sign up, call 494-9738. Limited spaces are also available for individual counseling for general concerns. Our email address is pgcg@purdue.edu and our website is www.edst.purdue.edu/pcgc.

CONVERSATION WITH DR. CLAYTON CHRISTENSEN

Please join the Office of the President and the Purdue Teaching Academy for conversations on Thursday, March 29, 2018, with Dr. Clayton Christensen, the Kim B. Clark Professor of Business Administration at the Harvard Business School, and author of The Innovative University: Changing the DNA of Higher Education from the Inside Out.

Dr. Christensen was awarded a master’s and Ph.D. in business administration from the Harvard Business School, after earning a BA in economics from Brigham Young University and an M.Phil. in applied econometrics from Oxford University as a Rhodes Scholar. He is the author of 11 books and more than a hundred articles relating to innovation.

Room size limits participation to 100 people. Light refreshments will be served. Register at cie.purdue.edu.

Questions may be directed to the Teaching Academy at teachingacademy@purdue.edu or by contacting the Center for Instructional Excellence at 765-496-6422. For more information, see the attached flyer.

ENTERPRISE AND THE ENVIRONMENT SUMMER SCHOOL
July 1-13, 2018

The Smith School of Enterprise and the Environment at the University of Oxford. We would like to invite students at the Purdue department for earth, atmospheric and planetary sciences to

http://www.eaps.purdue.edu/
apply for our Enterprise and the Environment Summer School, which will take place from 1st-13th July 2018 in Oxford. It is a summer school intended for undergraduates, as well as recent graduates passionate about leading environmental change in business, society and government. See attached for more information.

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.

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 ahold 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.

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 Logan Judy (ljudy@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
Aerosols are sometimes referred to as the most confounding element in the climate system when it comes to simulating future parameters of Earth's climate. Their interaction with clouds makes the problem extremely complicated. Models of the Earth system used for policy decisions regarding national energy security are therefore subject to unacceptably large degrees of uncertainty. Aerosols also have deleterious health effects and reduce visibility, impacting aviation and other technical operations. I will discuss some tools used to study the transport of aerosols, especially those made freely available by US government agencies such as NASA and NOAA, which can be employed not just in the US but throughout the world, including India and the Gulf region. I will also present some results from an ongoing study of biomass burning smoke from the southwestern African savanna that travels over low-level clouds in the southeast Atlantic Ocean. Data was gathered from a mobile surface station deployed on Ascension Island in the SE Atlantic from June 2016 to October 2017 and a unique lidar that was on flights in the region in September 2016 and again in August 2017.
Dust Behavior in Microgravity: Learning about Small Body Interiors and Surfaces

Julie Brisset
University of Central Florida

I will present some aspects of experimental work studying dust in microgravity, from multi-particle collisions to dust layer impacts, that can help us gain insight into the internal structure and surface regolith of small bodies. Experimental platforms range from laboratory drop towers to orbital platforms, such as CubeSats and the International Space Station.

Thursday, March 29, 2018
3:30 p.m.
Room 1252 HAMP

Refreshments at 3:00 pm
Room 2201/HAMP
Long-term Performance Metrics for National Weather Service Tornado Warnings: An Archeological Investigation

Harold Brooks
NOAA/NSSL

Tornado warnings are one of the flagship products of the US National Weather Service. We will update the time series of various metrics of performance in order to provide baselines over the 1986-2016 period. Lead time, probability of detection, false alarm ratio, and warning size and duration will be shown.

We look at the warnings as artifacts left by a culture and attempt to ascertain the values of that culture that led to the performance. In order to do this, we have used metrics that work in a consistent way across the official changes in policy for warning issuance, as well as across points in time when unofficial changes took place. This allows us to see changes in the quality of the warning system, as well as changes in potential value of the system because of changes in the threshold for warning issuance. Importantly, we discover that relatively small performance differences are seen when official changes in policy for warning issuance took place, with larger performance differences when no official changes in policy for issuance took place.

Our analysis is based, in large part, on signal detection theory, which separates the quality of the warning system from the threshold for issuing warnings. Threshold changes lead to trade-offs between false alarms and missed detections. Such changes provide further evidence for changes in what the warning system considers important, as well as highlighting the limitations of measuring performance by looking at metrics independently.

Monday, March 26, 2018
12:00 pm
Room 2201, HAMP Bldg.
CLIMATE CHANGE

HOW TO SUSTAIN OUR FUTURE?

REGISTRATION (FREE): WWW.CONF.PURDUE.EDU/PUGWASH

FRIDAY, APRIL 13 · PMU WEST FACULTY LOUNGE · OPENS AT 6:00PM
SATURDAY, APRIL 14 · STEW 279 · OPENS AT 8:30AM

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Kim B. Clark Professor of Business Administration at the Harvard Business School and author of *The Innovative University: Changing the DNA of Higher Education from the Inside Out*

**THURSDAY, MARCH 29**
**WILMETH ACTIVE LEARNING CENTER**
**ROOM 1087**

**4:30-5:30 PM:*** Interactive discussion with the author, moderated by the Purdue Teaching Academy

**5:30-6:30 PM:*** Roundtable discussions with light refreshments

The *Innovative University* asks:
- How can the "DNA" of the university change?
- What are new models in higher education & how might they affect instructional strategies & approaches?
- How does a university address the needs of a diverse student population?
- How can the balance of instruction, service and scholarship be managed in promotion & tenure?

**HOSTED BY:**

**ATTENDANCE IS LIMITED. TO REGISTER, VISIT CIE.PURDUE.EDU**

Questions? Email teachingacademy@purdue.edu or call the Center for Instructional Excellence at 765 496 6422
SAVE THE DATE

LAVENDER GRADUATION

APRIL 19TH, 2018
7:00PM—9:00PM
PMU FACULTY LOUNGES

Are you graduating in May or December of 2018? If you are graduating in 2018 and wish to be honored, please register at: https://tinyurl.com/LavenderGrad2018

This event is a special ceremony for LGBTQ and Ally students to acknowledge their achievements, contributions, and unique experiences at Purdue University. This community building program is a gathering that celebrates the graduating students and our distinguished guests as well as an opportunity to share our history and progress on campus. Graduates are welcome to invite their friends, family, and people who have been influential while at Purdue. The ceremony will be followed by a catered reception! As a graduate you will receive a rainbow stole that you may wear at the Purdue University graduation ceremony.

All undergraduate and graduate students are eligible to participate. There is no cost associated with participating.

If you have any questions, please email the LGBTQ Center at lgbtq@purdue.edu.
CIMMS Research Associate – Radar Operations

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) seeks to fill a Research Associate position for projects funded by the National Oceanic and Atmospheric Administration (NOAA) Office of Oceanic and Atmospheric Research (OAR) National Severe Storms Laboratory (NSSL). The Research Associate will participate in NSSL’s Phased Array Radar (PAR) research program.

Background:

NOAA and other agencies are developing concepts and performing risk reduction for a next-generation Multifunction Phased Array Radar. As part of these efforts, NOAA partnered with the Federal Aviation Administration (FAA) to develop the Advanced Technology Demonstrator (ATD). The ATD is a modern, active, dual-polarization phased array radar that will be primarily used for weather research. When operational, the ATD will accomplish a significant milestone towards reducing technological risk for the PAR research program. The incumbent in this position will focus on supporting ATD Radar Operations and Research activities.

Responsibilities:

The incumbent will provide general support of Radar Operations and Research activities associated with the use of the ATD by interfacing with a diverse team of CIMMS and NSSL researchers. Responsibilities encompass a variety tasks including but not limited to radar setup and operation; radar availability coordination; troubleshooting support; configuration management; high-level software testing; documentation of operational procedures; radar operator training; radar data archive, data management, processing, and distribution; documentation of radar performance.

Required Qualifications:

1. A Master’s degree in electrical engineering, computer engineering, computer science, observational atmospheric science, or related area OR a Bachelor’s degree in the same fields with at least 3 years of experience.
2. Experience with Linux/Unix operating systems.
3. Good oral and written communication skills.
4. The ability to work both independently and cooperatively with others.

Knowledge of radar systems and/or radar operations is preferred but not a requirement.

The beginning salary will be based on qualifications and experience, with benefits provided through the University of Oklahoma (https://hr.ou.edu/Employees/New-Employees-at-OU/OU-Benefits-Overview). The start date for the position is negotiable.
This position is a full-time appointment funded by grants from NOAA. The appointment is contingent on passing a Department of Commerce/NOAA background check. The appointee will serve a customary probationary period during the first year.

To apply, please forward your resume, cover letter and contact information for 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
trinke@ou.edu
ATTN: Radar Operations March 2018