EAPS WEEKLY NEWSLETTER
26 November 2018

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

DEPARTMENT NEWS

EAPS COLLOQUIA

David Boutt
2018 BIRDSALL-DREISS LECTURER
University of Massachusetts-Amherst
Thursday, November 29, 2018
3:30 p.m.
HAMP 1252

EAPS HOLIDAY CELEBRATION

You are invited to the EAPS Holiday Celebration on Friday, December 7 from 12:00 – 1:30 PM in HAMP 2201. Main dish provided, please bring a side or dessert to share.

To help us with our catering, please RSVP at the following link:
https://drive.google.com/open?id=1o7A0U4bWGJxw8dx3DBT_nn3piqFOq7TJ9rX10M5kfbM

http://www.eaps.purdue.edu/
LEADERSHIP IN GLOBALIZATION AWARDS

The University’s Office of Corporate and Global Partnerships (OCGP) and the Global Academic Committee (GAC) are soliciting nominations for Outstanding Leadership in Globalization. One faculty member and one staff member will be recognized in 2019. Each will receive a cash award.

Nomination information can be accessed using the following links. Self-nominations are allowed.


All nominations must be routed to OCGP through the College of Science by their deadline of 2/15. Therefore, please send your nomination materials electronically to Robin Sipes (rsipes@purdue.edu) by 5:00 PM on Wednesday, February 13, 2019.

Questions regarding the nomination process can be directed to Professor Elizabeth J. Taparowsky: taparows@purdue.edu

PURDUE EAPS WELL REPRESENTED AT SEVERE STORMS CONFERENCE

A contingent of three faculty and six students from Purdue EAPS attended the American Meteorological Society (AMS) 29th Conference on Severe Local Storms in Stowe, Vermont, 22-26 October 2018, delivering a total of three oral presentations and 10 poster presentations. The attendees were EAPS faculty Prof. Dan Dawson, Prof. Dan Chavas, and Prof. Robin Tanamachi, graduate students Allison LaFleur, Milind Sharma, Shawn Simmons, Zhanxiang (Henry) Hua, and Funing Li, and undergraduate student Derrek Dalman.

The AMS Severe Local Storms conference occurs biennially. About 300 people attended this year’s conference, which, according to its web site, “covers all topics related to severe local storms and associated hazards of tornadoes, large hail, damaging winds, lightning, and flash floods.”

LIVING WITH LOSS

With the holiday season coming, grieving your losses can be additionally challenging. Come join us for an information session to learn about grief responses and coping strategies.

Wednesday, December 5th
7:00 to 8:00pm
BRNG 3119

[See attached flyer for complete information]

AGI HARRIET EVELYN WALLACE SCHOLARSHIP

AGI is seeking women pursuing thesis-based Master’s and Doctoral degrees in the geosciences for the 7th Harriet Evelyn Wallace Scholarship.

http://www.eaps.purdue.edu/
Applications are being accepted now for the 2019-2020 academic year. Successful applicants will be full-time students and must be U.S. citizens or permanent residents.

To find out more information about application credentials and procedures please visit: [www.americangeosciences.org/scholarships](http://www.americangeosciences.org/scholarships)

**Application deadline is January 4, 2019**

[For additional information please see attached flyer]

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**CIMMS RESEARCH ASSOCIATE – SCIENTIFIC PROGRAMMER FOR DEVELOPING & INTEGRATING WARN-ON-FORECAST GUIDANCE INTO AWIPS 2**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) seeks to fill a Research Associate position to support the National Oceanic and Atmospheric Administration (NOAA) National Severe Storms Laboratory’s (NSSL) Warn-on-Forecast (WoF) research and development effort. NOAA’s WoF program seeks to develop a storm-scale ensemble prediction system to provide short-term, probabilistic guidance of high-impact weather.

The incumbent will work within the NOAA Earth System Research Laboratory (ESRL) Global Systems Division (GSD) in Boulder, CO as part of the Hazard Information Services project within the Weather Information Systems Evolution group. Hazard Services is a multi-year effort, and one foundational aspect of the project is to combine the existing capabilities of AWIPS WarnGen, Graphical Hazard Generator, and RiverPro into a single application. Currently, these critical applications allow National Weather Service (NWS) forecasters to produce hazard watch, warning, and advisory products and deliver various hazard-related services. Other development areas for Hazard Services include probabilistic hazard information, NWS National Center applications, and potential applications for international agencies. Hazard Services will be the primary software for operationalizing many concepts related to FACETs (Forecasting a Continuum of Environmental Threats) in the NWS.

[See attached flyer for complete information]

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**LECTURER – UNIVERSITY OF GEORGIA**

The University of Georgia, Geography Dept., is advertising for a full-time non-tenure-track lecturer who would teach synoptic, mesoscale, weather forecasting seminars, and physical geography, with a PhD who is interested in, and excels, at teaching weather-related subjects. The salary is circa $60K/9-month appointment. A diverse applicant pool is highly desireable.

Job ad link is here: [https://www.ugajobsearch.com/postings/350129fbcld=IwAR0WH1Fi7sdLzyv-iPJPZuihoJcP1fF3Uq9gYjqL-1fgjiXCOjtkHsjqnM4](https://www.ugajobsearch.com/postings/350129fbcld=IwAR0WH1Fi7sdLzyv-iPJPZuihoJcP1fF3Uq9gYjqL-1fgjiXCOjtkHsjqnM4)

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**RIsing PROFESSIONALS HOST CALLOUTS**

Rising Professionals, an Old Masters program, will be hosting their Fall Host Callout November 29th from 7-8 pm in Rawls 1082!

Come out to see what you can bring to the Rising Professionals Program and how you can grow in your early collegiate career!

Purdue Rising Professionals program exists to unite distinguished young Purdue alumni with underclassmen to inspire the pursuit of the full Boilermaker experience. Built as part of the Purdue Old Masters program, the Rising Professionals program looks for individuals who have achieved early career success. Each year, a panel of student leaders at Purdue will select a group of individuals who embody qualifications of extraordinary career and life experiences, well-rounded accomplishments, and involvement during their time at Purdue.

[See attached flyer]

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**RESEARCH ASSOCIATE – ARM DATA QUALITY OFFICE**

The Cooperative Institute for Mesoscale Meteorological Studies at the University of Oklahoma is seeking a Research Associate with excellent attention to detail and strong programming skills to join the U.S. Department of Energy’s (DOE) Atmospheric Radiation

[http://www.eaps.purdue.edu/](http://www.eaps.purdue.edu/)
Measurement (ARM) Program Data Quality (DQ) Office located in the National Weather Center at the University of Oklahoma in Norman, Oklahoma. The DQ Office Supports the ARM Program by serving as the first line of defense in discovering data quality issues with the final goal of providing the science community with the highest quality data possible. The primary responsibilities of the DQ Office are, in close cooperation with ARM instrument mentors, site operators, and other members of the ARM infrastructure, to create automated processes for inspection and assessment of data quality, inspect and assess the data, report detected problems and participate in their resolution, and communicate data quality findings to end-users of ARM data.

[For complete information please see attached flyer]

CIMMS POST-DOCTORAL RESEARCH ASSOCIATE
WARN-ON-FORECAST FOR HAZARDS ASSOCIATED WITH LANDFALLING TROPICAL CYCLONES

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) seeks to fill a Post-Doctoral Research Associate position for its collaborative research with the National Oceanic and Atmospheric Administration (NOAA) National Severe Storms Laboratory (NSSL) at the National Weather Center (NWC) in Norman, Oklahoma. The Post-Doc will contribute to applications of NSSL’s Warn-on-Forecast (WoF) research and development program in predicting tornadoes and other hazardous weather associated with landfalling hurricanes. The incumbent will work in close collaboration with the researchers at NOAA’s Atlantic Oceanographic and Meteorological Laboratory (AOML) Hurricane Research Division (HRD) in Miami, Florida. The dynamic research and operational working environment at the NWC and HRD will provide the candidate with ample opportunities for career advancement.

[See attached flyer for complete information]

STUDENT TRAINEE (METEOROLOGIST)

The Pathways announcement for two Student Trainee (Meteorologist), GS-1399-07 positions at the National Weather Service Meteorological Development Laboratory. The announcement opened on Tuesday, November 6, 2018 and will close on Tuesday, November 20, 2018.


One of these positions would work on LAMP (Local Aviation MOS Product) and the other in MDL Verification unit, where we are gradually converting over to use of MET. This unit does NDFD (Official NWS gridded forecast) and NBM (National Blend of Models) verification and validation.

FREE O’REILLY & SPRINGER PUBLISHER BOOKS FOR PURDUE STUDENTS

You can access O’Reilly and Springer books on wide variety of topics for free. Do so by visiting their respective publisher portals (PU login required):

O’Reilly: https://proquestcombo-safaribooksonline-com.ezproxy.lib.purdue.edu/

Springer (many books available as downloadable PDFs): https://link-springer-com.ezproxy.lib.purdue.edu/

ILS 695 DATA SHARING AND PUBLICATION

- Wrapping up your PhD dissertation?
- Ready to share your data with your research group?
- Excited to publish your data sets along with your thesis?

A new course available to our Graduate Students that will walk students through the process of preparing a data set for sharing with
both internal and external audiences, in conjunction with their thesis deposit.

- Work closely with your supervisor to determine an authoritative data set
- Create data documentation
- Apply metadata
- Choose a data sharing platform as appropriate for your project

3 Credit
Spring 2019
Monday
8:30-9:20 (Lecture)
9:30-11:20 (Lab)
WALC 3049 & 3045

Questions? Contact Megan Sapp Nelson: msn@purdue.edu or Nichole Kong: kongn@purdue.edu

2019 SUMMER ASSOCIATE PROGRAM

Institute for Defense Analyses (IDA) in Alexandria, VA has a great student internship program for undergraduate and graduate students. IDA is currently looking for applicants for the 2019 Summer Program with potential opportunities in meteorology/atmospheric science.

Applications are due by January 5, 2019.

Click the link below to see the details of the position:
https://chk.tbe.taleo.net/dispenser/servlet/DispatcherServlet?org=INSTITUTEDA&act=redirectCws&cws=39&redirectUrl=%2Fats%2Fcareers%2Frequisition.jsp%3Frid%3D1165%26cws%3DINSTITUTEDA%26cws%3D39

AGU RECEPTIONS

The AGU Reception is at Matchbox Chinatown in Washington D.C. on Thursday, December 13, from 7-9:30 p.m.

[See flyer for complete information]

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MS SCHOLARSHIPS AND FELLOWSHIPS

AMS scholarships and fellowships range from $1,000 to $25,000 and are open for applications — whether you will be a college freshmen or a graduate student, AMS supports your education and pursuit of a career in the atmospheric and related oceanic or hydrologic sciences.

- 21 Senior Scholarship awards ranging from $2000 to $10,000 are available in 2019 for outstanding undergraduate students entering their final year of study. Applications are due on 8 February 2019.

- AMS Graduate Fellowships include a $25,000 stipend and partial travel support to attend the AMS Annual Meeting. Applications are due on 11 January 2019.

- The AMS Freshman Undergraduate Scholarship program is open to all high school students and designed to encourage study in the atmospheric and related sciences. Applications are due on 8 February 2019.

- AMS Minority Scholarships award funding to minority students who have been traditionally underrepresented in the sciences, especially Hispanic, Native American, and Black/African American students. Applications are due on 8 February 2019.

To learn more and apply click here.

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PLEPS LECTURE: BIG DATA ETHICS – “ETHICAL IMPLICATIONS OF THE INTERNET OF THINGS”

Dr. Katleen Gabriels
Thursday, November 29, 2018
MRGN 121
4:00 P.M.

The Purdue Lectures in Ethics, Policy, and Science are proud to present the next in this year’s series. The topic of big data is an increasingly important part of
Purdue’s intellectual and research endeavors and has generated a complicated web of ethical issues.

Dr. Katleen Gabriels is an assistant professor at Eindhoven University of Technology, where she teaches technology ethics and philosophy. From January 2019 onwards she will work as an assistant professor at Maastricht University. She investigates the relations between morality and contemporary technologies, in particular the ethical consequences of computer technology. In so doing, she seeks to conjoin a strong grounding in moral philosophy with empirical studies. Her expertise is in the area of philosophy and ethics of technology, computer ethics, media ethics, moral philosophy, Internet of Things (IoT), (social) virtual worlds and virtual reality (VR). Katleen is an elected steering committee member of ETHICOMP, an international organization that occupies itself with ethical computing. Her book ‘Onlife. Hoe de digitale wereld je leven bepaalt (How digitization shapes your life)’ was published (Lannoo) in 2016 and named as ‘Book of the year’ by independent think tank Liberale. This academic year (2018-2019) she is awarded the chair Willy Calewaert by the Engineering faculty of the Vrije Universiteit Brussel (Belgium). She will give a number of lectures on ethics of technology that are also open to the general public.

[See attached flyer for additional information]

FACULTY SEARCH COMMITTEE WORKSHOP SET FOR JAN. 28

ADVANCE-Purdue is offering a session of the "ADVANCE-Purdue/OVPEC Faculty Search Committee Workshop" on Jan. 28.

The workshop, which is open to all faculty and required for serving on a search committee, will be held 1:15-5 p.m. in Purdue Memorial Union's West Faculty Lounge.

The workshop provides an interactive opportunity to explore and discuss search strategies and challenges. It is research-based and includes important information on unintentional bias. The workshop is conducted in a roundtable format that offers opportunity for an in-depth discussion of faculty search best practices with other faculty members across campus, including how to build a robust and diverse candidate pool.

Those faculty planning to attend can click the link to register for the workshop here. Those interested in being on search committees in the fall should register for this workshop.

Any questions should be directed to De Bush at dibush@purdue.edu. The workshop and registration information is also available here.

The Office of the Vice President for Ethics and Compliance is committed to making all programs accessible to participants with disabilities. Those who require an accommodation or assistance due to a disability for this program should contact the office before the program begins at 765-494-6373, or vpeceducation@purdue.edu.

COURSE ANNOUNCEMENT (ME597)

Course: ME597 Innovation and Problem Solving With an Emphasis on TRIZ Tools.
Instructor: Kartik Ariyur

Spring 2019, entirely online (course lectures on video, flipped classroom on campus). Office hours via telecon/teamviewer/in person for project help--note that there is an online section, and an on-campus section for those on campus.

Video pitch on Youtube: https://www.youtube.com/watch?v=6-UaEpj2Ajs
https://engineering.purdue.edu/ProEd/courses/innovation-problem-solving-emphasis-triz-tools

Are you facing hard technical problems that have eluded solution for months or even years? Are you looking to generating multiple alternative approaches to the problems you are attacking? Have you ever wondered how you could be Sherlock Holmes, and crunch through any complex problem, using both imagination and deduction systematically? If the answer to any of these questions is yes, then this course will help. This has produced valuable results for students in the form of solved problems in engineering (which previously had escaped solution for months or sometimes
years) and intellectual property. One student won the top innovation award at Purdue (Burton Morgan competition) in Spring 2018, and another created a predictor of bitcoin value that predicted its value some 20-30 days in advance for the whole of last fall (took the course in Fall 2017). Based on your results in the class project, you may be able to publish a paper in TRIZCON 2019 also if Purdue hosts it as it did in 2018.

For proof, see the variety of areas I have solved problems in. Check out my researchgate profile: https://www.researchgate.net/profile/Kartik_Ariyur

The class integrates expertise from innovative engineers and TRIZ experts from around the world (see http://opensourcetriz.com/) and goes much beyond in integrating the insights of many disciplines inside a function modeling + TRIZ framework. When I taught a portion of the material in industry, many hard and pending problems got solved during an intensive 40 hour course, and the participating engineering teams generated a great deal of Intellectual Property.

INTEGRATIVE DATA SCIENCE INITIATIVE (IDSI) DISTINGUISHED LECTURE SERIES

We are proud to announce the initial speaker for the IDSI Distinguished Lecture series:

Dr. Vipin Kumar - Big Data in Climate and Earth Sciences: Challenges and Opportunities for Data Science

MONDAY, DECEMBER 3, 2018
3:00-4:00 P.M.
LWSN 1142

Dr. Kumar is the Regents Professor and William Norris Chair in Large Scale Computing, Department of Computer Science and Engineering, University of Minnesota. Dr. Kumar is the Lead PI of a 5-year, $10 Million project, "Understanding Climate Change - A Data Driven Approach", funded by the NSF’s Expeditions in Computing program that is aimed at pushing the boundaries of computer science research.

[See attached flyer for complete details]

SAP PORTAL PAUSE DATES ANNOUNCED IN PREPARATION FOR SUCCESSFACTORS TRANSFORMATION

Data preparations are underway for the upgrade to SuccessFactors, set to deploy Jan. 1. Nonexempt (i.e., hourly) staff will access SuccessFactors starting with the Dec. 24-Jan. 6 pay period. Exempt staff will access SuccessFactors starting Jan. 2. All employees will use SuccessFactors to view pay statements, adjust tax information, edit bank details, request time off, etc.

Pause activities and dates are being implemented to reduce data conversion risk. Managers are encouraged to review the pause dates and adjust their staff hiring process timeline.

All employees should be aware of the Purdue SAP Portal pause on Nov. 28. Nov. 27 is the last day employees can access Purdue SAP Portal via OneCampus to view their salary statement, request leave online, or update personal information such as bank details, tax withholdings, etc. Employees are encouraged to request their December-dated time off or leaves by the needed time frame.

Here are the dates for the processes/systems that will be affected by the pause:

Nov. 26: Staff recruitment through Taleo. The last day to post a staff position in Taleo is Nov. 26. Taleo pauses Dec. 14. Hiring manager may continue to use the candidate pool within Taleo or post the position again through SuccessFactors in January to create a new candidate pool.

Nov. 27: Employee Self-Service (Purdue SAP Portal). Last day to access the SAP Portal, complete personal information updates and request online leaves.

Nov. 30: Leave requests through Form 33Absence. Last day to submit/approve Form 33Absence.

Nov. 30: FMLA leave. Last day to submit December-dated FMLA leave.


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

Dec. 14: Staff recruitment through Taleo. Taleo pauses (hiring managers can continue to use existing candidate pools).

Dec. 19: Benefit changes. New hires and individuals with qualifying life events can continue to make changes to benefit elections in Benefitfocus, the online benefit enrollment system, through 5 p.m. Dec. 19.

NATIVE AMERICAN EDUCATIONAL AND CULTURAL CENTER TO CELEBRATE HERITAGE MONTH

Purdue University’s Native American Educational and Cultural Center will host several events to celebrate Native American Heritage Month in November.

“Native American Heritage Month is a celebration to recognize and acknowledge the traditions and contributions of indigenous people,” said Felica Ahasteen-Bryant, director of the Native American Educational and Cultural Center. “We are excited to offer programs that showcase our diverse tribal nations and to address both historical and current issues that impact Native peoples. I encourage the Purdue campus community to join us and gain deeper insight and appreciation of Native American cultures.”

Another highlight of the monthlong observance will be Purdue’s Literary Reading Series, featuring poet Natalie Diaz at 7:30 p.m. Nov. 29 at Krannert Building’s Krannert Auditorium (Room 140).

Diaz was born and raised in the Fort Mojave Indian Village in Needles, California, on the banks of the Colorado River. She is Mojave and an enrolled member of the Gila River Indian Tribe. Her first poetry collection, “When My Brother Was an Aztec,” was published by Copper Canyon Press. She has received numerous awards, including being named a MacArthur Fellow, a Lannan Literary Fellow and a Native Arts Council Foundation Artist Fellow. She teaches at Arizona State University’s Creative Writing Master of Fine Arts program. Her talk is sponsored by the Creative Writing Program and the College of Liberal Arts.

Other scheduled events, which are open to the public, include:

* Nov. 27: 3-4:30 p.m., Native American Educational and Cultural Center. NAECC Indigenous Alumni Speakers Series presents RaeLynn Butler. This speaker series features distinguished Native American, Alaska Native and Native Hawaiian Purdue alumni who are making significant contributions in Native American communities and accomplishments in their profession. Butler is from the Muscogee Creek Nation in Tulsa, Oklahoma. She received her bachelor’s degree from Haskell Indian Nations University and her master’s degree in botany from Purdue’s Department of Botany and Plant Pathology in the College of Agriculture. She currently serves as the manager of the historic and cultural preservation department with the Muscogee Creek Nation.

* Nov. 28: 8 a.m.-5 p.m., Hendricks County Fairgrounds in Danville, Indiana. MESA 15th Annual Multicultural Gathering, “Mother Earth & Father Sky: Environmental Justice, Food Security and Sexual Violence Prevention.” This is a one-day training focused on developing strategies for sexual violence prevention in underserved and underrepresented communities. MESA (Multicultural Education to End Sexual Assault) sponsors this event, and the NAECC serves as a co-sponsor.

* Dec. 1: noon-4 p.m., Native American Educational and Cultural Center. Third annual Native American Winter Art Market. Native American students and local artists showcase their jewelry and artwork. The Purdue and Lafayette community are invited. This event is co-sponsored by Native American Student Association and Purdue AISES (American Indian Science and Engineering Society).

In addition to those programs, the center will launch “Natives Helping Natives,” which will include service events for the community. One will be a food drive for a food pantry managed by the American Indian Center of Indiana in Indianapolis. Food donations may be dropped off at the center through Nov. 14. In addition, a collection for books,
gloves, hats and scarves will be taken at the center. Those items will be shipped to a school and an assisted living facility in New Mexico that serves primarily Native Americans.

**Writer:** Matthew Oates, 765-496-2571, oatesw@purdue.edu

**Source:** Felica Ahasteen-Bryant, 765-494-4540, felica@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](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 Katherine Huseman ([khuseman@purdue.edu](mailto:khuseman@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](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/events-calendar.html).
Water and Lithium—The Nexus of Hydrogeosciences and Green Energy in the Transition from Fossil Fuels

David Boult
University of Massachusetts-Amherst

The Earth is warming at an unprecedented pace due to the release of carbon dioxide from the burning of fossil fuels. Our society is now in the great transition to a green and more sustainable energy supply. The development of portable and powerful energy storage mechanisms is essential to replace our dependence on the high-energy density fossil fuels. Lithium-ion batteries have emerged as one important technology for this purpose. The element lithium is abundant and plentiful on the planet but is rarely found at high concentrations to be of economical use. Economic deposits of lithium are found in pegmatites and closed-basin continental brines. The origin of the lithium brines and their distribution worldwide is fundamentally tied to the hydrology and hydrogeology of the host basins. This talk focuses on the multifaceted role of (ground) water in transporting, accumulating, and extracting lithium in continental brines and this discipline represents an important interface between hydrogeology, economic geology, and our green energy supplies. Field examples from Northern Chile and the Great Basin of the United States highlight the inter-disciplinary nature of the origin and evolution of continental lithium brine deposits. Many aspects of geosciences including volcanology, sedimentology, geomorphology, geochemistry, geophysics, paleoclimate, structural geology and tectonics combine with hydrogeosciences make this a particularly exciting example of the importance of earth sciences to future energy supplies. The environmental impacts of lithium brine pumping is explored and discussed in the context of balancing the sustainability of lithium-ion batteries.

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

Refreshments at 3:00 pm
Room 2201/ HAMP
“Water and Lithium - The nexus of hydrogeosciences and green energy in the transition from fossil fuels”

Dr. David Boutt, 2018 Birdsall-Dreiss Distinguished Lecturer

Dr. David Boutt is an Associate Professor in the Department of Geosciences at the University of Massachusetts-Amherst. His current research program focuses on understanding the role of groundwater in catchment-scale hydrologic processes. Dr. Boutt has been a member of the Geological Society of America (GSA) since 1997 and has convened many topical sessions at GSA national meetings. He is currently an editor for the journal Hydrological Processes, and he was previously an associate editor for Hydrogeology journal.

This lecture is sponsored by the Geological Society of America.
You're invited to the

EAPS Holiday Celebration

Friday, December 7
12:00 PM - 1:30 PM
Hampton Hall 2201

Main dish provided.

Please bring a side or dessert to share.
Living With Loss

Wednesday, December 5th
7:00 to 8:00pm
BRNG 3119

With the holiday season coming, grieving your losses can be additionally challenging. Come join us for an information session to learn about grief responses and coping strategies.

Grief is:

• Unique to each person
• Multidimensional
• Unfolding over time

Grief does NOT:

• Move in stages
• End after a few months
• Equal sadness

No Sharing Required
Open to All
Hosted by Dr. Heather Servaty-Seib and the Grief and Loss Team
The American Geosciences Institute

Harriet Evelyn Wallace Scholarship

WHAT
AGI is seeking women pursuing thesis-based Master’s and Doctoral degrees in the geosciences for the 7th Harriet Evelyn Wallace Scholarship. Applications are being accepted now for the 2019-2020 academic year. Successful applicants will be full-time students and must be U.S. citizens or permanent residents.

APPLICATION PROCESS
To find out more information about application credentials and procedures please visit: www.americangeosciences.org/scholarships

HOW MUCH
$5,000 for 2019-2020. Successful Scholars are eligible to compete for a second scholarship in future years, given that they continue to be full-time geoscience students. There is a 2-term life maximum for the scholarship.

QUESTIONS
Contact the scholarship coordinator at wallacescholarship@americangeosciences.org.

APPLICATION DEADLINE
January 4th, 2019
CIMMS Research Associate – Scientific Programmer for Developing & Integrating Warn-on-Forecast Guidance into AWIPS 2

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) seeks to fill a Research Associate position to support the National Oceanic and Atmospheric Administration (NOAA) National Severe Storms Laboratory’s (NSSL) Warn-on-Forecast (WoF) research and development effort. NOAA’s WoF program seeks to develop a storm-scale ensemble prediction system to provide short-term, probabilistic guidance of high-impact weather.

The incumbent will work within the NOAA Earth System Research Laboratory (ESRL) Global Systems Division (GSD) in Boulder, CO as part of the Hazard Information Services project within the Weather Information Systems Evolution group. Hazard Services is a multi-year effort, and one foundational aspect of the project is to combine the existing capabilities of AWIPS WarnGen, Graphical Hazard Generator, and RiverPro into a single application. Currently, these critical applications allow National Weather Service (NWS) forecasters to produce hazard watch, warning, and advisory products and deliver various hazard-related services. Other development areas for Hazard Services include probabilistic hazard information, NWS National Center applications, and potential applications for international agencies. Hazard Services will be the primary software for operationalizing many concepts related to FACETs (Forecasting a Continuum of Environmental Threats) in the NWS.

The primary job responsibility of this position will be integrating WoF guidance into the Advanced Weather Interactive Processing System (AWIPS 2) for use in the Hazard Services program. Additional responsibilities include close collaboration with CIMMS and NSSL scientists working on WoF and Hazard Services to develop advanced capabilities of the Hazard Services program using WoF guidance.

The principal duties of this position are:
- Develop software for visualizing WoF guidance products in the Advanced Weather Interactive Processing System (AWIPS2).
- Closely collaborate with CIMMS, ESRL, and NSSL scientists working on WoF and Hazard Services to develop advanced capabilities of the Hazard Services program using WoF guidance.
- Design and implement novel post-processing and visualization techniques for ensemble numerical weather prediction.
- Assist in assessing the usability, strengths, and limitations of WoF within NWS operations and during Hazardous Weather Testbed experiments.
- Attend meetings, workshops, and professional conferences to present research results and interact with operational forecasters, collaborators, and users.

Required Qualifications:
- A Master’s degree or higher in Meteorology, Atmospheric Science, Computer Science, or related area.
- Strong programming (e.g., Java, C, C++) and scripting (e.g. Python, NCL) skills, and experience with Linux (or Unix) operating systems.
- Excellent oral and written communication skills.
Ability to work and communicate effectively in diverse team environments.

Ability to pass a National Agency Check with Inquiries (NACI, federal background check). U.S. Citizenship or Permanent Residency is required.

Desired Qualifications:
- Experience in designing and developing interactive software applications
- Experience with ensemble-based data assimilation and numerical weather prediction, probabilistic weather forecasting, and transition of research to operations (R2O).

Normal working hours will be observed except for occasional irregular hours during Hazardous Weather Testbed Experiments or for workshops conducted at remote sites. This position will primarily be located in Boulder, Colorado with quarterly trips to Norman, Oklahoma.

Supervision will be provided by CIMMS staff. Technical oversight will be provided jointly by CIMMS Research Scientists, GSD collaborators, and NSSL management. Works under general supervision but is expected to work in a team environment and determine action to be taken in handling all but unusual situations. Incumbent is not expected to supervise other employees.

The salary for this position is very competitive and will be based on experience, skills, and knowledge. Information on University benefits may be found at [https://hr.ou.edu/](https://hr.ou.edu/). The position is expected to begin January-February 2019.

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: Scientific Programmer WoF AWIPS2

_The University of Oklahoma is an equal opportunity/Affirmative Action employer._
Rising Professionals Host Callouts

November 29th & January 10th
7-8 PM
RAWLS 1086

#RISEUP

Follow Us @RPPurdue
The Cooperative Institute for Mesoscale Meteorological Studies at the University of Oklahoma is seeking a Research Associate with excellent attention to detail and strong programming skills to join the U.S. Department of Energy’s (DOE) Atmospheric Radiation Measurement (ARM) Program Data Quality (DQ) Office located in the National Weather Center at the University of Oklahoma in Norman, Oklahoma. The DQ Office Supports the ARM Program by serving as the first line of defense in discovering data quality issues with the final goal of providing the science community with the highest quality data possible. The primary responsibilities of the DQ Office are, in close cooperation with ARM instrument mentors, site operators, and other members of the ARM infrastructure, to create automated processes for inspection and assessment of data quality, inspect and assess the data, report detected problems and participate in their resolution, and communicate data quality findings to end-users of ARM data.

The duties of this position are:

- Develop software for displaying, inspecting, and assessing ARM data
- Help maintain and improve our web-based tools https://dq.arm.gov
- Work with ARM personnel to improve and develop new data quality analysis techniques and visualizations
- Facilitate problem resolution and communication of data quality problems with ARM infrastructure
- Mentor undergraduate student analysts who assist in the analysis of ARM data
- Participate in relevant data quality research projects as opportunities arise
- Represent the DQ Office at meetings and conferences
- Perform related duties as assigned

The minimum qualifications for this position are:

- M.S. in atmospheric science, earth system science, meteorology, or related field Or B.S. in atmospheric science plus three years full-time experience
- Strong computer programming skills, particularly in command-line Linux environments
- Experience with meteorological data analysis, including scientific data formats such as netCDF

Preference will be given to applicants with:

- Knowledge, experience, or previous education focusing on meteorological instrumentation, atmospheric chemistry and/or aerosols, radar, lidar, or atmospheric fluxes
- Experience performing data analysis and visualization with Python; consideration will also be given for work done with other languages such as IDL, Matlab, Perl, or R
- Knowledgeable in new and emerging programming techniques, such as machine learning, big data analysis, or software automation
- Experience with revision control systems such as Git or SVN
- Experience with web programming (Javascript, PHP, HTML, CGI, etc.)
The beginning salary will be competitive for this position, and will be dependent on experience. The University of Oklahoma provides a generous benefits package. Information on benefits may be found at https://hr.ou.edu/Employees. The position will remain open until a suitable candidate is identified.

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

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Executive Director, Finance and Operations  
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Norman, OK 73072-7304  
treinke@ou.edu  
Job Requisition – ARM Data Quality

*The University of Oklahoma is an equal opportunity/Affirmative Action employer.*
CIMMS Post-Doctoral Research Associate
Warn-on-Forecast for Hazards Associated with Landfalling Tropical Cyclones

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) seeks to fill a Post-Doctoral Research Associate position for its collaborative research with the National Oceanic and Atmospheric Administration (NOAA) National Severe Storms Laboratory (NSSL) at the National Weather Center (NWC) in Norman, Oklahoma. The Post-Doc will contribute to applications of NSSL’s Warn-on-Forecast (WoF) research and development program in predicting tornadoes and other hazardous weather associated with landfalling hurricanes. The incumbent will work in close collaboration with the researchers at NOAA’s Atlantic Oceanographic and Meteorological Laboratory (AOML) Hurricane Research Division (HRD) in Miami, Florida. The dynamic research and operational working environment at the NWC and HRD will provide the candidate with ample opportunities for career advancement.

Background:
The National Weather Service issues outlooks for landfalling hurricane hazards, followed by mesoscale discussions and watches 1–12 h in advance of landfall. The National Hurricane Center, Storm Prediction Center, Weather Prediction Center, local Weather Forecast Offices and River Forecast Centers issue outlooks, watches, and warnings for tornadoes, high winds, extreme rainfall and flash floods. However, forecasting these hazards associated with landfalling hurricanes are very challenging. Forecasts for these hazards can be advanced through the creation of and improvements to probabilistic guidance from convection-resolving numerical weather prediction ensemble output.

Essential job functions include:
- Advance ensemble forecasts for hazards associated with landfalling tropical cyclones, including tornadoes, wind gusts, and extreme rainfall.
- Investigate the impact of different observations on these forecasts.
- Create probabilistic guidance from ensemble output to efficiently communicate hazards.
- Interpret and publish results in progress reports and peer reviewed literature.
- Present research results at meetings and conferences.
- Contribute towards proposals written to maintain and expand this research effort.

Desired Qualifications:
The incumbent must have a Ph.D. Degree in Atmospheric Science or an equivalent subject having performed research in the area of tropical cyclones. The incumbent must demonstrate skill in data analysis and must have previous experience with numerical weather prediction models and tropical cyclone data. Experience working with large datasets and strong programming (e.g., Fortran, C, C++), and scripting (e.g. Python, NCL) skills are desirable. We encourage motivated individuals with excellent written and verbal communication skills. The incumbent must be an easy relationship builder, creative, intelligent, and a flexible, supportive team member. The appointment is for 2 years with annual renewal based upon performance.
Start date for the position will be as soon as the candidate can begin work. The position will remain open until filled. Salary will be competitive depending on experience and qualification with University of Oklahoma benefits. Information on benefits may be found at http://hr.ou.edu/.

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

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Executive Director, Finance and Operations  
University of Oklahoma CIMMS  
120 David L. Boren Blvd., Suite 2100  
Norman, OK 73072-7304  
treinke@ou.edu  
REFERENCE: Landfalling Tropical Cyclones

The University of Oklahoma is an equal opportunity/Affirmative Action employer.
11th Annual Purdue Reception
at the AGU Fall Meeting
Thursday, December 13
7:00 PM - 9:30 PM.
Matchbox Vintage Pizza Bistro
713 H Street NW
Washington, DC 20001
Complimentary heavy hors d'oeuvres and beverages
Co-sponsored by:
Department of Earth, Atmospheric, and Planetary Sciences (EAPS)
and
Purdue Climate Change Research Center (PCCRC)
The Purdue Lectures in Ethics, Policy, and Science present...

The Ethics of Big Data

“Ethical Implications of the Internet of Things”

Dr. Kathers Gabriels, Assistant Professor, Eindhoven University of Technology; Willy Calewaert Chair, Free University Brussels

ABSTRACT: Logging out is becoming an illusion. The last generation that can still distinguish between on- and offline is living today and will disappear. All others grow up onlife. Humankind has never lived in a society in which so many data are saved. An ever-increasing number of devices is becoming part of the internet, i.e. ‘the Internet of Things’ (IoT). This talk discusses ethical implications of IoT and argues that an onlife society should never lose sight of the good life: technological progress also has to imply ethical progress, in the public interest.

THURSDAY, NOVEMBER 29TH
MRGN 121, 4 PM
FREE PIZZA
Speaker Biography:

Vipin Kumar is a Regents Professor at the University of Minnesota, where he holds the William Norris Endowed Chair in the Department of Computer Science and Engineering. Kumar received the B.E. degree in Electronics & Communication Engineering from Indian Institute of Technology Roorkee (formerly, University of Roorkee), India, in 1977, the M.E. degree in Electronics Engineering from Philips International Institute, Eindhoven, Netherlands, in 1979, and the Ph.D. degree in Computer Science from University of Maryland, College Park, in 1982. Kumar’s current research interests include data mining, high-performance computing, and their applications in Climate/Ecosystems and health care. Kumar is the Lead PI of a 5-year, $10 Million project, “Understanding Climate Change - A Data Driven Approach”, funded by the NSF’s Expeditions in Computing program that is aimed at pushing the boundaries of computer science research. He also served as the Head of the Computer Science and Engineering Department from 2005 to 2015 and the Director of Army High Performance Computing Research Center (AHPCRC) from 1998 to 2005. His research has resulted in the development of the concept of isoefficiency metric for evaluating the scalability of parallel algorithms, as well as highly efficient parallel algorithms and software for sparse matrix factorization (PSPASES) and graph partitioning (METIS, ParMetis, hMetis). He has authored over 300 research articles, and has coedited or coauthored 10 books including two textbooks “Introduction to Parallel Computing” and “Introduction to Data Mining”, that are used world-wide and have been translated into many languages.

BIG DATA IN CLIMATE AND EARTH SCIENCES: CHALLENGES AND OPPORTUNITIES FOR DATA SCIENCE

December 3, 2018, 3-4 p.m.
LWSN 1142

Vipin Kumar, Regents Professor and William Norris Chair in Large Scale Computing, Department of Computer Science and Engineering, University of Minnesota

Abstract:

The climate and earth sciences have recently undergone a rapid transformation from a data-poor to a data-rich environment. In particular, massive amount of data about Earth and its environment is now continuously being generated by a large number of Earth observing satellites as well as physics-based earth system models running on large-scale computational platforms. These massive and information-rich datasets offer huge potential for understanding how the Earth’s climate and ecosystem have been changing and how they are being impacted by humans actions. This talk will discuss various challenges involved in analyzing these massive data sets as well as opportunities they present for both advancing machine learning as well as the science of climate change in the context of monitoring the state of the tropical forests and surface water on a global scale.