EAPS WEEKLY NEWSLETTER
04 February 2019

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

Facebook
Twitter
Department Magazine
Website News

DEPARTMENT NEWS

EAPS COLLOQUIA

Rebecca Williams
Planetary Science Institute
Thursday, February 7, 2019
3:30 p.m.
HAMP 2108

DEPARTMENT CREDIT CARDS

If you are checking out department credit cards, please be sure to return them as soon as possible. Due to the limited number of cards in the department, failing to return them quickly may impact others that also need to borrow department credit cards.

http://www.eaps.purdue.edu/
BUSINESS OFFICE CHANGES

Due to recent changes, Sarah Flook and Elizabeth Dunning are no longer in the EAPS Business Office; they are now in the College of Science Travel Center and working only with travel; no longer with purchasing, shipment of packages, or payroll. If you need assistance with travel, procurement, or payroll please email the College of Science business centers. The College of Science business centers are:

Payroll: cospayroll@purdue.edu, LWSN 3130

Procurement: cosprocure@purdue.edu, WTHR 225

Travel: costravel@purdue.edu, LILY 1-412

Recharge: cosrecharge@purdue.edu, RLPH 158

CONSTRUCTION NOISE DISTURBING TO YOU?

Please let Alan Holtman (Building Deputy) know if you are teaching a class and find that the noise from the construction is making it difficult. The crew is trying to perform most of the noisy work after 6:30pm but obviously there is some going on during the daytime hours. You may reach Alan at 49-40189 or email: aeholtman@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

STUDENT NEWS

2019 SPRING RECEPTION

Calling all graduate students! Submit an application to present a poster at the Office of Interdisciplinary Graduate Programs 2019 Spring Reception

Wednesday, May 1, 2019
10:00 AM - 12:00 PM
North & South Ballrooms, Purdue Memorial Union
A celebration of graduate research at Purdue

10:00-11:30 Open Poster Sessions
11:30-12:00 Awards Presentation and Keynote Address
All are welcome to attend

Find more information online. Click here to submit an application to present a poster by March 1st!

Contact us at 765-494-0379 or oigp@purdue.edu

purdue.edu/gradschool/oigp

[Air Quality Meteorologist Position]

The Wisconsin DNR is accepting applications through February 12 for a forecasting meteorologist position.

An opportunity for seniors with some research experience or a masters student.

http://www.eaps.purdue.edu/
WEATHER SCIENCE RESEARCH LEAD

The Climate Corporation leads the industry in providing digital agriculture solutions for growers to manage their data, as well as to derive insights from their data for maximizing productivity, efficiency and sustainability. We are seeking an exceptional candidate to organize and lead a small Weather Science research team. This role will be responsible for prioritizing and developing a research plan combining existing and novel efforts into a coherent research program focused on incorporating all key aspects of atmospheric science, agronomic practices and environmental characteristics. The successful candidate will be responsible for guiding a team of science experts who can combine atmospheric, environmental and management data using novel modeling frameworks and approaches to improve our understanding of agriculturally limiting factors.

What You Will Do:
- Exploratory data analysis, data cleaning & processing
- Directed and/or independent research to test scientific hypotheses
- Engage with diverse research groups to understand their models and products and develop solutions to meet their data needs
- Evaluate the limitations of existing data sources and provide recommendations to address unmet data needs
- Undertake written & verbal communication with stakeholders in various parts of the organization
- Lead a team focused on both integrating existing models and developing new models; work collaboratively with partner teams to maximize the use of genetic, environmental, and grower management data assets
- Actively contribute to efforts to understand the prospective value of R&D projects in ways that can support portfolio review processes and financial forecasting; track and maintain portfolio of projects and capabilities against company pipeline/portfolio processes
- Serve as the primary point of contact and key science stakeholder to respective counterparts in other business units, including Product, Engineering, and Commercial/Marketing
- Contribute thought leadership, helping establish/execute on the team’s research agenda
- Clearly and effectively communicate research vision, strategy, and outcomes to key stakeholders both internally and externally.

Active areas of research:
- Analysis and interpretation of observations (e.g. satellite, weather stations, radar), and third party products (climate indices, reanalyses, seasonal outlooks)
- Ensemble reconstruction of historical weather from multiple proxies
- Multivariate spatio-temporal stochastic processes
- A combination of physical and statistical models, including statistical forecast calibration and downscaling
- Numerical weather prediction, data assimilation, mesoscale meteorology, ensemble forecasting

Basic Qualifications:
- MS in a quantitative science discipline (e.g. atmospheric sciences, physics, applied mathematics) paired with experience in data science or computationally intensive research
- Demonstrated experience working with diverse weather data, including a high level of expertise with soils and other environmental data
- At least 5 years of post-degree work experience, including industry experience involving management of research programs and at least 1 year of people management experience
- Demonstrated experience translating complex technical concepts to collaborators, decision makers, and non-technical audiences

Preferred Qualifications:
- PhD in Atmospheric Sciences, Computer Science, High-Dimensional Statistics, Applied Math or other physical science involving computationally intensive research
- Strong organizational skills
- Ability and inclination to work in multi-disciplinary environments, and desire to see ideas realized in practice
- Strong drive to learn new topics and skills and to develop innovative products for our customers

http://www.eaps.purdue.edu/
• Excellent interpersonal and communication skills

What We Offer:
Our teams are composed of industry experts, top scientists, and talented engineers. The environment is extremely engaging and fast-paced, with dozens of specialties coming together to provide the best possible products and experiences for our customers.
We provide competitive salaries and some of the best perks in the industry, including:
• Superb medical, dental, vision, life, disability benefits, and a 401k matching program
• A stocked kitchen with a large assortment of snacks & drinks to get you through the day
• Encouragement to get out of the office and into the field with agents and farmers to see first-hand how our products are being used
• We take part and offer various workshops, conferences, meet-up groups, tech-talks, and hackathons to encourage participation and growth in both community involvement and career development

We also hinge our cultural DNA on these five values:
• Inspire one another
• Innovate in all we do
• Leave a mark on the world
• Find the possible in the impossible
• Be direct and transparent

Job site location: [http://jobs.jobvite.com/the-climate-corporation-internal/job/oUFd9fwF](http://jobs.jobvite.com/the-climate-corporation-internal/job/oUFd9fwF)

SEMESTER ABROAD: INTERN – STUDY - TRAVEL

Semester in Development –

Spend your next semester interning, studying and living in a developing country, gaining career relevant experience while exploring the world

As an alternative to volunteer tourism, the Semester in Development prioritizes learning from locals, both in the classroom, where you’ll earn university credits, and in the field, during your hands-on internship

The program is open to all undergrads, and at $6,250 USD is a low-cost alternative to a traditional semester spent at home or abroad

Are you looking to gain meaningful experience? Have you considered going abroad but don’t know where to look?
For more than 6 years, Insight has been delivering programs for students in over 7 countries. With a model of ethical engagement at the root of what we do, our programs equip students with the skills and experiences sought after in today's global community.

To Learn More visit: [https://insightglobaleducation.com/university/?utm_campaign=Semester%20in%20Development%20Department%20Emails&utm_medium=email&hs_enc=p2ANqtz-9a4Bx9W_Zwr_ZXR4s1Opp2NB89PJozVQ2fYa4751X3eQW6PQvspZfbaDqAvE4479C11_PPX2-REbF2tE6nXddkEXbQ&_hsmi=69251819&utm_content=69251819&utm_source=hs_email&hsCtaTracking=7d0c9c74-3544-495d-b6b1-c8869411203a7%3Ced4fcb35-6e96-45c1-b49e-086153dac4ab](https://insightglobaleducation.com/university/?utm_campaign=Semester%20in%20Development%20Department%20Emails&utm_medium=email&hs_enc=p2ANqtz-9a4Bx9W_Zwr_ZXR4s1Opp2NB89PJozVQ2fYa4751X3eQW6PQvspZfbaDqAvE4479C11_PPX2-REbF2tE6nXddkEXbQ&_hsmi=69251819&utm_content=69251819&utm_source=hs_email&hsCtaTracking=7d0c9c74-3544-495d-b6b1-c8869411203a7%3Ced4fcb35-6e96-45c1-b49e-086153dac4ab)

[See attached information sheets]
Interactive Processing System, Version 2 (AWIPS-2). Concentrating on AWIPS-2 enables the OPG to focus development and evaluation efforts on the primary NWS operational system, as well as allowing meteorological research, development and operational services to be integrated and leveraged with other federal, regional, state and local partners.

[See attached flyer for complete information]

GRAD & PROFESSIONAL DEVELOPMENT SERIES

Feb. 5: **Tell me about yourself!**
Drill down into networking fundamentals; market yourself authentically & effectively.

Feb. 12: **The Question behind the Question ...**
What do recruiters really want to know?! Practice and improve upon your STAR method.

Feb. 18: **Negotiation Skills**
Should one negotiate? And if yes, HOW?!

All workshops: in ME 3006 from 5:00 pm to 6:30 pm
NO RSVP; arrive early to get a seat! Questions? askCCO@purdue.edu

Evolving Earth Foundation 2019 Student Grant Program

The Evolving Earth Foundation has launched its 2019 student research grant program in the earth sciences. A total of ten grants are available, for amounts of up to $3000 per grant. Undergraduate students, graduate students, and post-doctoral researchers at accredited U.S. colleges and universities or research institutions are eligible to apply for grants. The **deadline for applications is March 1st, 2019**.

Please visit the Evolving Earth Foundation web site at [http://www.evolvingearth.org](http://www.evolvingearth.org) for more information and full grant program details.

UNDERGRADUATE SUMMER RESEARCH OPPORTUNITIES AT THE SCRIPPS INSTITUTION OF OCEANOGRAPHY

The Scripps Institution of Oceanography is offering summer research experience for undergraduates, spanning fields that include earth sciences, geophysics, and atmospheric science. For a list of these internships, go to: [https://scripps.ucsd.edu/undergrad/research-programs/summer-research-opportunities](https://scripps.ucsd.edu/undergrad/research-programs/summer-research-opportunities).

REQUEST FOR PREPROPOSALS FOR USE OF THE U.S. DEPARTMENT OF ENERGY’S ARM USER FACILITY

The U.S. Department of Energy (DOE) is now accepting preliminary proposals from scientists worldwide to use components of the Atmospheric Radiation Measurement (ARM) user facility for field campaigns.

Preproposals are due **April 5, 2019**, for:

- Use of the second ARM Mobile Facility – AMF2 will be available for deployment beginning in January 2022. Note: The Scanning ARM Cloud Radar (SACR) will not be offered with AMF2.
- Supplemental campaigns – Moderate-size campaign proposals to augment an ARM atmospheric observatory will be considered for calendar years 2020–2021.
- Note: The Gulfstream-159 research aircraft will not be available for this call.

Submit preproposals online through the [field campaign preproposal form](http://www.eaps.purdue.edu/).
Priority will be given to proposals that:

- make comprehensive use of the ARM facilities
- focus on strategic goals of the DOE Office of Biological and Environmental Research (BER)
- have the ability to improve regional or global earth system models.

Proposals that coordinate with other BER community capabilities (e.g., Environmental Molecular Sciences Laboratory, AmeriFlux Network, Next Generation Ecosystem Experiments in the Arctic and Tropics, Energy Exascale Earth System Model) are encouraged.

https://www.arm.gov/news/facility/post/52337

ASSISTANT PROFESSOR OF METEOROLOGY POSITION AT VIRGINIA TECH

The Department of Geography (https://geography.vt.edu) at Virginia Tech (https://vt.edu) is seeking applicants for a faculty position in meteorology/climatology at the level of Assistant Professor. This is a full-time, tenure-track position available August 2019.

We seek a geographically trained meteorologist or climatologist who has demonstrated excellent teaching, is able to teach courses in dynamic and either physical or synoptic meteorology, and who will develop additional courses in support of our BS degree program in Meteorology. Supervision of graduate students in our geography MS degree program and in our College of Natural Resources and Environment’s (https://cnre.vt.edu) interdisciplinary Geospatial and Environmental Analysis PhD program is also expected.

[See flyer attached for complete information]

CIMMS POST-DOCTORAL RESEARCH ASSOCIATE – FACETs

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma is currently seeking a postdoctoral research associate to collaborate with scientists in the National Severe Storms Laboratory’s (NSSL) Warning Research & Development Division on the development of probabilistic severe convective weather guidance for the Forecasting A

http://www.eaps.purdue.edu/
Continuum of Environmental Threats (FACETs) project. The goal of FACETs is that future warnings will be probabilistic, spatially coherent forecasts.

[For complete information see attached flyer]

**CIMMS – MRMS SEVERE WEATHER RESEARCH SCIENTIST**

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 and assessment of scientific applications, algorithms, and applied research that assists forecasters in the warning decision-making process for severe convective weather events. The incumbent will lead the development of severe convective weather guidance applications for the Multi-Radar / Multi-Sensor system, which is widely used in the National Weather Service, private sector, and in academia for analyzing thunderstorm events.

[See attached flyer for complete information]

**CIMMS PETER LAMB POSTDOCTORAL FELLOWSHIP**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma is seeking excellent candidates for the prestigious Peter Lamb Postdoctoral Fellowship. CIMMS is a research organization that promotes collaborative research between National Oceanic and Atmospheric Administration (NOAA) and University of Oklahoma (OU) scientists on problems of mutual interest to improve basic understanding of mesoscale and storm-scale meteorological phenomena to help produce better forecasts and warnings that save lives and property and to understand the societal impacts of such phenomena. Research scientists within CIMMS use observations, analysis and models to improve the understanding and prediction of high-impact weather elements and systems and climate anomalies ranging in size from cloud nuclei to multi-state areas.

Although the position is not project-specific, proposals for the CIMMS Postdoctoral fellowship should address at least one of CIMMS’ research themes: 1) weather radar research and development; 2) storm-scale and mesoscale modeling research and development; 3) forecast improvements research and development; 4) impacts of climate change related to extreme weather events; and 5) societal and socioeconomic impacts of high-impact weather systems. The CIMMS website [http://cimms.ou.edu/index.php/research](http://cimms.ou.edu/index.php/research) has more information on projects underway within these research themes as well as contact information for CIMMS scientists working on these themes. It is suggested but not required that those applying contact a CIMMS scientist before writing their research proposal to receive guidance when drafting a proposal.

[See attached flyer for complete information.]

**CIMMS RESEARCH ASSOCIATE – SEVERE CONVECTIVE WEATHER RADAR APPLICATIONS**

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 new severe weather applications for the detection and diagnosis of tornadoes and hail.

[For additional information, see attached flyer]

**CIMMS RESEARCH ASSOCIATE – MRMS SEVERE WEATHER APPLICATIONS**

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 severe convective weather applications.

[For complete information see attached flyer]

http://www.eaps.purdue.edu/
guidance applications for the Multi-Radar / Multi-Sensor project, which is widely used in the National Weather Service, private sector, and in academia for analyzing thunderstorm events.

[See attached flyer for complete information]

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 desirable. Job ad link is here: https://www.ugajobsearch.com/postings/35012fbc1id=IwAR0WH1f1I7sdlZyy-iPJPZuihoJcP1f3Uq9gYjql-1fqJtXCOjtkHsjqM4

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.

- 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.

[See attached flyer for complete information]

ENTERPRISE AND THE ENVIRONMENT SUMMER SCHOOL

The Enterprise and the Environment Summer School will take place from 30 June - 12 July 2019 at the University of Oxford and is intended for undergraduate and masters students passionate about environmental change. The course typically attracts a global spread of 35-40 attendees from a diverse mix of academic disciplines and will include teaching across subjects such as sustainable enterprise management, environmental economics and policy, the future of transport, valuing water for sustainable development, and the renewable energy transition. More details are available on the website: https://www.smithschool.ox.ac.uk/courses/summer-school.

[See attached flyer for more information]

CHANGES TO IRB REVIEW PROCESSES AT PURDUE UNIVERSITY

Please see attached memo from Christopher Agnew, Associate Vice President for Research, Regulatory Affairs detailing additional burden-reducing changes to IRB review processes here at Purdue. These changes have come into effect as of the week of January 22 with the final approval of federal Common Rule updates. The goal is to improve processing of human subjects research protocols submitted to the IRB.

[See attached memo for important information]
HACKING HUMAN TRAFFICKING 150TH EVENT

Design innovation challenge: FIGHT HUMAN TRAFFICKING IN THE AMERICAS. You can stop it.

They steal human dignity for profits. Your ideas can save lives.

February 14-15, 2019
Purdue Memorial Union North Ballroom

LEARN:
Learn about the state of human trafficking in the Americas from the law enforcement officials, advocacy programs and survivors.

HACK:
You will break into teams, put your respective disciplines to work and problem-solve through the night.

WIN-WIN:
You will be mentored by faculty experts and community leaders. Top two teams with most promising solutions will be awarded $4000 and $1500!

To register visit: conf.purdue.edu/humantrafficking

[See flyer for complete information]

UPDATED CAREER PLANNING TOOLS RELEASED TO SUPPORT NEW JOB FAMILY STRUCTURE

Through the implementation of the job family structure, employees can begin to identify opportunities for career growth. To support employees in building a career at the University, Human Resources is announcing the availability of the Career Path Maker.

This tool allows employees to explore the jobs within the job family structure. By simply searching by career stream, job family, sub family, or keyword, employees can see the various opportunities and alternative paths available to them. The tool provides information regarding the job family, sub family, title, career stream, and competencies required for each job, as well as a high-level summary of each job.

Additionally, minor revisions have been made to the Career Stream Level Guide. The updated version should be used and is available online.

For any questions regarding the Career Path Maker, contact jobfamilystructure@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 Katherine Huseman (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.

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
Unraveling the Martian Fluvial History

Rebecca Williams
Planetary Science Institute

Over the last couple decades, researchers have gradually recognized the evidence for prolonged fluvial processes and the complexity of the sedimentary record on Mars. Piecing together this complex history has required synthesis of high resolution, multi-instrument data from orbit and the surface. This talk will highlight new insights into the ancient fluvial history on Mars. Detailed study of a wide spectrum of fluvial landforms has filled in knowledge gaps in the timing and geographic distribution of fluvial systems. Building upon terrestrial analogs, a key advance in our understanding was the recognition of various preservation states of fluvial landforms, especially those in inverted relief. Arabia Terra is a critical window into conditions on early Mars, and the extensive networks of ‘inverted channels’ across that region are consistent with widespread precipitation and runoff. In addition, recent ground-based observations with the Curiosity rover of rock outcrops along its traverse reveal important details about sedimentary processes, sediment provenance, and stratigraphic context. The record of fluvio-lacustrine environments present at Gale crater is likely representative of the global history of past warmer and wetter conditions.

Thursday, February 7, 2019
3:30 p.m.
Room 2108/HAMP

Refreshments at 3:00 pm
Room 2201/ HAMP
The Office of Interdisciplinary Graduate Programs Presents the

2019 Spring Reception

Wednesday, May 1, 2019
10:00 AM - 12:00 PM
North & South Ballrooms, Purdue Memorial Union

10:00-11:30 Open Poster Sessions
11:30-12:00 Awards Presentation and Keynote Address
All are welcome to attend

Find more information online.
Submit an application to present a poster.

Contact us at 494-0379 or oigp@purdue.edu
purdue.edu/gradschool/oigp
Spend your next semester interning, studying and living in a developing country, gaining career relevant experience while exploring the world.

As an alternative to volunteer tourism, the Semester in Development prioritizes learning from locals, both in the classroom, where you’ll earn university credits, and in the field, during your hands-on internship.

The program is open to all undergrads, and at $6,250 USD is a
low-cost alternative to a traditional semester spent at home or abroad

Are you looking to gain meaningful experience? Have you considered going abroad but don't know where to look?

For more than 6 years, Insight has been delivering programs for students in over 7 countries. With a model of ethical engagement
at the root of what we do, our programs equip students with the skills and experiences sought after in today's global community
The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma is currently looking for a Research Associate (RA) to collaborate with scientists and National Weather Service (NWS) forecasters at the Operations Proving Ground (OPG) in Kansas City, MO. This position will assist with projects designed to transition meteorological research and forecasting tools into the operational environment, develop practical applications for emerging technologies, incorporate risk communication skills into the warning and forecast process, and optimize NWS forecast delivery systems. Much of the work will be conducted on the Advanced Weather Interactive Processing System, Version 2 (AWIPS-2). Concentrating on AWIPS-2 enables the OPG to focus development and evaluation efforts on the primary NWS operational system, as well as allowing meteorological research, development and operational services to be integrated and leveraged with other federal, regional, state and local partners.

The duties of this position are:
1. Develop expertise in meteorology and the delivery of warnings, forecasts, and impact-based decision support services (IDSS).
2. Develop expertise in utilizing AWIPS-2 to generate and disseminate forecast products and deliver IDSS.
3. Develop expertise in creating AWIPS-2 cases that can be used to evaluate and validate the usefulness and usability of promising tools or capabilities emerging from NOAA-affiliated laboratories and testbeds.
4. Refine skills needed in the operation of Linux and Windows workstations. The person applying to this position should have a basic knowledge of Linux and experience with Python.
5. Participate in NWS designed simulations to study the effectiveness of newly developed applications and capabilities designed to enhance forecasting and/or service delivery.
6. Assist in testing and fielding new capabilities and services in a simulated operational environment. By validating both scientific integrity and human factors, deployment risks will be reduced prior to implementation.
7. Review technical and professional publications, and attend seminars to stay abreast of current developments in meteorological and hydrological applications.
8. Attend meetings and professional conferences to understand new meteorological and hydrological applications and interact with the operational community.
9. Perform related duties as assigned to support the development and delivery of user and focal point training for the AWIPS-2 system.

The minimum qualifications for the position are:
1. A Master’s Degree in Meteorology, Atmospheric Science or related area;
2. Or a Bachelor’s Degree in Meteorology, Atmospheric Science or related area and at least three years’ experience in operational meteorology, operational hydrology or applied research;
3. Emphasis will be placed on applicants with experience in operational forecast operations, operational forecast systems, applied meteorology, Linux, Python, and AWIPS-2.
Applicants should identify expertise with any of the following areas: operational forecasting, forecast systems, risk communication and adult education. Strong oral and written communication skills are needed for the position. Please indicate experience with Linux (or UNIX) operating systems, National Weather Service systems, programming skills and commercial software applications - specifically Python, GIS, Java, Dreamweaver, and graphic design programs.

Normal working hours will be observed except for occasional irregular hours during system testing or workshops. Incumbents will receive training and gain expertise in the latest meteorological forecasting systems. This position is located in Kansas City, MO.

Supervision will be provided by CIMMS staff. Technical oversight will be provided by CIMMS staff and OPG management. The incumbent 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.

Beginning salary range is scalable to experience and qualifications, supplemented by University of Oklahoma employment benefits. Information on benefits may be found at [https://hr.ou.edu/](https://hr.ou.edu/).

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: OPG KC

_The University of Oklahoma is an equal opportunity/Affirmative Action employer._
**Full-time, Tenure-track Assistant Professor Position in Meteorology/Climatology**  
**Department of Geography, Virginia Tech, Blacksburg, Virginia**

The Department of Geography (https://geography.vt.edu) at Virginia Tech (https://vt.edu) is seeking applicants for a faculty position in meteorology/climatology at the level of Assistant Professor. This is a full-time, tenure-track position available August 2019.

We seek a geographically trained meteorologist or climatologist who has demonstrated excellent teaching, is able to teach courses in dynamic and either physical or synoptic meteorology, and who will develop additional courses in support of our BS degree program in Meteorology. Supervision of graduate students in our geography MS degree program and in our College of Natural Resources and Environment's (https://cnre.vt.edu) interdisciplinary Geospatial and Environmental Analysis PhD program is also expected.

An ability to develop a strong, externally funded research program and publication record is essential for success at Virginia Tech. Applicants must provide evidence of the skills necessary to secure external funding and evidence of a research track focused on atmospheric science with a strong foundation in data analytics. The specific research specialty is open, but preference will be given to candidates who can strengthen research collaborations at Virginia Tech through research involving data-driven modeling and/or analysis of large/complex data sets.

In the spirit of Virginia Tech’s strong commitment to the principles of diversity and inclusion, the Department of Geography seeks a broad spectrum of candidates, including women, minorities, veterans, and people with disabilities. Individuals with disabilities desiring adjustments in the application process should notify the search committee chair by the application deadline. To evaluate the requirements and apply, candidates should review posting TR0180193 in its entirety at https://listings.jobs.vt.edu/postings/search.

Review of applications will begin on January 18, 2019. For full consideration, applicants MUST apply on-line.

Applications should include the following information: (1) curriculum vitae, (2) a cover letter expressing a statement of interest in the position, (3) separate statements of research and teaching interests in a single statement document, and (4) the names, titles, and complete contact information for three references. An official transcript for highest degree earned is required prior to the start of employment for the selected candidate.

Inquiries can be made to Dr. Drew Ellis, Search Committee Chair; e-mail: awellis@vt.edu.

The Department of Geography offers bachelor’s and master’s programs in geography, houses the only bachelor’s degree in meteorology in the state, and is also a major participant in the interdisciplinary geospatial and environmental analysis doctoral program. The department is recognized for its high quality of instruction and advising and is a leader at Virginia Tech in geospatial applications. Faculty regularly publish with graduate students and are active on multiple research projects supported by external funding sources. Selected faculty research topics include human health in Appalachia, Tanzanian social networks, Bangladesh coastal hazards, sea level rise in the southeast US, alpine biogeographic response to climate change, Caribbean paleo-environments, water resources in South Asia, spatial analysis of tropical cyclones, urban mega-events (e.g., the Olympics), and remoting sensing of land use change.
This year, faculty members have taught international field courses in Antarctica, Croatia, and New Zealand, and the meteorology program regularly offers a two-week summer Hokie Stormchase course. The department is well-positioned in the new Pathways general education curriculum with multiple Pathways courses and a new minor in Sustainability.

The College of Natural Resources and Environment, one of nine college units at Virginia Tech, was established in 1992. The college is composed of four academic departments (Fish and Wildlife Conservation, Forest Resources and Environmental Conservation, Geography, and Sustainable Biomaterials) serving more than 1,000 undergraduate students. The college has about 180 faculty and staff, including 75 tenure-track faculty. More than 300 graduate students are enrolled in our programs, which include both an online master of natural resources degree and a cohort-based executive degree in the National Capital Region. The college’s Advising Center, with dedicated professional academic advisors assigned to each department, works in partnership with faculty mentors focused on student success. The college hosts an annual career fair that attracts a wide range of external partners, working in partnership with the college’s director of employer relations. Faculty research awards total $15-20 million annually in the college’s research-intensive, student-centered environment. Two of our departments are among the top 10 academic departments at Virginia Tech in average research dollars awarded annually, and the college ranks second among colleges at Virginia Tech in research expenditures per FTE. The college hosts several NSF centers as well as numerous other research and outreach centers engaged with state and federal agencies and the private sector. The college manages a nearly 1,300-acre forest located close to campus that is utilized on a weekly basis for student learning and research, as well as a forestry research site in Critz, Virginia. College Factual has ranked the college as No. 1 for the study of natural resources and conservation for four consecutive years. The forestry degree program is ranked No. 1 by College Factual for the second consecutive year, and the packaging systems and design degree program is ranked No. 7 among the top 20 programs nationally by Value Colleges.

*Virginia Tech is an equal opportunity/affirmative action institution.*
CIMMS Research Scientist – Warn-on-Forecast

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently seeking an experienced Research Scientist to provide scientific and meteorological expertise for collaborative work to advance NSSL’s storm-scale data assimilation and prediction science within the NOAA Warn-on-Forecast project. Specifically, research will focus on improving short-term predictions of high impact severe convective storms, heavy rainfall, landfalling tropical cyclones and other hazardous weather associated with convective storms. This research will require close collaboration with the Storm Prediction Center, NOAA’s Global Systems Division at the Earth Systems Research Laboratory, and the Environmental Modeling Center in College Park, Maryland. A successful candidate for this position will need high-level abilities to diagnose and understand differences in forecasts between various modeling and data assimilation systems, through expertise in mesoscale and storm-scale dynamics and convection allowing models. Also required are high-level abilities to assess the capabilities of models to properly depict mesoscale convective systems and land-falling tropical cyclones and their attendant hazardous weather, and the ability to develop diagnostics for those weather hazards from convective models. The emphasis of the research will be on Warn-on-Forecast applications (e.g., 0-6 h forecasts of severe wind gusts, storm-scale vortices within mesoscale convective systems, and tornadic supercells within TC rainbands). The position will be based at the National Severe Storms Laboratory (NSSL) in Norman, OK within the National Weather Center, a highly collaborative operational, research, and academic environment containing a number of NOAA and OU organizations.

The principal duties of this position are:

1. Conduct original research and solicit funding for new research on diagnostics, verification, and predictability for frequently updating storm scale data assimilation and prediction systems with a focus on understanding model dynamics and representation of physical processes associated with extreme high impact weather.
2. Collaborate with NOAA testbeds such as the Hazardous Weather Testbed, Hydro-Meteorological Testbed, and Aviation Weather Testbed, to design real-time forecasting experiments using experimental storm-scale modeling and data assimilation systems, and lead/organize post-experiment evaluations.
3. Contribute to scientific publications and attend off-site conferences, workshops, symposia and NOAA testbed-related outreach events as needed.
4. Provide leadership within CIMMS and the Forecast Research and Development Division of NSSL through mentorship of students and junior colleagues.

The minimum qualifications for the position are:

1. A PhD in Meteorology, Atmospheric Science, or related area.
2. Demonstrated excellence in mesoscale and convective-scale dynamics via his/her publication record and conference presentations.
3. Experience with mentoring students and/or colleagues in these areas.

Excellent oral and written communication and public speaking skills are highly desired, as well as proficiencies in weather visualization software (e.g., GrADS, NCL, GEMPAK, etc.) and coding languages like Python and/or Fortran. Applicants should identify experience in graphic
design/visualization, programming and scripting languages, as well as skills using numerical weather prediction models.

Normal working hours will be observed except for occasional irregular hours during data collection, warning/forecast experiments or workshops conducted at remote sites. CIMMS staff will provide general supervision with technical oversight provided by NSSL staff and management. The incumbent works under general supervision, but is expected to work independently and determine action to be taken in handling all but unusual situations.

The beginning salary is commensurate with educational background and experience, with OU benefits. Information on OU benefits can be found at [http://www.hr.ou.edu/](http://www.hr.ou.edu/).

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: Warn-on-Forecast

_The University of Oklahoma is an Equal Opportunity/Affirmative Action employer._
CIMMS Post-Doctoral Research Associate - FACETs

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma is currently seeking a postdoctoral research associate to collaborate with scientists in the National Severe Storms Laboratory’s (NSSL) Warning Research & Development Division on the development of probabilistic severe convective weather guidance for the Forecasting A Continuum of Environmental Threats (FACETs) project. The goal of FACETs is that future warnings will be probabilistic, spatially coherent forecasts.

The duties of this position are:
1. Apply diverse data sets to produce storm-based probabilistic trends and historical distributions of convective storm features to produce probabilistic hazard information.
2. Develop and test new multi-sensor (e.g., satellite, lightning, numerical models, radar) algorithms and techniques (e.g., machine learning) for short-term probabilistic prediction and nowcasting;
3. Acquire and apply expertise in severe local storms and the warning-decision-making process;
4. Design and lead applied research and operational experiments with National Weather Service Forecasters and end-users in the Hazardous Weather Testbed’s Experimental Warning Program.
5. Attend meetings and professional conferences to present research results and interact with collaborators and users; formally publish results when appropriate;
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 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. Experience with statistical methods or software for meteorological data analysis and visualization
4. 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; Using Large Datasets; Data Mining; Machine Learning; Statistics; Warning Decision Making; Weather Radar; Lightning Data; Numerical Modeling; 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. The position is expected to begin 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: Post-Doc FACETs

*The University of Oklahoma is an equal opportunity/Affirmative Action employer.*
CIMMS - MRMS Severe Weather Research Scientist

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 and assessment of scientific applications, algorithms, and applied research that assists forecasters in the warning decision-making process for severe convective weather events. The incumbent will lead the development of severe convective weather guidance applications for the Multi-Radar / Multi-Sensor system, which is widely used in the National Weather Service, private sector, and in academia for analyzing thunderstorm events.

The duties of this position are:
1. Lead development and assessment of techniques and algorithms that utilize a variety of sensors (e.g., satellite, lightning, polarimetric radar, or numerical models) to improve the short-term prediction of high impact weather including tornadoes, hail, lightning, and damaging wind.
2. Design and lead 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;
3. Develop scientific talent and enhance diversity within the field through the advisement of undergraduate and graduate students.
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 statistical methods or software for meteorological data analysis and visualization
3. Experience with scientific programming on UNIX/Linux using a high level language (e.g. C++, Java, Python)
4. Interest in new severe and convective applied research and operational applications of research
5. 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; Lightning Data; Numerical Modeling; Remote Sensing and Satellite. Strong oral and written communication skills
are needed for the position, including the ability to collaborate on proposals and reports. 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. The position is expected to begin 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: MRMS Scientist

The University of Oklahoma is an equal opportunity/Affirmative Action employer.
CIMMS Peter Lamb Postdoctoral Fellowship

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma is seeking excellent candidates for the prestigious Peter Lamb Postdoctoral Fellowship. CIMMS is a research organization that promotes collaborative research between National Oceanic and Atmospheric Administration (NOAA) and University of Oklahoma (OU) scientists on problems of mutual interest to improve basic understanding of mesoscale and storm-scale meteorological phenomena to help produce better forecasts and warnings that save lives and property and to understand the societal impacts of such phenomena. Research scientists within CIMMS use observations, analysis and models to improve the understanding and prediction of high-impact weather elements and systems and climate anomalies ranging in size from cloud nuclei to multi-state areas.

Although the position is not project-specific, proposals for the CIMMS Postdoctoral fellowship should address at least one of CIMMS’ research themes: 1) weather radar research and development; 2) storm-scale and mesoscale modeling research and development; 3) forecast improvements research and development; 4) impacts of climate change related to extreme weather events; and 5) societal and socioeconomic impacts of high-impact weather systems. The CIMMS website http://cimms.ou.edu/index.php/research has more information on projects underway within these research themes as well as contact information for CIMMS scientists working on these themes. It is suggested but not required that those applying contact a CIMMS scientist before writing their research proposal to receive guidance when drafting a proposal.

Terms of appointment are for one (1) year, renewable for a second year subject to satisfactory performance. An annual salary of $60,000 and a research budget of up to $5,000 per year is included in the award, along with a modest relocation stipend. Successful applicants must have obtained a Ph.D. within the last five years; proof of a Ph.D. is required before assuming the post-doctoral position, but those in the final stages of Ph.D. dissertation completion are encouraged to apply provided a finish date before July 31, 2019 is anticipated.

Applicants are asked to submit electronically: (1) a curriculum vitae; (2) a list of all products (e.g., papers, patents, technology transfers, licensed software, etc.) generated over the course of their career; (3) a cover letter which includes the expected start date and any non-standard resources that might be needed to complete the proposed work; (4) a brief proposal (no more than 4 pages, double-spaced, excluding the list of references and figures) describing the work to be pursued during a 2-year tenure at CIMMS; and (5) a list of three references. In addition, applicants should request that their referees directly send their reference letters to CIMMS at the email address listed below.

To receive full consideration, applications and supporting material should be received prior to January 30, 2019. All materials should be sent electronically to:

Tracy Reinke, Executive Director Finance and Operations
Cooperative Institute for Mesoscale Meteorological Studies (CIMMS)
120 David L. Boren Blvd, Norman, OK, 73072
treinke@ou.edu
ATTN: Peter Lamb Postdoctoral Fellowship
CIMMS Research Associate - MRMS Severe Weather Applications

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 severe convective weather guidance applications for the Multi-Radar / Multi-Sensor project, which is widely used in the National Weather Service, private sector, and in academia for analyzing thunderstorm events.

The duties of this position are:

1. Developing and/or testing new multi-sensor (e.g., satellite, lightning, numerical models) algorithms and techniques (e.g., machine learning) 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 Masters Degree in Meteorology, Atmospheric Science, Geographic Information Systems, or related area;
2. Experience with scientific programming on UNIX/Linux using a high level language (e.g., C++, Java, Python)
3. Experience with statistical methods or software for meteorological data analysis and visualization
4. Interest in new radar algorithm development for severe storm detection and diagnosis
5. 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; Lightning Data; Numerical Modeling; 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. The position is expected to begin 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: MRMS Severe Weather Applications

*The University of Oklahoma is an equal opportunity/Affirmative Action employer.*
CIMMS Research Associate - Severe Convective Weather Radar Applications

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 new severe weather applications for the detection and diagnosis of tornadoes and hail.

The duties of this position are:

1. Development of new applications and techniques for the analysis of WSR-88D data, including tornado and mesocyclone detection algorithms;
2. Evaluation of existing Radar-based products and applications, specifically focusing on data quality control and short-term nowcasting (0-2 hour) of severe and convective events;
3. Acquire and apply expertise in severe local storms and the warning-decision-making process;
4. Attend meetings and professional conferences to present research results and interact with collaborators and users;
5. Meet with collaborators and provide regular summaries of work accomplished;
6. Review technical and professional publications and attend seminars to stay abreast of current developments in meteorological and remote sensing science;
7. Plan and execute the evaluation of new applications and techniques in the Hazardous Weather Testbed.

The minimum qualifications for the position are:

1. A Masters Degree in Meteorology, Atmospheric Science, Geographic Information Systems, or related area;
2. Computer programming and scripting experience (e.g. C++, Java, Python);
3. Skills in the interpretation of weather radar data.

Applicants should identify expertise with any of the following areas: Computer Programming; Weather Radar; Visualization; Geographic Information Systems; Warning Decision Making; 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 application development and scripting).

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 dependent on experience, with University of Oklahoma benefits.
Information on benefits may be found at http://www.hr.ou.edu. The position is expected to begin
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: Severe Weather Radar Applications

    The University of Oklahoma is an equal opportunity/Affirmative Action employer.
I'm delighted to invite you to the annual Enterprise and the Environment Summer School at the University of Oxford. This is a unique programme which teaches across the Smith School’s strengths in environmental economics and policy, enterprise management, and financial markets and investment. During the Summer School we will explore critical global environmental challenges in the 21st century through a combination of science, diverse stakeholder engagement, and analysing the value of the environment to enterprise.

The Smith School is a leading interdisciplinary academic hub focused upon teaching, research, and engagement with enterprise on climate change and long-term environmental sustainability. We work with social enterprises, corporations, and governments; we seek to encourage innovative solutions to the challenges facing humanity. We are excited to be holding our fourth Summer School and hope to meet you in Oxford in June 2019.

Professor Cameron Hepburn
Director, Smith School of Enterprise and the Environment

Dates: 30 June 12 July 2019
Accommodation: Jesus College, University of Oxford
Teaching Venue: School of Geography and the Environment, University of Oxford
Website: www.smithschool.ox.ac.uk/courses/summer_school/
Contact: summerschool@smithschool.ox.ac.uk
Early Bird Price: £2850 (for payments made prior to 12 April 2019)
Full Price: £3100 (for payments made after 12 April 2019)
Date: January 22, 2019

To: Associate Deans for Research

cc: Suresh V. Garimella, Executive Vice President for Research and Partnerships
    Jay T. Akridge, Provost and Executive Vice President for Academic Affairs and Diversity

From: Christopher R. Agnew, Associate Vice President for Research, Regulatory Affairs

Re: Important Updates from the Purdue Human Research Protection Program (HRPP)

This memo is being sent to all Associate Deans for Research, with the request that each of you distribute this information to your college’s dean, department heads, faculty, post docs, graduate students, and research staff.

I write to update the Purdue research community on the latest changes to regulations and associated processes governing human subjects research. Purdue’s HRPP, which includes our Institutional Review Boards, stands ready to assist researchers as they navigate these latest welcome changes.

1. Long Awaited Final Implementation of Changes to the Common Rule

Final changes to the federal rules that prescribe protections for human participants in research (collectively known as the Common Rule) became effective yesterday, January 21, 2019. We are now fully embracing all of these burden-reducing changes. Here are some highlights:

   a) **Moving from Annual to Triennial Review.** Qualifying protocols deemed by IRB to be “No Greater Than Minimal Risk” are being (or have been) converted from an annual to a triennial (i.e., every 3 years) review cycle. The conversion process involves PIs providing a short update on the status of their data collection and minor new required changes to approved consent forms. Principal Investigators (PI) are being contacted by HRPP on a rolling basis for this purpose. Once complete, a new approval letter will be issued that reflects the extended approval period.

   b) **Implementing Broad Consent for Future Data Use.** Storage and use of samples for future studies may now be eligible for exemption from IRB review. However, the process involves a separate participant “broad consent” process in parallel with tracking and monitoring provisions typically associated with established bio- or data-banking facilities. HRPP will evaluate pending guidance as it becomes available from the federal government. For now, HRPP will determine applicability on a case-by-case basis.

   c) **Adding Benign Behavioral Intervention Exemption Category.** Additional categories of research that are exempt from IRB review have now come into effect. Of particular
importance for social and behavioral researchers is the inclusion of new Exemption Category 3, which involves studies classified as “benign behavioral interventions.” To qualify, the research must involve only adults participating in brief research interventions involving the study of psychological states and processes, cognition, ideas and attitudes, or behavior. Note that studies involving physical (bodily) tasks, such as exercise or blood collection, do not qualify for this new exemption category. Common examples of benign behavioral interventions include adults solving puzzles, playing computer games, or answering survey questions. Like all human subject research (exempt or not), researchers are still required to provide information about their study to HRPP prior to beginning their study. This is most easily done via our online PROPEL tool (Purdue Research Online Portal Exemption Logic: www.irb.purdue.edu/getting-started/).

Researchers who conduct benign behavioral interventions will notice a significant decrease in review time and in the number of documents required for protocol submission. The HRPP is already accepting and reviewing applications accordingly.

### 2. Storing Research Data Using Box

Recently, Purdue’s Office of Research and Partnerships collaborated with Information Technology at Purdue (ITaP) to provide a new data storage resource for the Purdue research community. Purdue researchers now have access to Box, a cloud-based storage service that allows investigators to store and share data. HRPP/IRB will accept protocol applications that make use of Box as an acceptable means to store research data. However, please be aware that any storage of Protected Health Information (PHI) covered under HIPAA, or storage of other data with specific access parameters, will require special account set-up through ITaP prior to data storage. Note that ITaP and other campus units are currently exploring the possibility of storage options for data covered under additional regulations (e.g., export controlled data). To access Box, use your Purdue Career Account login here: [https://purdue.account.box.com/login](https://purdue.account.box.com/login)

### 3. Additional Investigator Resources

HRPP efforts in recent months follow the dual themes of (1) removing the mystery from what is necessary for an IRB protocol submission, and (2) working collegially with researchers to meet, as efficiently as possible, their regulatory obligations. In addition to offering monthly training sessions and an online Researcher Guide, updated infographics give an at-a-glance overview of the process involved in putting together an IRB application. One of the more recent tools added to our website outlines what to consider when making a study recruitment flyer. New resources will be added continuously. As you review the current resources, please feel free to submit your ideas regarding topics we should add (email irb@purdue.edu).

PIs continue to be responsible for reporting any changes to procedures, personnel, funding, or problems that occur during the course of an approved study. Please do not hesitate to reach out to the IRB should changes occur. Also, please note that all approved and currently open studies are subject to post approval monitoring by HRPP (for more on this process, go here: [https://www.irb.purdue.edu/after-approval/](https://www.irb.purdue.edu/after-approval/)). As we transition to these long-awaited regulatory changes, we will continue to look for efficiencies that can be added to our processes, without compromise to research protections. We welcome your comments and feedback as we work together to ensure the welfare of human research participants.
They steal human dignity for profit.  
Your ideas can save lives.

♀ LEARN*
Learn about the state of human trafficking in the Americas from law enforcement officials, advocacy programs and survivors. Morning session open to the public.

 subsidi

♂ HACK*
You will break into teams, put your respective disciplines to work and problem-solve through the night.

WIN-WIN
You will be mentored by faculty experts and community leaders. **Top two teams with most promising solutions will be awarded $4000 and $1500!**

TO REGISTER:
Scan the QR code or visit conf.purdue.edu/humantrafficking
polytechnic.purdue.edu/HumanTrafficking

*Food and refreshments provided.

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