EAPS WEEKLY NEWSLETTER
07 January 2019

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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

Welcome Back & Happy New Year!

EAPS COLLOQUIA

William Guenthner
University of Illinois
Thursday, January 10, 2019
3:30 p.m.
HAM 2108

http://www.eaps.purdue.edu/
EAPS CROWDFUNDING PROJECT; FORGING OUR FUTURE EARTH & ATMOSPHERIC SCIENTISTS

As part of the University’s 150th anniversary, a crowdfunding website has been created, which provides an opportunity to bolster our outreach and recruitment efforts. This project, titled “Forging Our Future Earth & Atmospheric Scientists,” will help bring high school students to campus for AP labs in earth, environmental, and atmospheric sciences.


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.

Instructions for Faculty:

Instructions for Staff:

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

GEODATA SCIENCE BI-WEEKLY SEMINAR

Starting from Spring 2019, the Geodata Science Seminar is officially scheduled from 12:30PM to 1:20PM on Wednesdays in HAMP1113.

The plan is to hold seminars bi-weekly, with the goal of building a vibrant geodata science research community on and around Purdue campus.

Occasionally, due to speakers’ availability, we might need to schedule special seminar time/location in some weeks.

On dates not scheduled for seminars, Professor Wen-Wen Tung will lead group meetings to study and get hands-on with a few chapters of “Hadoop: The Definitive Guide: Storage and Analysis at Internet Scale”. The book is available on Amazon or online free from Purdue Library. We will focus on the MapReduce compute engine and analyze the National Climate Data Center (NCDC) data in a Hadoop system. This is a good exercise for all to get familiar with distributed-parallel computing with data. No prior experience with Hadoop is necessary, but those who have taken the Divide & Recombine or Geodata Science courses can further their skills of DeltaRho here.

WHAT TO DO NEXT?

1. A Geodata Science Seminar Newslist (gds-seminar@lists.purdue.edu) has been created. If you’d like to continue receiving seminar announcements and updates on study group activities please subscribe through this link https://lists.purdue.edu/mailman/listinfo/gds-seminar

2. Students interested in joining the study group are strongly encouraged to enroll in the 1-credit course “GeoData Science Seminar - 20443 - EAPS 59100 – 078” to ensure their computational needs are met.
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.

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NASA STUDENT AIRBORNE RESEARCH PROGRAM (SARP)

The NASA Airborne Science Program announces the opportunity for highly motivated rising senior undergraduates to participate in an 8-week summer 2019 internship program in Earth system science using a NASA flying laboratory. Participants will acquire hands-on research experience in all aspects of a scientific campaign, including flying onboard the NASA DC-8 research aircraft to collect data. See the attached flyer for more information, or go to https://baeri.org/sarp/. The application deadline is January 30, 2019.

[See attached flyer for additional information]

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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]

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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.

Be sure to check the ARM campaign page for more details, including current campaigns and capabilities, and proposal due dates. Proposed deployments should focus on research that addresses the ARM mission of improving the understanding and representation of clouds and aerosols in earth system models, as well as their interactions and coupling with the Earth’s surface.

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

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**CIMMS RESEARCH SCIENTIST – WARN ON FORECAST @ UNIVERSITY OF OKLAHOMA**

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.

[See attached flyer for complete information]

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**10 PAID SUMMER INTERNSHIPS OFFERED BY NCEP**

The National Weather Service (NWS) National Centers for Environmental Prediction (NCEP) is accepting applications for its 2019 summer student internship program.

NCEP is offering up to 10 paid summer internships targeted towards current undergraduate and graduate students to work in areas that will meet the future needs of the ever-broadening weather-climate-water user community. Each student will collaborate with one or more scientists at our five centers located in College Park, MD: Climate Prediction Center, Environmental Modeling Center, NCEP Central Operations, Ocean Prediction Center, and Weather Prediction Center.

Potential projects could include the following:

- Improve understanding of forecasting problems
- Address some critical aspect of operational model development
- Create new data analysis techniques with wide application and usefulness in operational forecasting
- Develop improved forecast tools (including use of GIS)
- Conduct IT related activities, such as reviewing operational process documentation, website maintenance, and auditing websites
- Develop datasets for the Science on a Sphere
- Incorporate social science to improve communication of forecast uncertainty

Applications are due February 1, 2019. For more information and to apply, go to: https://ncepinternship.smapply.io
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.

[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 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 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 desireable.

Job ad link is here: https://www.ugajobsearch.com/postings/350129fbclid=IwAR0WH1FI7sdLzyyiPJPZuihoJcP1fF3Uq9gYjqlL-1fgjiXCOjtkhjgqM4

TENURE-TRACK FACULTY POSITION IN ATMOSPHERIC REMOTE SENSING

The Department of Atmospheric and Oceanic Sciences at McGill University is seeking outstanding applicants for a tenure-track Assistant Professor position in remote sensing of the atmosphere, the ice or the ocean surface to strengthen its leadership in remote sensing and earth system science. The successful applicant will be expected to develop an active research program, supervise graduate students, and teach a variety of undergraduate and graduate courses in the Department of Atmospheric and Oceanic Sciences and in the Earth System Science program. A relevant doctoral degree in physical sciences or engineering is required.

The preferred starting date for this position is August 1, 2019. Review of the applications will begin on January 21, 2019, and continue until the position is filled.

[For complete details see attached flyer]

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
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 freshman 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.

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.


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.

http://www.eaps.purdue.edu/
Any questions should be directed to De Bush at djbush@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.

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.
Departmental Colloquium

William Guenthner
University of Illinois

Thursday, January 10
3:30 p.m.
Room 2108/HAMP

Refreshments at 3:00 pm
Room 2201/ HAMP
NASA Student Airborne Research Program (SARP)

Summer Internship for Advanced Undergraduate STEM Majors
Research in the Earth & Atmospheric Sciences from onboard a NASA Aircraft in Southern California

The NASA Airborne Science Program announces the opportunity for highly motivated rising senior undergraduates to participate in an 8-week summer 2019 internship program (June 16-August 9) in Earth system science using a NASA flying laboratory.

The NASA Student Airborne Research Program (SARP) is funded by the NASA Ames Cooperative for Research in Earth Science and Technology (ARC-CREST) and managed by the National Suborbital Research Center (NSRC).

Participants will acquire hands-on research experience in all aspects of a scientific campaign, including flying onboard the NASA DC-8 research aircraft to collect data.

Multi-disciplinary Earth Science Research Participants will work in four multi-disciplinary teams to study surface, atmospheric, and oceanographic processes. Participants will fly onboard the NASA DC-8 research aircraft and assist in the operation of instruments to sample and measure atmospheric gases and image land and water surfaces in multiple spectral bands. Along with airborne data collection, students will participate in taking measurements at field sites.

Mission faculty and research mentors will guide participants through instrument operation, sample analysis, and data reduction. Each student will develop an individual research project from the data collected and will deliver a final presentation on their results. Many students in the past have gone on to present their research at national conferences.

Academic Background Applicants must have a strong academic background in any of the physical, chemical, or biological sciences, or engineering and an interest in applying their background to the study of the Earth system. We especially encourage applications from students majoring in Earth, environmental or atmospheric sciences and related disciplines. All participants will receive a stipend, travel costs, as well as housing and transportation during the program.

APPLICATION DEADLINE:
January 30, 2019
https://baeri.org/sarp/
Email questions to nasasarp@baeri.org

Applicants will be selected based upon:
• Excellent academic performance (GPA of at least 3.0/4.0)
• Science, Technology, Engineering or Mathematics (STEM) Major
• Evidence of interest in Earth system science and hands-on research
• Leadership qualities and ability to perform in teams
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/.

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:

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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](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](mailto:treinke@ou.edu)
ATTN: Peter Lamb Postdoctoral Fellowship
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:

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treinke@ou.edu  
ATTN: Severe Weather Radar Applications

_The University of Oklahoma is an equal opportunity/Affirmative Action employer._
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.

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The University of Oklahoma is an equal opportunity/Affirmative Action employer.
Tenure-track Faculty Position in Atmospheric Remote Sensing

The Department of Atmospheric and Oceanic Sciences at McGill University is seeking outstanding applicants for a tenure-track Assistant Professor position in remote sensing of the atmosphere, the ice or the ocean surface to strengthen its leadership in remote sensing and earth system science. The successful applicant will be expected to develop an active research program, supervise graduate students, and teach a variety of undergraduate and graduate courses in the Department of Atmospheric and Oceanic Sciences and in the Earth System Science program. A relevant doctorate degree in physical sciences or engineering is required.

The successful candidate is expected to pursue research in remote sensing of the atmosphere, the ice or the ocean surface with a strong modelling and/or observational component. The range of possible research areas is broad and includes but is not limited to: 1) the development of retrieval methods for studies of atmospheric composition, temperature, wind, precipitation, air-sea interactions, surface ocean temperatures and circulation 2) the use of measurement data for the characterization and understanding of processes affecting weather, air quality, climate, sea ice and 3) the development and validation of remote sensing instruments. The Department of Atmospheric and Oceanic Sciences has strong ties with the Departments of Mathematics and Statistics, Chemistry, and with the Earth System Science Program. Access to high performance computing is available through Compute Canada.

McGill University is an English-speaking university located in Montreal, one of North America’s most cosmopolitan cities. For more information about McGill University and the Department of Atmospheric and Oceanic Sciences, please see http://www.mcgill.ca/meteo

Qualified candidates are invited to submit an application, including a curriculum vitae, a statement of research interests, a statement of teaching interests, and names and contact information for three references. Following a preliminary screening, we will contact the references directly. Applications can be sent via email in pdf format to remotesensing.aos@mcgill.ca or by post to Dr. John R. Gyakum, Chair, Department of Atmospheric and Oceanic Sciences, McGill University, 805 Sherbrooke Street West, Montreal, QC H3A 0B9, Canada (Telephone: 1-514-398-3760; fax: 1-514-398-6115).

The preferred starting date for this position is August 1, 2019. Review of the applications will begin on January 21, 2019, and continue until the position is filled.

McGill University hires on the basis of merit and is strongly committed to equity and diversity within its community. We especially welcome applications from visible minority group members, women, Indigenous persons, persons with disabilities, persons of minority sexual orientations and gender identities, and others with the skills and knowledge to productively engage with diverse communities. We encourage members of equity-seeking groups to self-identify within their letter of intent in their application. Persons with disabilities who anticipate needing accommodations for any part of the application and hiring process may contact, in confidence, Professor Angela Campbell, Associate
Provost (Equity and Academic Policies) at (514) 398-1660 or at Angela.Campbell@mcgill.ca. Associate Provost Campbell can also answer questions related to equity, diversity and inclusion, or privacy concerns the candidate may have related to self-identifying. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.