

# EAPS WEEKLY NEWSLETTER

31 March 2021

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## DEPARTMENT NEWS

### EAPS COLLOQUIA

Again this semester all colloquia can be accessed virtually and we will continue to have opportunities for students and faculty to meet with speakers individually and in small groups; signups to meet with speakers and more details will be available closer to the date of their talk.

April 1, 2021

Speaker: Melisa Diaz

“Geochemistry of soils from the Shackleton Glacier region, Antarctica”

3:30 MP

Remote

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## Earth Atmospheric Planetary Sciences



### EAPS MEETINGS & EVENTS

#### **EAPS FACULTY MTG.**

Tuesday's 3:00-5:00/pm

Remote

April 13

May 4

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#### **PRIMARY COMMITTEE MTG.**

April 6

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#### **READING DAY**

Tuesday, April 13

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#### **COMMENCEMENT**

Friday, May 14

Saturday, May 15

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#### **EAPS K-12 OUTREACH CALENDAR OF EVENTS**

<http://www.eaps.purdue.edu/outreach/Outreach News.html>

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#### **REPORT YOUR OUTREACH AND ENGAGEMENT ACTIVITIES**

<http://bit.ly/EAPSOut>

## OUTREACH NEWS

Do you have part of a recorded lecture that would work for high school students? Do you have an idea for a virtual lab for K-12? Do you have cookies? Are you including a broader impacts section for your next grant? Contact our K-12 Outreach Coordinator, Steven Smith ([mrsmith@purdue.edu](mailto:mrsmith@purdue.edu)).

The Purdue University Superheroes of Science Podcast is on most podcast players as well as YouTube! Check out some of the latest episodes, <https://www.youtube.com/c/SuperheroesofScience>.

Facebook <https://www.facebook.com/EAPS.out>  
<https://www.facebook.com/PurdueSOS>  
Twitter (@Purdue SOS)  
EAPS departmental outreach web page:  
<http://www.eaps.purdue.edu/outreach/index.html>.



## CAREERS IN METEOROLOGY WEBINAR

Interested in a career in radar meteorology? Want to learn more about how radar can be a tool for a successful path in research, private industry, forecasting, government jobs, and academia? The American Meteorological Society's Committee for Radar Meteorology invites undergraduate students, graduate students, and early career professionals to a virtual panel on:

**31 March 2021 from 1-3 p.m. CDT.**

Five scientists will reflect on their careers thus far, how radar has been a foundational part of their journey, and will be available to answer your questions about careers in radar meteorology.

### **Panelists**

Dr. Susan Avery -- Woods Hole Oceanographic Institution

Dr. Chris Weiss -- Texas Tech University

Dr. Kevin Petty -- The Weather Company

Dr. Paul Reasor -- Hurricane Research Division

Amy Daniel -- Radar Operations Center

Join us using at the following link:

[ametsoc.org/WebinarRadar](http://ametsoc.org/WebinarRadar)

Questions? Addison Alford -- [addisonalford@ou.edu](mailto:addisonalford@ou.edu),  
Ellie Venteicher -[Ellie.Venteicher@ttu.edu](mailto:Ellie.Venteicher@ttu.edu), Scott Ellis -  
[sellis@ucar.edu](mailto:sellis@ucar.edu)

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## 2021 NASA PLANETARY SCIENCE SUMMER SCHOOL APPLICATIONS DUE APRIL 1

Offered by the Jet Propulsion Laboratory in Pasadena, California, PSSS is a three-month long career development experience to learn the development of a hypothesis-driven robotic space mission in a concurrent engineering environment while getting an in-depth, first-hand look at mission design, life cycle, costs, schedule, and the trade-offs inherent in each.

Science and engineering doctoral candidates, recent Ph.D.s, postdocs, certain engineering MS students, and junior faculty who are U.S. Citizens or legal permanent residents (and a very limited number of Foreign Nationals from non-designated counties) are eligible. Applicants from diverse backgrounds are particularly encouraged to apply.

Session 1: May 24--Aug 6

Session 2: May 24--Aug 20

With workload of a rigorous 3-hour graduate-level course, participants spend the first 10 weeks in preparatory webinars acting as a science mission team, and spend the final culminating week mentored by JPL's Advance Project Design Team to refine their planetary science mission concept design and present it to a mock expert review board. The culminating week is typically at JPL; however, in 2021 it is likely to be virtual due to COVID-19 pandemic conditions.

For more information and to apply, visit [go.nasa.gov/missiondesignschools](http://go.nasa.gov/missiondesignschools).

Warm regards,

Sarah Valencia

LEAG Early Career Representative

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## SEA GRANT (ILLINOIS/INDIANA) 2021 SUMMER STUDENT INTERNSHIP PROGRAM

Illinois-Indiana Sea Grant announces the following positions for the 2021 Summer Student Internship Program. The paid internships can include research, communications and outreach components.

Applicants may have the opportunity to participate in activities outside of their specific internship duties. For more information on the internship program and position descriptions,

please visit: <https://iiseagrant.org/about/career-opportunities/> See attached pdf for more detailed information.

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**CIMMS FACETS RESEARCH SCIENTIST**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently seeking a Research Scientist to provide scientific and meteorological expertise for collaborative work to advance the National Severe Storm Laboratory's (NSSL) Forecasting a Continuum of Environmental Threats (FACETs) initiative. The FACETs concept is broad, but an important component is its envisioned role as the NWS delivery mechanism for the next generation forecast and warning system. This position will focus on development of calibrated severe weather forecast guidance for experimental real-time applications, as well as archival and verification of that guidance to measure progress over time. The forecast guidance will include operational and experimental guidance that NWS forecasters use to inform issuance of operational NWS/Storm Prediction Center (SPC) Outlook and Watches, experimental Warn-on-Forecast-generated probabilistic guidance that is used for Warning-scale products, and other statistical AI/Machine-Learning derived products based on gridded radar products and Probabilistic Hazard Information (PHI) tools under development. Importantly, the position also involves establishing performance metrics to measure the skill of these outputs and track improvement over time. This position is within NSSL's Forecast Research & Development Division (FRDD), but will involve close collaborative work with colleagues in the Warning Research & Development Division (WRDD), particular the WRDD scientists involved with Multi-Radar Multi-Sensor (MRMS) and Probabilistic Hazard Information (PHI) products. Outside of NSSL, there will be close collaborations with the SPC and local weather forecasting offices of the NWS. A successful candidate for this position will need knowledge in AI/ML algorithms, experience working and collaborating with operational forecasting centers in formulating AI/ML-based hazardous weather forecasting tools and experience in verification and validation of severe weather forecasts. The position will be based at 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 flier for more information]

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**CIMMS POST-DOCTORAL RESEARCH ASSOCIATE – LIGHTNING**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently seeking a Post-Doctoral Research Associate to collaborate on lightning and storm electrification research with the National Severe Storms Laboratory (NSSL). NSSL has made world-class, innovative observations of storm electrification and lightning for more than 40 years. The incumbent is expected to work as part of this team deploying new instrumentation in the field. This position will focus on (1) mobile Lightning Mapping Array (LMA) data collection and analysis for field programs such as VORTEX-SE and TORUS and (2) the integration of lightning data from multiple platforms, including the GOES-Geostationary Lightning Mapper (GLM), within the Multi-Radar Multi-Sensor (MRMS) platform.

[Flier attached with additional information]

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**POSTDOCTORAL APPOINTEE – WIND ENERGY RESOURCE MODELER**

Argonne National Laboratory has a new Postdoctoral Appointee opportunity focusing on wind energy resource modeler. This role will be a part of their EVS – Environmental Sciences division under the direction of Rao Kotamarthi. This role will involve methodological and applied research related to wind energy resource characterization for onshore and offshore situations. In particular, the focus will be on high-resolution mesoscale atmospheric modeling, and ocean-atmosphere coupling.

Argonne National Laboratories are looking for a candidate that has completed their PhD within the last three years, or will be completing this summer.

Follow the following link for more information:  
<https://bit.ly/3kizZLd>

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### **UAH ATMOSPHERIC AND EARTH SCIENCE CLINICAL ASSISTANT PROFESSOR POSITION**

The Atmospheric and Earth Science (AES) Department at the University of Alabama in Huntsville (UAH) is in the process of hiring a Clinical Assistant Professor in atmospheric and Earth systems science. The main duties of this position will be undergraduate teaching, undergraduate and graduate academic advising and mentoring, and serving as a liaison between the AES Department and the on-site NASA Marshall Space Flight Center Short-term Prediction Research Transition Center (SPoRT) research group. The ideal candidate will have educational, professional and research backgrounds in the atmospheric sciences, with a strong understanding of satellite remote sensing and related geospatial/Earth systems science experience. Minimum requirements are a PhD in atmospheric or a closely related atmospheric-Earth science subject, or that the candidate will be receiving their PhD degree within one year of beginning the position in August 2021 in advance of the Fall 2021 semester. Applicants will be encouraged to collaborate in the summer with the various research programs within the National Space Science and Technology Center (NSSTC) on the UAH Campus, including those in NASA's Marshall Space Flight Center and the National Weather Service, however the main purpose of the position is teaching and advising. This is a great opportunity for an early career scientist, and a colleague interested in teaching, having a hand in developing a rich undergraduate program, and helping mentor graduate students.

The full posting can also be found at  
<https://www.uah.edu/hr/careers/faculty-careers>.

[See attached flier for information]

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### **AGU SPRING RESEARCH GRANTS**

Opening February 10, 2021, Close mid-April

AGU offers a suite of [research grants](#) for students to help fund their research and studies, including: [June Bacon-Bercey Scholarship](#) (NEW) - supports women students with a demonstrated interest in atmospheric sciences and intersections with meteorology.

[Horton Research Grant](#) - supports Ph.D. candidates in hydrology or water resources research.

[GSSI Student Grant](#) - awarded to AGU student members in the Near Surface Geophysics Section. [Paros Scholarship](#) - recognizes outstanding graduate students demonstrating interest in geophysical instrumentation and precision field measurements.

[Dewan Young Scientist Scholarship](#) - supports graduate students studying atmospheric science and space physics.

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### **2021 NASA PLANETARY SCIENCE SUMMER SCHOOL APPLICATIONS OPEN**

2021 NASA Planetary Science Summer School  
**Applications Open Through April 1st.**

Offered by the Jet Propulsion Laboratory in Pasadena, CA, PSSS is a 3-month long career development experience to learn the development of a hypothesis-driven robotic space mission in a concurrent engineering environment while getting an in-depth, first-hand look at mission design, life cycle, costs, schedule and the trade-offs inherent in each.

Science and engineering doctoral candidates, recent PhDs, postdocs, and junior faculty who are U.S. Citizens or legal permanent residents (and a very limited number of Foreign Nationals from non-designated countries) are eligible. Applicants from diverse backgrounds are particularly encouraged to apply.

**Session 1: May 24-Aug 6**  
**Session 2: May 24-Aug 20**

With workload of a rigorous 3-hour graduate-level course, participants spend the first 10 weeks in preparatory webinars acting as a science mission team, and spend the final culminating week mentored by JPL's Advance Project Design Team to refine their planetary science mission concept

design and present it to a mock expert review board. The culminating week is typically at JPL, however in 2021 it is likely to be virtual due to Covid-19 pandemic conditions.

<http://go.nasa.gov/missiondesignschools>

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### **HALF TIME POST DOC OPPORTUNITY WITH CIMMS - UNIVERSITY OF OKLAHOMA**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) is currently looking for a half-time (20 hours/week) Post-Doctoral Research Associate working in the National Weather Center (NWC). The NWC is a highly collaborative operational, research, and academic environment containing a number of NOAA and OU organizations.

Responsibilities of the position include:

- The primary task consists of applications of both radar and satellite data on natural hazards such as drought and floods.
- An additional task of this project is to support the further development of severe thunderstorm applications based on NASA Atmospheric Infrared Sounder (AIRS) data to develop joint ground radar-satellite research.

[See attached flier for complete details]

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### **PHD LEVEL RESEARCHER WITH CIMMS**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) working collaboratively with NOAA's National Severe Storms Laboratory (NSSL), is currently looking for a highly-qualified Research Scientist to provide scientific and technological expertise in the combined analysis of airborne NOAA P-3 tail Doppler radars (TDRs) with ground-based radars to improve process understanding of severe deep moist convection. The Research Scientist will provide leadership in the development and application of radar editing and analysis tools for use in research applications at CIMMS/NSSL, primarily for the use of performing

process studies to better understand severe weather phenomena (tornadoes, hail, high wind) in supercells and quasi-linear convective systems observed during VORTEX-SE and TORUS. This position will include participation in the field for upcoming research projects (e.g., TORUS-2022) and will require the Research Scientist to integrate multi-radar airborne/ground-based analyses and retrievals, surface and airborne in situ, sounding, windsonde, and surface profiler and airborne compact Raman lidar observations into these process studies. The incumbent will work directly with research scientists at NSSL and will be encouraged to collaborate actively with scientists from other institutions with expertise in radar-based severe weather process studies (e.g., the OU School of Meteorology Biggerstaff Research Group). The position will be based at NSSL in Norman, OK within the National Weather Center (NWC), a highly collaborative forecasting, research, and academic environment containing a number of NOAA and OU organizations.

[For additional information see attached flier]

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### **CIMMS REAL-TIME MODELING RESEARCH FELLOW – 100% REMOTE WORK**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently seeking a Half-Time (0.5FTE) Research Fellow to oversee and maintain real-time model forecast systems for NOAA's National Severe Storms Laboratory (NSSL). Specifically, these systems include, (1) the NSSL-WRF, which is a permanent experimental modeling framework providing storm-scale guidance to the Storm Prediction Center (SPC) and serving as a testing ground developing storm-scale model diagnostics, (2) the NSSL-FV3, a limited area version of the Finite Volume Cubed Sphere model, which NOAA has selected as the dynamics core for its Unified Forecasting System initiative, and (3) the Warn-on-Forecast System (WoFS), a rapidly updating, convection-allowing ensemble being developed by NSSL to extend hazardous weather warning lead times and provide probabilistic forecast guidance within the watch to warning (i.e., 0.5 – 6-h) time frame. The NSSL-WRF and NSSL-FV3 are run daily on Jet, a NOAA High-Performance Computing (HPC) cluster, while WoFS is an on-demand system run



internally at NSSL when significant severe weather is expected. However, the incumbent would lead implementation of WoFS on Jet. All job duties may be performed remotely.

[See attached flier for additional information]

**CIMMS RESEARCH ASSOCIATE AT THE STORM PREDICTION CENTER – SATELLITE PROVING GROUND LIAISON**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) is currently looking for a Research Associate to work with the NOAA/NWS Storm Prediction Center (SPC). This position will be located at the SPC in Norman, OK, which is housed within the National Weather Center (NWC), a highly collaborative operational, research, and academic environment containing a number of NOAA and OU organizations. Here you will work directly with development meteorologists and operational forecasters at the SPC and will have opportunities to interact with NOAA and academic scientists within the NWS, NOAA's Satellite and Information Service (NESDIS), and the broader meteorological community.

[Flier attached for additional information]

**ASSISTANT PROFESSOR IN ATMOSPHERIC AND CLIMATE SCIENCE**

The Department of Geography at the University of Florida, College of Liberal Arts and Sciences, invites applications for two (2) full-time, nine-month, tenure-accruing positions, at the level of Assistant Professor to begin August 16, 2021. The department seeks candidates with expertise in Artificial Intelligence (AI) to study Atmospheric and Climate Science (meteorology, weather forecasting and prediction, extreme events, climate change and climate change modeling, etc.) and will complement existing strengths in the department and across campus.

Primary responsibilities include 1) the development of a high-quality research portfolio employing AI techniques (e.g., artificial neural networks, deep learning, machine learning, computer vision,

reinforcement learning) in Atmospheric and/or Climate Science, 2) a 2-1 teaching assignment where developed undergraduate and graduate courses contribute to our proposed new major in meteorology and/or certificate in AI and Atmospheric Science along with mentoring students, including those from underrepresented backgrounds, and 3) performance of administrative/service duties commensurate with a tenure-track appointment in the Department.

For additional information go to link: <https://facultyjobs.hr.ufl.edu/posting/82837>

**PROJECT GEOLOGIST**

Lord and Winter is hiring a full time Project Geologist based out of our Franklin, Tennessee Office. The ideal candidate would live in Middle Tennessee and have a Bachelor's Degree in

Geology and a Master's Degree in Geology with emphasis in hydrogeology or geochemistry. Experience level required is 2 to 10 years having obtained Professional Geologist Licensure (PG) or Geologist In Training (GIT) or Professional Geologist (PG) through ASBOG. The candidate must be entrepreneurial, be self-motivated, work successfully unsupervised, and be adept at electronic data collection including use of cloud based administration systems. Knowledge of contaminant fate and transport, human health risk assessment, and site investigation and remediation guidance is a plus.

Anticipated project work will include remediation planning and management, Phase II Site Investigations, and Phase I Site Assessments. Work will include sample collection, soil description using the USCS system, interpretation of analytical data, and report writing. The work is expected to include frequent travel, generally within the Southeastern US. The work can be physically challenging with site investigations over several hundred acres which may be required to be completed on foot. Non-field work will be completed in a home-based office.

The successful candidate will qualify for a full time (40 hour) Lord and Winter Professional Scientist Position with benefits which may include quarterly bonus, vacation, healthcare, dental care, vision

care, short-term disability, life insurance, and contributions to an employer-matched individual retirement plan.

Environmental Services firm in the Southeastern United States. Lord and Winter is headquartered in Nashville, Tennessee with offices in Franklin, Tennessee; Baton Rouge, Louisiana; and Austin, Texas. We have experienced steady growth since our founding in 2013. Lord and Winter is sought out by commercial and residential developers, public utility providers, and the energy industry due to our niche expertise in environmental remediation, environmental permitting, and environmental compliance. Lord and Winter is an equal opportunity employer. Find out more about Lord and Winter at [www.lordandwinter.com](http://www.lordandwinter.com). Salary commensurate with experience.

For information and to apply go to the following link: <https://www.ziprecruiter.com/jobs/lord-and-winter-a826f4e6/project-geologist-56443b4c>

### **AMERICAN METEOROLOGICAL SOCIETY (AMS) GRADUATE FELLOWSHIPS AND UNDERGRADUATE SCHOLARSHIPS**

The American Meteorological Society (AMS) administers an array of graduate fellowships and undergraduate scholarships with the support of its members, corporations, and government agencies nationwide. The fellowships and scholarships range from \$1,000 to \$25,000 and help further the education of outstanding graduate and undergraduate students pursuing a career in the atmospheric and related oceanic or hydrologic sciences.

Applications for the 2021 AMS Scholarships and Fellowships are now open!  
<https://www.ametsoc.org/index.cfm/ams/information-for/students/ams-scholarships-and-fellowships/>

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### **MS AND PHD EAPS STUDENTS BROADEN YOUR GRAD EXPERIENCE**

For those MS and PhD students in EAPS that would like to broaden their graduate experiences while at Purdue, EAPS is affiliated with the

Computational Interdisciplinary Graduate Programs (CIGP) at Purdue. While working toward a graduate degree in EAPS, graduate students can also have a concentration (specialization) in the area of Computational Science and Engineering (CSE).

For more information see:  
<https://www.purdue.edu/gradschool/cigp/index.html>

A short video about the CIGP/CSE program can be found at:  
<https://www.youtube.com/watch?v=8qo9ykKtduQ>

### **EAPS GRAD STUDENT RESEARCH OPPORTUNITIES**

If you are interested in an EAPS grad research opportunity, go to the following updated link for information:  
[https://www.eaps.purdue.edu/for\\_students/graduate/grad-research-opp.html](https://www.eaps.purdue.edu/for_students/graduate/grad-research-opp.html)

### **POSTDOCTORAL APPOINTEE REGIONAL SCALE CLIMATE MODELING**

This post-doctoral appointment in the Environmental Science Division of the Argonne National Laboratory will involve methodological and applied research in regional scale climate modeling. In particular, the focus will be on high-resolution dynamic downscaling, hydrological modeling, impacts and assessments. For this position, we are looking for applicants with experience in regional scale models of hydrology, (e.g. WRF-Hydro). Expertise in working with large datasets on high-performance computing resources is required.

Please use the following link to directly apply:  
<https://bit.ly/32RrPkE>

Applications will be considered as they arrive and with a likely start date in October 2020. This will be a two-year position. The successful applicant will be required to provide 3 letters of reference and university transcripts.

For complete information go to link:  
<https://bit.ly/32RrPkE>

## **PRE-DOCTORAL APPOINTEE**

This pre-doctoral appointment in the Environmental Science Division of the Argonne National Laboratory will involve providing technical support to scientific staff for methodological and applied research in atmospheric science in projects related to aerosol-cloud interactions and regional scale climate modeling. For this position, we are looking for applicants with experience in the analysis of large weather/atmospheric datasets, running atmospheric models and analysis of the model output.

For complete information go to link:  
<https://bit.ly/3bEORz8>

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## **CIMMS PETER LAMB POSTDOCTORAL FELLOWSHIP**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma has established the Peter Lamb Postdoctoral Fellowship that is offered annually. 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. This collaborative basic and applied research includes the study of mesoscale and storm-scale meteorological phenomena to help produce better forecasts and warnings that save lives and property and the investigation of 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 ranging in size from cloud nuclei to multi-state areas.

Applications must include a 3-4 page novel proposal developed by the applicant that addresses at least one of the 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. Applicants are highly encouraged to contact a CIMMS scientist to receive guidance when drafting a research proposal. 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.

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, 2021** 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.

[See Attached flier for more information]

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## **NOAA HOLLINGS UNDERGRADUATE SCHOLARSHIP**

The 2021 Ernest F. Hollings Undergraduate Scholarship application period is now open — apply today!  
Link: <https://www.noaa.gov/office-education/hollings-scholarship>



**PURDUE ASIAN AMERICAN AND ASIAN**  
**RESOURCE AND CULTURAL CENTER VIRTUAL**  
**LUNCH AND LEARN**

Please join Purdue Asian American and Asian Resource and Cultural Center (AAARCC) in our weekly Spring 2021 Virtual Lunch & Learn Series to discuss research, teaching/learning, and experiences of diverse Asian and Asian American communities. This event is free and open to all.

To register for all segments of the Lunch & Learn Series: <https://tinyurl.com/y2rkj7z7>

For more information on the Lunch and Learn program:  
<https://www.purdue.edu/aaarcc/events/Spring%202021.php>

Career Prep, Academic Career Track, Industry Career Track, Wellness, Research & Ethics, Communication, Grantsmanship, Post-Docs, & Diversity.

All Spring 2021 Workshops are virtual.

New Workshops are added regularly! For registration & additional information, visit <http://bit.ly/purdueworkshops>

[See attached flier for more information]

**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 Cheryl Pierce (pierce81@purdue.edu) **by 5:00pm on Thursday of each week for inclusion in the Monday issue.**

If it is in the newsletter, we assume know about it and no other reminders are needed. For answers to common technology questions and the latest updates from the EAPS Technology Support staff, please visit: [http://www.eaps.purdue.edu/resources/information\\_technology/index.htm](http://www.eaps.purdue.edu/resources/information_technology/index.htm).

Also, as an additional resource for information about departmental events, seminars, etc., see our departmental calendar at <http://www.EAPS.purdue.edu/events-calendar.html>





# 2021 Summer Student Internship Program

Illinois-Indiana Sea Grant announces the following positions for the 2021 Summer Student Internship Program. The paid internships can include research, communications and outreach components. Applicants may have the opportunity to participate in activities outside of their specific internship duties. For more information on the internship program and position descriptions, please visit: <https://iiseagrant.org/about/career-opportunities/>

Internships are available in the following areas:

## **Climate Communications, Great Lakes Education, Sustainable Communities, Water Quality, Youth Education**

Interns will be paid \$15 per hour. Interns will be student employees of Purdue University or University of Illinois. Interns will be work up to 37.5 hours per week for 12 weeks, depending on the position. These positions may be remote, in-person or a hybrid depending on the guidelines from Purdue University and the University of Illinois. Some evenings and/or weekends may be needed, and IISG will cover the cost of transportations. Interns are responsible for the cost of housing plus transportation to and from their work place.

**Application packets are due by April 5, 2021.** Successful applications will be notified of their acceptance in April. Internships are expected to start in May and end in August.

### **Eligibility**

- Undergraduates currently enrolled in a U.S. institution of higher learning, and enrolled for the Fall 2021 semester.
- Students applying to the University of Illinois positions must be a rising junior or senior
- Graduate students are not eligible.
- Applicants should be U.S. citizens, permanent residents or have an active F-1 visa.
- Previous IISG interns who have participated in the Summer Internship program are not eligible.

The people of Illinois-Indiana Sea Grant value diversity, equity, and inclusion in both our organization and the communities we serve. Therefore, we strive to make access to research, outreach, education, and employment opportunities available to everyone, regardless of race, color, religion, place of origin, gender, sexual orientation, age, socio-economic status, disability, or veteran status. The full IISG values statement can be found at <https://iiseagrant.org/about/about-us>

### **Application**

Send all application materials via email to Angela Archer, [amcbride@purdue.edu](mailto:amcbride@purdue.edu), and include "2021 IISG Summer Internship" in the subject line. All questions should be directed to Ms. Archer via email or 765-496-3722. **Save the following documents in a single PDF file:**

- Curriculum vitae detailing education and work experiences (2 pages maximum)
- Goal statement emphasizing your interest in the Great Lakes and the internship program. (500 words or less)
- Ranked preference of the internship positions
- Copy of unofficial transcript(s)
- One letter of recommendation, include in your application or can be sent directly to [amcbride@purdue.edu](mailto:amcbride@purdue.edu) on your behalf

# Summer Student Program Position Descriptions

## Climate Communications Intern

**IISG Specialist: Veronica Falls, Climate Extension Specialist**

The intern will assist in creating several resources that were identified as being high priority needs during the [2020 IISG Virtual Lake Levels Workshops](#). Workshop participants recognized that developing several reference lists and communication products were necessary in order to improve upon communication efforts about lake level change and variability in southwestern Lake Michigan.

The intern will assist in researching, developing, and designing several of the products that are described in the workshop report. This will involve regular communication with some members of the IISG team, such as the Research Coordinator and members of the communications team, as well as other relevant stakeholders and organizations, i.e. Army Corps of Engineers, Coastal Management Programs, etc. This position is unlikely to require any travel and will be completed virtually.

In addition, the intern will have the opportunity to attend IISG staff meetings as well as other potential professional development and networking opportunities.

The successful applicant will be an employee of University of Illinois Champaign-Urbana.

**Qualifications:** The intern should have strong writing, reporting, and organizational skills. The ability to work independently, communicate effectively, and creatively synthesize and deliver information is preferred. (Virtual) communication and engagement with various Great Lakes stakeholders is expected. Experience with design is desired but not required. Interest in resiliency around the Great Lakes is preferred but not necessary.

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## Great Lakes Education Intern

**IISG Specialists: Kristin TePas, Community Outreach Specialist, and Irene Miles, Strategic Communication Coordinator**

This internship will help support Great Lakes educational programming efforts for IL-IN Sea Grant. The intern will assist the specialist with planning and conducting remote professional-learning workshops for educators on Great Lakes research, as well as on water quality and environmental justice. In addition, the intern will develop short informative videos on Great Lakes topics using existing video clips of scientists answering student-derived questions. Also, the intern will organize videocall connections between scientists and students/classrooms, as requests arise, which may require working with scientists on how best to convey their research to a lay audience. The intern should be comfortable working independently and remotely as the position may require working from home.

The successful applicant will be an employee of University of Illinois Champaign-Urbana.

**Qualifications:** Candidates should have experience with or interest in environmental education, interest in the Great Lakes, ability to work independently and remotely, with strong communication and organizational skills.

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## Sustainable Communities Extension Intern

**IISG Supervisor: Kara Salazar, Assistant Program Leader and Extension Specialist for Sustainable Communities**

The student intern will support state-wide sustainable communities extension programming efforts (<https://ag.purdue.edu/extension/scep>) for Purdue Extension and the Illinois - Indiana Sea Grant (IISG) College Program. Working with the Assistant Program Leader and Extension Specialist for Sustainable Communities and the Community

Planning Specialist, the intern will collaboratively develop extension education and training materials (fact sheets, excerpts of guide books, web pages, online modules, reports, database updates) related to public spaces, rain gardens, land use, and environmental planning topics. The intern will also interact with community groups and program partners through meetings, workshop/program delivery, and trainings in collaboration with extension specialists. Community engagement will be online, in person, or a hybrid approach depending on COVID-19 restrictions. Occasional travel with program teams may be required for program delivery, depending on travel status policies. Opportunities for professional development will be offered as available.

The successful applicant will be an employee of Purdue University.

**Qualifications:** Applicants should have interest in natural resources management, planning, community development, and developing and delivering education and outreach programs for diverse stakeholder groups. A background in natural resource sciences, social science, environmental planning or policy or a related field with strong verbal and written communication skills is desired.

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## Water Quality Outreach Intern

**IISG Specialist: Eliana Brown**

Intern will work to reduce Illinois' contribution to the Gulf of Mexico hypoxic zone (aka "dead zone") via the Illinois Nutrient Loss Reduction Strategy (NLRS). Primary responsibilities will include helping edit the Illinois NLRS biennial report, attending (virtual) meetings with environmental groups, agriculture commodity groups, and water agencies, and posting on the Illinois NLRS social media accounts, among other tasks.

**This position is for 8 weeks at 30 hours per week. Start date is flexible.**

The successful applicant will be an employee of University of Illinois Champaign-Urbana.

**Qualifications:** Candidates should have strong reporting and writing skills, good organizational skills, ability to work independently, and experience making graphs in Excel, and social media. Enthusiasm for learning about the Gulf of Mexico hypoxic zone and its solutions.

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## Youth Education Intern

**IISG Specialist: Megan Gunn, Recruitment and Outreach Specialist**

This internship will help support educational programming efforts for IL-IN Sea Grant such as a Lake Michigan curriculum development, future IISG projects, and the Research and Extension Experiences for Undergraduates (REEU) with the Department of Forestry and Natural Resources. Primary responsibilities will include helping to develop curriculums for middle and high school classrooms, helping to plan a field trip, editing and creating videos, and posting on social media.

**This position will start on May 10 and end on July 2.** Depending on grant funds, the position could be extended.

The successful applicant will be an employee of Purdue University.

**Qualifications:** Applicants should have interest in natural resource or environmental sciences and developing and delivering education and outreach programs for youth audiences. Videography experience is preferred. Applicants should be able to work independently, be organized and motivated to learn.



Interested in a career in radar meteorology? Want to learn more about how radar can be a tool for a successful path in research, private industry, forecasting, government jobs, and academia?

*The American Meteorological Society's  
Committee for Radar Meteorology invites*

*undergraduate students, graduate students, and early career  
professionals to a virtual panel on:*

***31 March 2021 from 1-3 p.m. CDT.***

Five scientists will reflect on their careers thus far, how radar has been a foundational part of their journey, and will be available to answer your questions about careers in radar meteorology.

**Panelists**

Dr. Susan Avery – Woods Hole Oceanographic Institution

Dr. Chris Weiss – Texas Tech University

Dr. Kevin Petty – The Weather Company

Dr. Paul Reasor – Hurricane Research Division

Amy Daniel – Radar Operations Center

**Join us using at the following link:**

**[ametsoc.org/WebinarRadar](https://ametsoc.org/WebinarRadar)**

Questions?

Addison Alford – [addisonalford@ou.edu](mailto:addisonalford@ou.edu), Ellie Venteicher -  
[Ellie.Venteicher@ttu.edu](mailto:Ellie.Venteicher@ttu.edu), Scott Ellis - [sellis@ucar.edu](mailto:sellis@ucar.edu)



**PURDUE UNIVERSITY**  
**Department of Earth, Atmospheric, and Planetary**  
**Sciences Colloquia – Spring 2021**  
**Thursdays at 3:30 PM,**  
**REMOTE (unless noted)**

Jan. 21	Andy Czaja, University of Cincinnati	Host: Briony Horgan
Jan. 28	Zheng Wu, ETH Zurich	Host: Funning Li
Feb. 4	Andrew Bunker, University of Pittsburgh	Host: Wenjing Wang
Feb. 11	Lijun Liu, University of Illinois at Urbana-Champaign	Host: Xiaotao Yang
<del>Feb. 18</del>	<del>Meena Balgopal, Colorado State University</del>	<del>Host: Erika Foster</del>
Feb. 25	Julia Cisneros, University of Illinois at Urbana-Champaign	Host: Marissa Tremblay
March 2	Meena Balgopal, Colorado State University	Host: Erika Foster
March 4	Ryan Fogt, Ohio University	Host: Connor Belak
March 11	Sara Port, NASA Glenn	Host: Alexander Kling/ Noel Scudder
<b>March 18</b>	<b>READING DAY</b>	
March 25	Leena Mavis Cyclic, University of Nevada Las Vegas	Host: Dara Laczniak
April 1	Melisa Diaz, Woods Hole Oceanographic Institution	Host: Marrison Tremblay
April 8	Alejandro Soto, Southwest Research Institute	Host: Alexandria Johnson
April 15	Angela Dapremont, Georgia Institute of Technology	Host: Ali Bramson
April 22	Melissa Berke, Notre Dame	Host: Lisa Welp
April 29	Osinachi Ajoku, UCSD/National Center for Atmospheric Research	Host: Matthew Huber
May 6	Fred Ciesla, University of Chicago	Host: Michelle Thompson

## **CIMMS FACETs Research Scientist**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently seeking a Research Scientist to provide scientific and meteorological expertise for collaborative work to advance the National Severe Storm Laboratory's (NSSL) Forecasting a Continuum of Environmental Threats (FACETs) initiative. The FACETs concept is broad, but an important component is its envisioned role as the NWS delivery mechanism for the next generation forecast and warning system. This position will focus on development of calibrated severe weather forecast guidance for experimental real-time applications, as well as archival and verification of that guidance to measure progress over time. The forecast guidance will include operational and experimental guidance that NWS forecasters use to inform issuance of operational NWS/Storm Prediction Center (SPC) Outlook and Watches, experimental Warn-on-Forecast-generated probabilistic guidance that is used for Warning-scale products, and other statistical AI/Machine-Learning derived products based on gridded radar products and Probabilistic Hazard Information (PHI) tools under development. Importantly, the position also involves establishing performance metrics to measure the skill of these outputs and track improvement over time. This position is within NSSL's Forecast Research & Development Division (FRDD), but will involve close collaborative work with colleagues in the Warning Research & Development Division (WRDD), particular the WRDD scientists involved with Multi-Radar Multi-Sensor (MRMS) and Probabilistic Hazard Information (PHI) products. Outside of NSSL, there will be close collaborations with the SPC and local weather forecasting offices of the NWS. A successful candidate for this position will need knowledge in AI/ML algorithms, experience working and collaborating with operational forecasting centers in formulating AI/ML-based hazardous weather forecasting tools and experience in verification and validation of severe weather forecasts. The position will be based at 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. Develop severe weather forecasting guidance with emphasis on AI/Machine-Learning for experimental real-time applications, and establishment of an archive.
2. Develop ML interpretability techniques that can be used in real-time by forecasts to determine how the ML algorithm is arriving at its predictions.
3. Establish performance metrics to measure the skill of severe weather forecasting guidance over time.
4. Collaborate with NOAA testbeds, especially the Hazardous Weather Testbed, to design real-time forecasting experiments using newly developed, AI/ML-based hazard guidance, and lead/organize post-experiment evaluations.
5. Contribute to science publications and attend off-site conferences, workshops, symposia and NOAA testbed-related outreach events as needed.

The minimum qualifications for the position are:

1. A PhD in Meteorology, Atmospheric Science, or related area.
2. Experience applying AI/Machine-Learning algorithms to produce severe weather guidance and/or experience in verification and validation of severe weather forecasts.

Excellent oral and written communication and public speaking skills are highly desired, as well as proficiencies in weather visualization software and coding languages like Python, C++, and Fortran. Applicants should identify experience in collaborating with operational forecast centers, graphic design/visualization, programming, and scripting languages, as well as skills using numerical weather prediction models and skills with observational datasets.

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's excellent benefits can be found at <https://hr.ou.edu/Employees>.

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

CIMMS Careers  
University of Oklahoma CIMMS  
120 David L. Boren Blvd., Suite 2100  
Norman, OK 73072-7304  
CIMMS-careers@ou.edu  
Attn: FACETs

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## CIMMS Post-Doctoral Research Associate - Lightning

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently seeking a Post-Doctoral Research Associate to collaborate on lightning and storm electrification research with the National Severe Storms Laboratory (NSSL). NSSL has made world-class, innovative observations of storm electrification and lightning for more than 40 years. The incumbent is expected to work as part of this team deploying new instrumentation in the field. This position will focus on (1) mobile Lightning Mapping Array (LMA) data collection and analysis for field programs such as VORTEX-SE and TORUS and (2) the integration of lightning data from multiple platforms, including the GOES-Geostationary Lightning Mapper (GLM), within the Multi-Radar Multi-Sensor (MRMS) platform.

The principal duties of this position are:

1. Assist in management of field data collection and operational dissemination framework of LMA data.
2. Lead intercomparison of research and operational lightning data sets and use, combined with WSR-88D observations, as proxies for cold pool characteristics and evolution.
3. Provide expertise and contribute to development of new satellite, radar, and lightning blended products and algorithms within the MRMS platform.
4. Collaborate with NOAA testbeds, including the Hazardous Weather Testbed and Satellite Proving Ground, to provide subject matter expertise during relevant experiments.
5. Contribute to science publications and attend off-site conferences, workshops, symposia and NOAA testbed-related outreach events as needed.

The minimum qualifications for the position are:

1. A PhD in Meteorology, Atmospheric Science, Physics, or related area.
2. Experience with storm electrification, lightning measurements, and instrumentation.
3. Experience with scientific programming on UNIX/Linux using a high-level language (e.g. C++, Java, Python).
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, Lightning and Storm Electrification Observations, Radar, 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 and programming skills (including web-based and mobile applications).

Supervision will be provided by CIMMS staff. Technical oversight will be provided by CIMMS staff, NSSL scientists, and NSSL management. Applicant will work under general supervision but is expected to determine action to be taken in handling all but unusual situations. Normal working hours will be observed except for occasional irregular hours during data collection or workshops conducted at remote sites.

The beginning salary is commensurate with educational background and experience, with OU benefits. Information on OU's excellent benefits can be found at <https://hr.ou.edu/Employees>.

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

CIMMS Careers  
University of Oklahoma CIMMS  
120 David L. Boren Blvd., Suite 2100  
Norman, OK 73072-7304  
CIMMS-careers@ou.edu  
Attn: Lightning PostDoc

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## **Clinical Assistant Professor – Department of Atmospheric and Earth Science**

**JOB DESCRIPTION/ REQUIREMENTS:** The Department of Atmospheric and Earth Science (AES) at The University of Alabama in Huntsville (UAH) is seeking an outstanding teacher and scientist to fill a long-term non-tenure track Clinical Assistant Professor position in the fields of atmospheric and earth systems science. The main duties of this position will be undergraduate teaching, undergraduate and graduate academic advising and mentoring, and serving as a liaison between the AES department and the on-site NASA Marshall Space Flight Center Short-term Prediction Research Transition Center (SPoRT) research group. The ideal candidate will have educational, professional and research backgrounds in the atmospheric sciences, with a strong understanding of satellite remote sensing and related geospatial/earth systems science experience. The successful candidate will teach two undergraduate courses per semester in atmospheric sciences/meteorology, with the potential to teach courses in other areas depending on experience. They will specifically assist with undergraduate academic advising and serve as an advisor for graduate students. SPoRT is a NASA project that focuses on the transition of unique observations and research capabilities to the operational weather community to improve short-term forecasts on a regional scale. In a SPoRT liaison role, the candidate will manage undergraduate and graduate students as they interact with NASA scientists and engage with SPoRT missions. The successful candidate may serve as a Masters student's main thesis advisor, or serve on thesis and dissertation committees for Masters and PhD students. This is a 9-month funded position, while the successful candidate will have the ability to pursue independent research funding for the summer, and/or supplement summer funding by working with NASA SPoRT. It is expected that the successful candidate will have a PhD or equivalent degree in a field appropriate to the job description above, or will be able to obtain a PhD degree within 1 year of being hired.

**ABOUT THE DEPARTMENT:** The Department of Atmospheric and Earth Science has been ranked in the top ten by the Chronicle of Higher Education based on faculty research productivity index. It is co-located with UAH's Earth System Science Center, NASA MSFC Earth Science Branch, and the National Weather Service (NWS), all of which are located in the Cramer Research Hall (CRH), enabling students to get a unique collaborative research and education experience. In addition to legacy atmospheric science research, a cross-cutting theme of the Department is the development and application of geospatial analytical methods and remote sensing technology to Earth Science disciplines. These include land use/land cover change, severe weather, climate, human adaptation, lightning instrumentation, numerical modeling and data assimilation, satellite remote sensing, air pollution, urban studies, natural disasters, and environmental policy and decision-making. The Department currently has one undergraduate program in Earth System Science (ESS), two Master's programs in ESS and Atmospheric Science (ATS), and one Ph.D. program in ATS, yet is in the midst of merging into one overall AES program. The Department has fifteen full-time faculty, over 20



adjunct/affiliate faculty, near 50 graduate students, and around 120 undergraduates.

Within CRH, multiple NASA Applied Earth Science Programs (such as NASA SERVIR, DEVELOP, SPoRT, IMPACT, and Disasters) have active research programs that engage students and employ dozens of University scientists. Related to student teaching, the GIS/Remote Sensing computer lab is equipped with 30 workstations with ArcGIS, ENVI, and other professional software. Additional resources available for faculty use and student engagement include: instrumentation and mobile radars/lidars housed in the adjoining Severe Weather Institute – Radar & Lightning Laboratories (SWIRLL) building, multiple computing labs, equipped student research spaces, and mobile computing resources. Significant undergraduate teaching activities are also routinely done within the AES Department, including the NASA DEVELOP, the National Science Foundation Research Experiences for Undergraduates (REU), and UAH's Research or Creative Experiences for Undergraduates.

**ABOUT THE COLLEGE:** The UAH College of Science advances cutting-edge research and offers first-rate degree programs thanks to our distinguished faculty and state-of-the-art facilities. Our location in Huntsville facilitates partnerships and collaborations with NASA, the US Army, NOAA, the HudsonAlpha Institute of Biotechnology, and the numerous high-tech companies located in Cummings Research Park, which is adjacent to UAH and is the second largest research park in the country. College of Science students enjoy the benefits of a research-intensive institution in a medium-sized university, including a 16:1 student-to-professor ratio and numerous research, leadership, and co-op/internship opportunities. The vibrant UAH campus, diverse student population, and academic and social organizations provide an enriching and cross-disciplinary student life experience. USA Today, Princeton Review, Consumers Digest, and Payscale have ranked UAH as a top educational value.

**ABOUT THE UNIVERSITY:** The University of Alabama in Huntsville, classified as a High Research Activity institution, offers academic and research programs in the Colleges of Arts, Humanities and Social Sciences, Business, Education, Engineering, Nursing, Professional and Studies, and Science. Huntsville maintains one of the highest per capita incomes and standards of living in the Southeast. It is a national center of aerospace and high technology research and is home to NASA's Marshall Space Flight Center. Huntsville and surrounding communities present many opportunities for healthcare research and professional practice.

**APPLICATION REVIEW:** Reviewing of applicants will begin **15 March 2021**, with initial interviews beginning in late March to early April. Early applications are encouraged, as completed applications will be reviewed and interviews scheduled on a rolling basis.

**APPLICATION PROCEDURE:** To apply, send a letter of application, curriculum vitae, original transcripts, and contact information for three references, including name, address, phone number and email address, to:

Chair, Department of Atmospheric and Earth Science  
The University of Alabama in Huntsville  
301 Sparkman Drive (Cramer Hall 4042)  
Huntsville AL  
35899  
aes-chair@uah.edu

*The University of Alabama in Huntsville is an affirmative action/equal opportunity employer of minorities/ females/ veterans/ disabled.*

*Please refer to log number 21/22-557*

**University of Oklahoma**  
**Cooperative Institute for Mesoscale Meteorological Studies**  
**Post-Doctoral Research Associate (Half-Time)**  
**Remote Sensing Hydrometeorology**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) is currently looking for a half-time (20 hours/week) Post-Doctoral Research Associate working in the National Weather Center (NWC). The NWC is a highly collaborative operational, research, and academic environment containing a number of NOAA and OU organizations.

Responsibilities of the position include:

- The primary task consists of applications of both radar and satellite data on natural hazards such as drought and floods.
- An additional task of this project is to support the further development of severe thunderstorm applications based on NASA Atmospheric Infrared Sounder (AIRS) data to develop joint ground radar-satellite research.

The minimum qualifications for this position are:

- A PhD in Meteorology, Atmospheric Science, Hydrology or related area
- Proficiency with programming languages (preferably MATLAB)
- Ability to work and communicate in a team environment

You will work under general supervision of CIMMS Research Scientists but are expected to work independently and determine action to be taken in handling all but unusual situations. This is a non-supervisory position. Salary is based on your education, experience, skills, and knowledge. Information on University of Oklahoma benefits may be found at <https://hr.ou.edu>.

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

CIMMS Careers  
University of Oklahoma CIMMS  
120 David L. Boren Blvd., Suite 2100  
Norman, OK 73072-7304  
CIMMS-careers@ou.edu  
Job Requisition: Remote Sensing Post-Doc

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

## **CIMMS Research Scientist – Applications of Airborne/Ground-based Radar Analysis in Process Studies of Severe Deep Moist Convection**

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) working collaboratively with NOAA's National Severe Storms Laboratory (NSSL), is currently looking for a highly-qualified Research Scientist to provide scientific and technological expertise in the combined analysis of airborne NOAA P-3 tail Doppler radars (TDRs) with ground-based radars to improve process understanding of severe deep moist convection. The Research Scientist will provide leadership in the development and application of radar editing and analysis tools for use in research applications at CIMMS/NSSL, primarily for the use of performing process studies to better understand severe weather phenomena (tornadoes, hail, high wind) in supercells and quasi-linear convective systems observed during VORTEX-SE and TORUS. This position will include participation in the field for upcoming research projects (e.g., TORUS-2022) and will require the Research Scientist to integrate multi-radar airborne/ground-based analyses and retrievals, surface and airborne in situ, sounding, windsonde, and surface profiler and airborne compact Raman lidar observations into these process studies. The incumbent will work directly with research scientists at NSSL and will be encouraged to collaborate actively with scientists from other institutions with expertise in radar-based severe weather process studies (e.g., the OU School of Meteorology Biggerstaff Research Group). The position will be based at NSSL in Norman, OK within the National Weather Center (NWC), a highly collaborative forecasting, research, and academic environment containing a number of NOAA and OU organizations.

The principal duties of this position are:

1. Use specialized radar editing and multi-radar data synthesis code to generate analyses of convective events observed during VORTEX-SE (2017-2018) and TORUS by the NOAA P-3 aircraft via its unique onboard dual tail Doppler radar (TDR) systems.
2. Integrate airborne-ground-based multi-radar wind syntheses with unique P-3 Raman lidar temperature and water vapor mixing ratio profiles in the atmospheric boundary layer (from VORTEX-SE 2018 and TORUS-2019 data), as well as lead individual scientific analysis of data collected by airborne/ground-based multi-radar arrays.
3. Collaborate with other NOAA weather research laboratories and University of Oklahoma researchers on airborne/ground-based radar analysis, and collaborate with University of Colorado researchers concerning the relationships between airborne Raman lidar profiler observations and storm evolution.
4. Contribute to scientific publications and present scientific results at professional off-site conferences, workshops, and symposia.
5. When appropriate, participate in transferring new knowledge to operations by providing input on radar algorithm design or through educating radar users on data interpretation.

The minimum qualifications for the position are:

1. A Ph.D. in meteorology or atmospheric science.
2. Expertise in radar data editing software, preferably including editing software authorship.
3. Expertise in areas of ground-based and airborne radar analysis applications and radar remote sensing, and applications to severe convective weather. Applicants should identify experience in these areas, including meteorological radar systems, and software used to analyze data from meteorological radar systems.
4. Experience with Unix, programming (e.g., Fortran, C, C++), and scripting (e.g. Python, NCL).
5. United State citizenship or permanent residency.

Preferred qualifications include experience with airborne and ground-based radars and field work.

Normal working hours will be observed except for irregular hours during field data collection and/or conferences/workshops conducted at remote sites. The incumbent will work under general supervision in order to satisfy the objectives of various research grants and programs, and is expected to contribute to field efforts as needed.

The beginning salary for this position will be based on qualifications and experience and will include University benefits. Information on benefits may be found at: <http://hr.ou.edu/>. The expected start date for the position is no later than May 2021.

Appointment to this position is contingent on passing a Department of Commerce/NOAA background check.

To apply, please forward your CV, cover letter and list of three references to:

CIMMS Careers  
University of Oklahoma CIMMS  
120 David L. Boren Blvd., Suite 2100  
Norman, OK 73072-7304  
[CIMMS-Careers@ou.edu](mailto:CIMMS-Careers@ou.edu)  
ATTN: Airborne/Ground-based Radar Analysis



## CIMMS Real-Time Modeling Research Fellow

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently seeking a Half-Time (0.5FTE) Research Fellow to oversee and maintain real-time model forecast systems for NOAA's National Severe Storms Laboratory (NSSL). Specifically, these systems include, (1) the NSSL-WRF, which is a permanent experimental modeling framework providing storm-scale guidance to the Storm Prediction Center (SPC) and serving as a testing ground developing storm-scale model diagnostics, (2) the NSSL-FV3, a limited area version of the Finite Volume Cubed Sphere model, which NOAA has selected as the dynamics core for its Unified Forecasting System initiative, and (3) the Warn-on-Forecast System (WoFS), a rapidly updating, convection-allowing ensemble being developed by NSSL to extend hazardous weather warning lead times and provide probabilistic forecast guidance within the watch to warning (i.e., 0.5 – 6-h) time frame. The NSSL-WRF and NSSL-FV3 are run daily on Jet, a NOAA High-Performance Computing (HPC) cluster, while WoFS is an on-demand system run internally at NSSL when significant severe weather is expected. However, the incumbent would lead implementation of WoFS on Jet. All job duties may be performed remotely.

The principal duties of this position are:

1. Oversee and maintain the NSSL-WRF and NSSL-FV3 real-time forecast systems on Jet. This involves checking the runs daily to make sure they've run successfully, working with Jet administrators when there are problems, and informing NSSL, CIMMS, and SPC staff when there are problems or delays.
2. Occasionally working with CIMMS, NSSL, and SPC staff to facilitate additional experimental model runs for limited time periods, for example, during Hazardous Weather Testbed Spring Forecasting Experiments.
3. Implement WoFS on NOAA's Jet HPC and clearly document the workflow. Oversee and maintain WoFS on Jet when needed and/or train others for these duties.

The minimum qualifications for the position are:

1. A Master's Degree in Meteorology, Atmospheric Science, or related area.
2. Expert knowledge and experience conducting weather forecast model simulations on High-Performance Computing clusters.
3. Experience and proficiency running NOAA's Warn-on-Forecast System.

Excellent coding skills and experience in languages such as Fortran and Python are highly desired, as well as proficiency in shell scripting (e.g., bash, ksh, tcsh, etc.). Excellent oral and written communication skills are also highly desired. Applicants should identify experience with HPC, programming and scripting languages, numerical weather prediction, and graphic design/visualization.

Work can be conducted remotely and working hours depend upon requirements of real-time systems (e.g., late evening hours and/or early morning hours may be required to ensure model runs have started and/or finished). CIMMS staff will provide general supervision with technical oversight provided by NSSL scientific 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 insurance benefits. Information on OU benefits can be found at <https://hr.ou.edu/Employees>.

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

CIMMS Careers  
University of Oklahoma  
120 David L. Boren Blvd., Suite 2100  
Norman, OK 73072-7304  
CIMMS-careers@ou.edu  
Attn: CIMMS Real-Time Modeling

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# AAARCC Lunch & Learn Series

Spring 2021, Virtual Platform/Zoom

Thursdays, Noon to 1:00 PM

## Solidarity & The Next Four Years of Presidency

January 28

Dr. Patsy Schweickart (Emeriti Faculty, English & Asian American Studies, Purdue University)

## Entrepreneurship as a Potential Career Path

February 4

Dr. Arnold Chen (Managing Director, Burton D. Morgan Center for Entrepreneurship, Purdue University)

## Inclusivity in the Arts

February 11

Tetia Lee (Chief Executive Officer, Tippecanoe Arts Federation)

## Pushing Boundaries on Academia as a Mixed Medium EntreScholar

February 18

Ariel Smith (Doctoral Student, American Studies Program, Purdue University)

## From Foundations to Frontiers: Chinese American Contributions to the Fabric of America

February 25

Committee of 100

**LINK TO REGISTER:**



## How Central Asian Women in the US Worked on COVID-19 Awareness Raising in Central Asia

March 4

Dr. Annagul Yaryyeva (Researcher, Turkmenistan Health Initiative)

## Diverging Trajectories of Transitional Justice: A Comparative Look into South Korea and Peru

March 11

Dr. Nusta Carranza Ko (Assistant Professor, University of Baltimore, School of Public and International Affairs)

## A Look Back at Our Purdue Experience

April 8

Renz Buenavista & Gwynelle Condino (Undergraduate Student Ambassadors, Purdue AAARCC)

## Virtual Identity & Music

April 15

Dr. Christopher Cayari (Assistant Professor, Patty and Rusty Rueff School of Visual and Performing Arts, Purdue University)

## Multilinguistic Hybridization in BTS Songs

April 22

Dr. Huai-Rhin Kim (Continuing Lecturer, School of Languages and Cultures, Purdue University)

## CAREER PREP

- Preparing for Behavioral Interview Questions (1/27)
- LinkedIn (2/2 & 3/31)
- Business Meal Etiquette (2/23 & 3/30)
- Comparing Job Offers (3/17 & 4/6)
- Personal Branding (4/20)
- The Cover Letter (4/22)
- Networking (4/28)
- Negotiating the Job Offer (4/29)

## ACADEMIC CAREER TRACK

- An Overview of the Academic Job Interview (2/5)
- Preparing a Teaching Demo (2/11)
- Writing a Teaching and Diversity Statement (2/17)
- Ask a Postdoc Panel (2/24)
- Publishing a Scientific Paper (4/22)
- Crafting Your Teaching Narrative: Teaching Statements (3/1)

## INDUSTRY CAREER TRACK

- Entrepreneurship as a Career Path (2/2)
- Interviewing for Industry Positions (2/18)
- Converting your CV to a Resume (4/21)

## WELLNESS

- Managing Uncertainty in the Time of COVID-19 (1/19 & 3/4)
- Time Management (1/20 & 2/19)
- Sleeping for Success (1/28 & 4/6)
- Budgeting & Saving Money (1/28 & 3/16)
- Setting Yourself Up To Win in Grad School (2/3 & 4/1)
- Let's Talk Taxes! (2/3 & 3/4)
- Mindfulness (2/5 & 3/16)
- Impostor Syndrome (2/9 & 3/17)
- Planning to Graduate On Time (2/25 & 3/2)
- Break Out From Burn Out (3/11)
- Success Over Stress (3/24 & 4/14)
- Eat Right When Your Budget is Tight (3/25)
- Credit Cards & Credit Scores (4/1 & 4/14)
- Healthy Eating on the Run (4/20)
- Debt Management (4/21)
- Preparing to Buy a House (4/29)

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**SUBMISSION DEADLINE: 01/29/21**



**RESEARCH & ETHICS**

- **RCR:** What You Should Understand About Copyright Before Publishing (2/1)
- Conducting a Literature Review (2/4)
- Data Quality Management (2/10)
- **RCR:** Overview of RCR (2/11 & 3/18)
- **RCR:** Research Integrity in Engineering and Technology (2/23)
- Citation Management with Zotero (2/26)
- What you NEED to know about thesis formatting and depositing (3/3 & 3/4)
- Understanding The Animal Welfare Act and the 3Rs of Alternatives in Animal Research (3/8)
- **RCR:** Authorship & Publishing (3/9 & 3/19)
- Navigating Databases and How to Conduct a Literature Search (4/20)
- Using Voyant Tools for Systematic Review Searches (3/11)
- Deciding Where to Publish & Present Your Work (3/26)

**COMMUNICATION**

- How to Deliver a Winning Presentation (2/10)
- The Elevator Pitch (3/25)
- How to Create a Winning 3MT Presentation (3/30 & 4/7)
- Using Data to Tell a Story (4/6)

**GRANTSMANSHIP**

- NIH Fellowship F31 Info Session (1/13 & 2/2)
- NIH Fellowship F32/K-award Info Session (1/14 & 2/4)
- How to Find and Prepare for Fellowship Applications (2/9)
- Personal Statements for Fellowships (2/11)
- NC-SARE Fellowship (Agricultural Research) Info Session (2/25)
- Letters of Recommendation for Fellowships (3/3)
- Research Statements for Fellowships (3/10)
- How to Plan a Research Project for a Grant or Fellowship App (3/23)
- Fellowship Application Editing (3/31)

**POSTDOCS**

- Postdoc Grant Writing: Logic Flow (1/21)
- Postdoc Orientation (1/29, 3/12, 4/30)
- Postdoc Grant Writing: NSF (2/18)
- Postdoc Grant Writing: Grant Solicitations and Funding (3/18)
- Postdoc Grant Writing: Postdoc Fellowship Applications (4/15)

**DIVERSITY**

- You are so articulate: Examining Microaggressions (2/16)
- Ostracism (3/4 & 3/5)
- Boys will be Boys: Addressing Gender Bias & Intersectionality (4/14)

**ALL SPRING 2021**  
**WORKSHOPS ARE**  
**VIRTUAL**