

Department of Earth, Atmospheric, and Planetary Sciences

EAPS WEEKLY NEWSLETTER

January 8, 2024

Facebook Twitter LinkedIn Instagram Website

EAPS MEETINGS & EVENTS

PURDUE CALENDAR 2023-24

EAPS K-12 OUTREACH CALENDAR OF EVENTS

REPORT YOUR OUTREACH AND ENGAGEMENT ACTIVITIES

NEWS/OPPORTUNITIES AT PURDUE

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, <u>click here</u>. A short video about the CIGP/CSE program can be found <u>here</u>. **Spring Application Deadline:** March 1 **Fall Application Deadline:** October 1

EAPS GRAD STUDENT RESEARCH OPPORTUNITIES

If you are interested in an EAPS grad research opportunity, <u>click here</u> for more information.



PUBLICATIONS

 Adam, L.F., Bridges, J.C., Bedford, C.C., Holt, J.M.C., Rampe, E., Thorpe, M., Mason, K. and Ewing, R.C. (2023), Synchrotron x-ray diffraction for sealed Mars Sample Return sample tubes. Meteorit Planet Sci. <u>https://doi.org/10.1111/maps.14105</u>

OUTREACH NEWS

K-12 Outreach would like to ask for your help in getting this request out to professional organizations.

Teachers are desperately requesting resources related to STEM careers. Please consider sharing what you do with students and teachers by making a recording.

Calling all STEM Professionals! Join our mission to inspire students and support educators! Students lack awareness of the vast possibilities in STEM fields. Teachers are tasked with integrating college and career readiness into their curricula. To support both students and their teachers, Purdue University College of Science K-12 Outreach is creating an extensive STEM Career Repository. We need YOUR expertise to make a difference! Record a short video

(2-3 minutes) introducing the captivating work you do as a STEM professional. Help us shed light on potential careers in STEM and ignite young minds with passion and curiosity!

For the video, consider introducing yourself along with your job/career, then follow with important background information relevant to your job. Finish

with something interesting that you do as part of your job.

Video clips (2-3 minutes) should be filmed horizontally and submitted to

mrsmith@purdue.edu. If you would prefer, we can record you on Zoom. Many people are recording in both English and another language that they are fluent in speaking. If you do record in a second language, please let us know the language. Please share this request with your fellow professionals in the STEM fields to amplify our impact! Together, we can shape the future of STEM exploration and education. Let's inspire the next generation of scientists, engineers, and innovators! Connect with us and contribute to the STEM Career Repository:

https://www.purdue.edu/science/K12/LabPages/c areers.php

If you or your group has worked with or helped with an activity for K-12 students or teachers, please fill out the departmental outreach activity form. https://bit.ly/EAPSOut

Social sites: <u>Twitter</u> <u>Instagram</u> <u>Facebook Superheroes of Science</u> <u>EAPS departmental outreach web page</u>

SUPERHEROES OF SCIENCE

Please help us by subscribing and sharing our podcast and our <u>YouTube</u> channel! On Apple: <u>https://bit.ly/SOS_apple</u> On Spotify: https://bit.ly/SOS_spotify

On Amazon: https://bit.ly/Superheroes_amazon

MEETINGS/EXPOS/ OPPORTUNITIES OUTSIDE OF PURDUE

NSF NCAR | UCAR | UCP STUDENT OPPORTUNITIES

NCAR | UCAR | UCP offer many different summer experiences for students in Earth System Science. Labs and Programs have unique opportunities with separate applications and different deadlines. We invite you to explore the compiled list below and apply to opportunities you find interesting.

SIParCS Technical Internships

Summer Internships in Parallel Computational Science (SIParCS) embed students in CISL to provide them with significant hands-on experience in high-performance computing and related fields that use HPC for scientific discovery and modeling. Available for undergraduate and graduate

students. Application Deadline: January 31, 2024. <u>EOL Summer Undergraduate Program for</u> Engineering Research (SUPER) Internship

While working at EOL, interns help develop new instrumentation and improve EOL's existing suite of NSF/NCAR lower atmosphere observing facilities. Most internships also offer the opportunity to make meaningful contributions to advance atmospheric science research capabilities.

Application **Deadline: January 15, 2024** Boulder Solar REU Program

NSF NCAR's HAO partners with CU Boulder on a summer experience for students interested in solar and space physics. Students will come to Boulder, Colorado for 10 weeks to work on a research project with a mentor. The topic areas span the field of solar and space physics, from instrument hardware to data analysis to modeling of the Sun, the Sun-Earth system, the near-Earth environment, or the heliosphere.

Applications expected to open in December and close mid January. Check the website for updates. NSF Significant Opportunities in Atmospheric Research and Science (SOARS)

NSF SOARS is an undergraduate-to-graduate bridge program designed to broaden participation of historically underrepresented communities in the atmospheric and related sciences. NSF SOARS invites students from multiple STEM disciplines -including chemistry, ecology, engineering, geography, mathematics, meteorology, physics, and the social sciences--to deepen their expertise in understanding the Earth's Atmosphere.

Applications will open in December and will be due February 1, 2024.

NASA Heliophysics Summer School

UCAR CPAESS partners with NASA to hold the Heliophysics Summer School each year. We invite you to apply for the 2024 NASA Heliophysics Summer School, which will be held both virtually and in-person this year. We are seeking students to join us this coming summer for a unique professional experience. They will learn about the exciting science of heliophysics as a broad, coherent discipline that reaches in space from the Earth's troposphere to the depths of the Sun, and in time

from the formation of the solar system to the distant future.

NSF Unidata Summer Internships

The NSF Unidata Summer Internship program offers graduate students and upper-level undergraduates the opportunity to work closely with NSF Unidata's professional staff on projects that interest them and benefit the wider NSF Unidata community. Interns interact with software developers, instructional designers, technical writers, and other mentors within the program, building skill with modern software development processes, learning about data-enabled geoscience, and generally getting to know what it's like to work in a communityfocused organization supporting Earth Science research and education. Participants contribute to NSF Unidata's innovative data access, analysis, and visualization tools by writing code, creating learning materials, or participating in other aspects of the software development lifecycle.

Application expected to open in December and close mid January. Check the website for updates. UCAR CPAESS NOAA Ocean Exploration Explorer-in-**Training Program**

As part of its mission to train the next generation of ocean explorers, scientists, engineers, and communicators, NOAA Ocean Exploration hosts students in the Explorer-in-Training Program. These interns gain valuable, interdisciplinary experience in ocean exploration while collaborating on office projects and expeditions. Explorer-in-Training internships enable students to increase their competitiveness for educational and career opportunities in ocean-related fields.

Application expected to open in December and close mid January. Check the website for updates. ACOM Ralph Cicerone Fellowship

The Ralph Cicerone Fellowship in Earth System Science is intended for graduate students with experience in, or working with, underrepresented communities. One fellowship is awarded each year for a two-year period. Successful candidates receive financial support for four months, divided over two years, and benefit from the training and guidance of ACOM scientists on tools and techniques that enhance and support their graduate research. Generally, the Fellowship recipient will visit NCAR for three consecutive months in the summer of the first year to focus on a self-defined research project in the field of atmospheric chemistry and one month in the following year to complete the project.

Applications due February 29, 2024

UCAR Next Generation Fellowship

The UCAR Next Generation graduate Fellowship is a prestigious, multi-faceted opportunity to explore the interplay between the areas of scientific research, diversity and inclusion, and public policy within the field of Earth Systems Science. Fellows engage with, and learn from, UCAR's leaders in these three arenas while participating in dedicated professional development and leadership training opportunities.

Application will open in January 2024. Student Opportunities Website

Check the opportunities website for other opportunities that are not currently accepting applications but may during other times of the year.

INVITATION TO PARTICIPATE IN 2024 geoSTORIES

Refugium Consulting and Facilitation Services, an organization focusing on fostering belonging and community in the natural sciences invites you to participate in the 2024 cohort of the geoSTORIES Initiative. Standing for STOrytelling for Resilience and Inclusion in Earth Sciences, geoSTORIES is a semester-long program designed to give natural science postdocs, undergraduates, and graduate students the support, connections, and skills needed to retain yourself and succeed on your natural science journey. They especially invite individuals who identify as members of marginalized communities, including Black, Indigenous, other People of Color, and Asian or Pacific Islanders; members of the LGBTQIA+ community; people who have disabilities, visible or invisible; neurodivergent folks: and others.

geoSTORIES employs a framework of personal storytelling and transformative relationships to cultivate a community in which you can belong as your full authentic self while simultaneously arowing as a member of your scientific field. Over a period

of 15 weeks beginning in February, you will...

- ... engage in weekly virtual gatherings to receive support from and share stories with other cohort members,
- ... learn from and network with established scientists who share identities and experiences with you,
- ... hone skills that will prepare you for a natural science career with your intersectional identity set,
- ... receive personalized one-on-one coaching to move towards your personal and professional goals, and
- ... have access to a moderated Discord server for sharing resources as well as giving and receiving support.

Participation in the geoSTORIES Initiative costs \$500. We are happy to work with you to identify funding sources and provide language for requesting funding assistance from your advisor, department, or college. Just indicate your interest in assistance

on your application. Please <u>submit your application</u> <u>here</u>. Upon acceptance, we will provide you with information about completing your registration and payment.

POST-DOC OPPORTUNITY - AIR FORCE SCIENCE & TECHNOLOGY FELLOWSHIPS

The National Academies of Sciences, Engineering, and Medicine administers postdoctoral and senior research awards at the U.S. Air Force Research Laboratory (AFRL), the U.S. Air Force Institute of Technology (AFIT), and the U.S. Air Force Academy (USAFA) under the <u>Air Force Science & Technology</u> <u>Fellowship Program (AF STFP).</u>

Seeking highly qualified candidates who are U.S. citizens and hold, or anticipate earning, a doctorate in a variety of fields of science or engineering.

Application deadline dates (four annual review cycles): February 1, May 1, August 1, November 1 Awardees have the opportunity to:

- Conduct independent research in an area compatible with the interests of the Air Force laboratories
- Devote full-time effort to research and publication
- Access the excellent and often unique Air Force research facilities
- Collaborate with leading scientists and engineers
- Awardee benefits:
- Base stipend starting at \$76,542; may be higher based on experience
- Health insurance (including dental/vision), relocation benefits, and a professional travel allowance

Applicants should contact prospective AFRL, AFIT and USAFA Research Adviser(s) at the lab(s) prior to the application deadline to discuss their research interests and funding opportunities. For detailed program information, to search for AFRL, AFIT, and USAFA Research Opportunities, and to contact prospective Research Adviser(s), visit www.nas.edu/afstfp.

ENVIRONMENTAL COMPLIANCE INTERNSHIP OPPORTUNITY IN VALPORAISO

The environmental compliance intern will support the work of the NiSource Environmental department and cross-functional Health, Safety and Environmental Execution Team, which is responsible for supporting compliance with all federal, state, and local environmental regulations across NiSource. The intern will receive experience in environmental compliance activities, data gathering, management and reporting processes,

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

and will ultimately be involved with both deskbased and hands-on work in the field. The intern will report to the Manager, Environmental Compliance, and collaborate with the Environmental Compliance Team and other internal business partners. Successful candidate must be capable of working in an outside setting and industrial conditions. Learn more

EUROPA CLIPPER ICONS INTERNSHIPS – NASA SCIENCE

The new Inspiring Clipper: Opportunities for Nextgeneration Scientists (ICONS) internships will bring members of the Europa Clipper mission team together with undergraduate students for 10-week programs that give students the opportunity to conduct original scientific research.

Internships may be in-person at the mentor's institution, virtual, or hybrid, depending on the research project and needs of the mentor and intern.

At the end of the 10 weeks, students and mentors will convene for a two-day conference at NASA's Jet Propulsion Laboratory in Pasadena, California. Interns will receive a \$12,000 stipend for the duration of the program, and may be eligible for travel, housing, and relocation allowances, depending on the location of their research activities.

The first Europa ICON internship will run June 3-Aug. 9, 2024.

Student applications are due Feb. 2, **2024**, and can be found on the <u>NASA STEM Gateway</u> by searching "Europa ICONS." <u>Info here.</u>

2024 RIPS SUMMER PROGRAM OPPORTUNITY FOR UNDERGRADS

Research in Industrial Projects for Students (RIPS) Program at the Institute for Pure and Applied Mathematics (IPAM) has a summer program opportunity for undergraduate students. <u>Program details.</u>

CIWRO PETER LAMB POSTDOCTORAL FELLOWSHIP

The Cooperative Institute for Severe and High Impact Weather Research and Operations (CIWRO) has established the Peter Lamb Postdoctoral Fellowship that is offered annually. CIWRO is a research organization that promotes collaborative research between scientists at the National Oceanic and Atmospheric Administration (NOAA) and a consortium of universities led by the University of Oklahoma (OU) on problems of mutual interest. CIWRO research seeks to improve the basic understanding of weather and transitioning that understanding to operations in order to help produce better forecasts and warnings that save lives and property. CIWRO also investigates the societal impacts of such phenomena. The recipient will be an OU employee but may conduct her/his research at OU, Howard University (HU), the Pennsylvania State University (PSU), Texas Tech University (TTU), or the University at Albany (UA). Apply by: January 15. More info.

AWG BRUNTON AWARD AND BRUNTON FIELD PROJECT AWARD

The AWG Brunton Award and Brunton Field Project Award promote the future of field mapping and data acquisition for the upcoming generation of people whose gender identity has been historically underrepresented in the geosciences. Applicants should have a passion for and exceptional experience with field work, including internships, field camp, coursework with a field-based research component, or research. The AWG Brunton Award has been active for >20 years and provides Brunton compasses to 1-2 awardees each year. The AWG Brunton Field Project Award started in 2022 and awards a Brunton compass and up to \$1000 to support field activities to each of 1-2 awardees each year. Learn more here. Deadline for entry is Dec. 15th of each year.

MERCURY EXPLORATION ASSESSMENT GROUP (MExAG) ANNUAL MEETING February 6-8, 2024 Virtual Meeting info

INEGRATING OCEAN DRILLING & NASA SCIENCE: WORKSHOP TO EXPLORE MISSIONS TO PLANET EARTH February 20-23, 2024 Washington D.C. / virtual <u>Meeting info</u>

PLANET CHARACTERIZATION IN THE SOLAR SYSTEM AND THE GALAXY WORKSHOP February 21-23, 2024 Houston, TX / virtual <u>Meeting info</u>

55th LUNAR AND PLANETARY SCIENCE CONFERENCE (LPSC) March 11-15, 2024 The Woodlands, TX / virtual

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

Meeting info

URANUS FLAGSHIP WORKSHOP May 21-23, 2024 NASA Goddard Space Flight Center, Greenbelt, MD <u>Meeting info</u>

8th INTERNATIONAL CONFERENCE ON MARS POLAR SCIENCE AND EXPLORATION July 8-12, 2024 Whitehorse, Yukon, Canada <u>Meeting info</u>

POSITIONS AVAILABLE-CAREER OPPORTUNITIES

AERODYNE RESEARCH (ARI) - MARKETING AND PROPOSAL ASSOCIATE

ARI currently has a job opening for a Marketing and Proposal Associate. Due to the technical and scientific aspects of the company, an ideal candidate would have a scientific background – although not required. This is a full-time position located at our headquarters in Billerica, MA. We're looking for someone to start as soon as possible. More info here.

TEXAS TECH - FOUR TENURE TRACK POSITIONS

Texas Tech is hiring four new tenure-track positions as part of an Atmospheric Hazards strategic research initiative. Positions include an atmospheric boundary layer modeler (open rank; LES and general CFD, ideally with coupling to structures) as well as two civil/structural engineering positions focused on wind hazards, and an experimental psychologist with interests in community resilience and risk assessment. <u>More info here</u>.

UNIVERSITY OF LOUISIANA MONROE – TENURE TRACK ASST. PROFESSOR

The Atmospheric Science Program at the University of Louisiana Monroe is searching for a tenure-track assistant professor in Atmospheric Science with an anticipated start date of August 2024. The Atmospheric Science program has experienced growth in both students and research productivity over the past 5-10 years, and are in the final approval stages for offering a new undergraduate degree in Earth System Science. The program maintains several instrument platforms used for research and education that any new hire would be able to access: a S-band polarimetric radar, mobile Doppler wind lidar system, microwave radiometer, lidar ceilometer, and radiosonde systems. We are also leading the deployment and management of a state mesonet with 50 initial stations across Louisiana.

Seeking an individual passionate about undergraduate education with interests in pursuing a research agenda who will contribute to both the Atmospheric Science and new Earth System Science degree programs. To promote a broad and diverse applicant pool, we are not focused on a specific research or topic area background. However, a successful candidate will likely complement and/or fill gaps in our current course offerings and research areas.

The full advertisement here.

Review of applications will begin on 1 February 2024 and the position will remain open until filled.

Please contact Dr. Anne Case Hanks (<u>casehanks@ulm.edu</u>) for any questions about the position.

FACULTY CLUSTER HIRE AT TAYLOR GEOSPATIAL INSTITUTE / SAINT LOUIS UNIVERSITY

<u>Faculty cluster hiring initiative</u> with Saint Louis University and the <u>Taylor Geospatial Institute</u> (<u>IGI</u>). This initiative will advance TGI's vision to become the nation's leader in geospatial research, fueling innovation and creating the next generation of talent in the burgeoning field of geospatial science and technology.

As part of this hiring initiative, SLU and TGI are recruiting for faculty in the following areas:

- Aerospace and Mechanical Engineering (2 positions) GPS/PNT; Autonomous Vehicle Operations
- **Civil Engineering** (1 position) Transportation Engineering (photogrammetry, digital twin, smart cities)
- Earth and Atmospheric Science (2 positions) GPS/PNT; Satellite Geodesy
- **Public Health** (1 position) Behavioral Science and Health Equity, Geospatial
- Biology (1 position) Plant Breeding and Genetics

The position descriptions for the positions listed above are <u>viewable here</u>.

FULL-TIME WEEKEND METEOROLOGIST/WEEKDAY REPORTER - WVVA TV IN BLUEFIELD, WV.

An immediate opening for a full-time weekend meteorologist/weekday reporter (for weather/science stories). <u>Link</u> TENURE TRACK METEOROLOGY FACULTY POSITION -VALPARAISO UNIVERSITY

We are excited to announce an opening for a Tenure Track Assistant Professor of Meteorology at Valparaiso University starting in August 2024. We especially need someone for mesoscale meteorology at the undergraduate level.

Apply here.

DePAUW SEEKING PART TIME INSTRUCTOR

The department of Geology and Environmental Geoscience at DePauw University is looking for a part-time instructor to teach an undergraduate course in Hydrogeology in next spring semester. This is a great opportunity for a graduate student to get some teaching experience in a Liberal Arts setting (at least a Master's degree is required). Apply <u>here</u>.

POSTDOCTORAL FELLOWSHIP IN METEOROLOGY: NUMERICAL SIMULATION STUDIES OF TORNADOES

The School of Meteorology of the University of Oklahoma has an opening for a Postdoctoral Fellowship in the areas of numerical modeling and severe storms. The successful candidate will use very high-resolution simulations (Cloud Model 1) to study the interaction between tornadoes and the built environment to understand how tornado dynamics evolve over urban landscapes. Sensitivity studies examining different neighborhood layouts and building types will be conducted, and different techniques for injecting turbulence into the model will be explored. The successful candidate will be supervised by Prof. David Bodine and will work collaboratively with an interdisciplinary team of scientists and engineers, including scientists Drs. Anthony Reinhart and Jeremy Gibbs at the National Severe Storms Laboratory and Prof. Franklin Lombardo at the University of Illinois Urbana-Champaian.

The successful candidate will work in the National Weather Center where the School of Meteorology and NOAA's National Severe Storms Laboratory reside. The National Weather Center fosters a unique collaborative work environment with federal, state, and academic units, providing valuable networking opportunities for career advancement.

Salary will be competitive based on experience and qualifications. The University of Oklahoma offers competitive benefits. Positions are open now until it is filled, and full consideration will be given to applications received by January 31, 2024.

Candidates in the final stages of completing their Ph.D. are also encouraged to apply. The term of appointment will be one year, renewable for a second year subject to satisfactory performance. **Qualifications**

Requirements:

• Ph.D. in Atmospheric Science, Meteorology, Engineering, Computer Science, Physics, Mathematics, or related disciplines within the last 5 years

• Strong background in numerical modeling Desired Skills and Qualifications:

• Programming experience with programming languages used in numerical models (e.g., Fortran) and for analysis and plotting (e.g., Python, Matlab)

• Excellent written and oral communication skills, evidenced by peer-reviewed publications

• Past experience and/or strong interest in using supercomputing resources

 Background and/or strong interest in mesoscale meteorology and atmospheric dynamic

Application Instructions

To apply for this position, please <u>submit the</u> <u>electronic application via Interfolio</u> and to Prof. David Bodine (bodine@ou.edu) and include the following: a letter of research interest and experience, CV, and three names of references (including their contact information).

NYS MESONET FIELD TECHNICIANS

<u>NYS Mesonet</u> is hiring a field technician position to maintain and repair 126-site standard network and 85 subnetwork sites. Competitive pay + benefits, learn more and <u>apply here</u>.

MONTANA MESONET FIELD MANAGER, MONTANA CLIMATE OFFICE

The Montana Climate Office within the W.A. Franke College of Forestry and Conservation and at the University of Montana is seeking applications for an Applied Meteorologist/Mesonet Field Manager position. The Mesonet Field Manager (MFM) will oversee the installation and maintenance of climate monitoring stations (Montana Mesonet) across the state. The MFM will lead three Mesonet field crews: three full-time technicians and six seasonal employees in the construction and maintenance of the Montana Mesonet and ensure high-quality performance and operation of all stations. The Montana Mesonet is being developed through a US Army Corps of Engineers (USACE) award to the Montana Climate Office. Link

MULTIPLE POSITIONS OPEN WITH ENVIROFORENSICS

EnviroForensics is hiring! We're looking for motivated and collaborative individuals to join us as a Project Manager (Indianapolis or Louisville), Staff Professional (Indianapolis), Field Professional (Indianapolis), and Field Technician (Indianapolis). If you're interested in joining our team, visit our Careers and apply today! <u>Click here to apply</u>

ASSISTANT PROFESSOR OF ENVIRONMENTAL & GEOSPATIAL SCIENCES -WESTERN KENTUCKY UNIVERSITY

The Department of Earth, Environmental, & Atmospheric Sciences (EEAS) at Western Kentucky University is seeking highly qualified applicants for a 9-month tenure-track Assistant Professor of Environmental & Geospatial Sciences position. Learn more here.

INDIANA EHS ADVISOR JOB POSTING

U.S. Compliance: Searching for high performing EHS professionals who want to make a difference. Join our fast-growing EHS compliance firm to help us care for people, Protect the environment and grow our clients' business. Link to posting.

METEOROLOGIST POSITIONS AVAILABLE TEGNA

Multiple <u>meteorology positions</u> are open with TEGNA.

PURDUE ENVISION CENTER (UNDER ITAP) RECRUITING EAPS STUDENTS

The Envision Center is recruiting EAPS students with background and interest in weather visualization. Details on the job opening can be found <u>here</u>.

POSITIONS AVAILABLE IN METEOROLOGY AND

ATMOSPHERIC SCIENCE

View current career listings

AGI GEOSCIENCE JOB CENTER

Check listings here.

MULTIPLE OPPORTUNITIES Please feel free to contact Qian Zhang if you are interested in applying and/or have any questions about the company and the opportunities.

NATIONAL WEATHER SERVICE POSITIONS AVAILABLE

<u>Check here for available positions</u> with the National Weather Service.

NEWSLETTER INFO

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. Material for inclusion in the newsletter should be submitted to <u>Cheryl Pierce</u> by 5:00pm on Thursday of each week for inclusion in the Monday issue.

For answers to common technology questions and the latest updates from the EAPS Technology Support staff, <u>click here</u>. As an additional resource for information about departmental events, seminars, etc., see our <u>departmental calendar</u>.

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