

# EAPS WEEKLY NEWSLETTER

November 18, 2024

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## EAPS MEETINGS & EVENTS

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## CONGRATS, KUDOS, COOL STUFF, AND THUMBS UP!

- Justin Jacquot, Xiaoli Shen and Dan Ciczco received NASA Group Achievement Awards for their participation in the Dynamics and Chemistry of the Summer Stratosphere (DCOTSS) field study. Congrats to all!
- Welcome Dr. Andrea Donnellan! She will be the new head of Purdue EAPS effective Monday, January 1<sup>st</sup>, 2025.
- Welcome Dr. Erik Conway! He is a new Professor of Practice who will join the department in March 2025.
- Congrats to these undergraduates: Lindsey Peterson, Owen Rahman, and Mia Smith, who jointly won a prize for the best student poster at the Central Indiana Severe Weather Symposium last month. Lindsey presented the poster in person. The title of the poster was, "Digitizing Purdue's Role in Tornado Science: Preserving Materials From the 1974 Super Outbreak of Tornadoes in Indiana." Prof. Robin Tanamachi advised on the project.

- Doug Schmitt reports news from the field: "Nick Karahalious at our field site this last week in Huntington, West Virginia in collaboration with Marshall University on a project funded by the ERDC. He is holding a sonic tool that measures the seismic wave speeds of the rocks down the borehole. He is being helped by Caleb Wise who helps manage the project from Marshall University. We were very busy and managed to log all 10 borholes each with 7 different kinds of 'tools' - so very long days." Great work Nick!



## NEWS/OPPORTUNITIES AT PURDUE

### EAPS SEMINAR – ALEX EVANS

Thursday, November 21, 3:30 pm, HAMP 1252

Alex Evans is an assistant professor from Brown University.

Host: Prof. Brandon Johnson

### MSC DEFENSE – BRIAN ROBITAILLE

Wednesday, November 20, 3:30 pm, HAMP 2201

"Seismic reflection survey of the Kentland impact structure."

Advisor: Prof. Doug Schmitt

### EAPS PET CALENDAR UPDATE

The 2025 EAPS Pet Calendar has reached completion and will be printed early December! Thank you all for your cute and funny submissions. The calendar will be covering Jan - Dec 2025 with all the dates aligned. Below is a link to the order form if you're interested in having your very own EAPS PetCal. Please complete the form by Monday, November 25th. [Link:](#)

Calendars are \$15 and the funds will support the EAPS Graduate Student Association.

To pay, cash is preferable as the funds will be submitted to the business office. My office is HAMP 3261, but if I'm on the microscope that day, Moe has been assigned as a trusted recipient. If that is challenging, let me know and we can work something out.

Cheers,  
Lisette, PSPSPS Committee Chair



### DOE NATIONAL LABS DAY AT PURDUE

We are thrilled to invite you to **DOE National Labs Day** at Purdue on **November 19-20, 2024!** This unique event will gather leaders, scientists, and experts from 14 of the 17 U.S. Department of Energy (DOE) National Labs right here on campus, offering a valuable opportunity for you to connect, share knowledge, and explore collaboration pathways in research and national security.

#### **Why Attend?**

- **Network and Build Connections:** Engage with representatives from the National Labs and Purdue's research community in an inspiring environment.
- **Hear from Purdue Leadership and Special Guests:** Enjoy remarks from Purdue leaders including **Karen Plaut** (Executive Vice President for Research), **Patrick**

**Wolfe** (Provost and Executive Vice President for Academic Affairs and Diversity), and **Lucy Fleisch** (Dean of the College of Science). During lunch, **Leland Cogliani** from Lewis and Burke will deliver a compelling address on the evolving landscape of DOE National Labs and federal research trends.

- **Focus on Student Engagement:** Our afternoon student sessions, co-hosted by Purdue's **National Defense Society** and the **Office of Research**, will highlight career and internship opportunities with the DOE National Labs. Encourage your students to attend this exciting event to connect with lab representatives and explore potential career pathways.

#### **Event Details:**

- **November 19:** General sessions in Stewart Center followed by a student poster session, networking, and an open career fair in the Purdue Memorial Union Faculty Lounge.

For more information, a full schedule of events, and registration details, please visit the [DOE National Labs Day website](#). **Don't forget to register** – we want to ensure your spot at this extraordinary event!

### DEFENSE CIVILIAN TRAINING CORPS - PURDUE UNIVERSITY

Purdue's Defense Civilian Training Corps (DCTC) is a new program that will build civilian careers in the Department of Defense relating to acquisition, digital technologies, critical technologies, science, engineering, and finance and more. The Defense Civilian Training Corps is a scholarship-for-civilian-service award.

### NEW OIL AND GAS COURSE OFFERED AT PURDUE

A new engineering course for the upstream oil and gas industry is being offered starting in spring of 2025. This class has been approved at all levels, BS, MS, PhD. Check with your advisor!

### EAPS GRAD STUDENT RESEARCH OPPORTUNITIES

If you are interested in an EAPS grad research opportunity, [click here](#) for more information.

## OUTREACH NEWS

**If you have not done your STEM Career video yet please set up a time with Steven to record it. It**

should only take you ~10 minutes to record the video.

[Here is a great example from Jonathan Delph](#)

Link to the repository with all of the recorded STEM Career videos: <https://purdue.link/STEMrepository>

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](#).

#### Social sites:

[Twitter](#)

[Instagram](#)

[Facebook Superheroes of Science](#)

[EAPS departmental outreach web page](#)

#### Tabletop Gaming Night

- Dates: First Friday of each Month (September - May): 6-9 pm
- Location: HAMP 2244
- Needs: No "needs" here. It's not even an official Dept event. It's just a bunch of us getting together to play board games. Everyone is welcome.

## PUBLICATIONS

- 8162, <https://doi.org/10.1016/j.catena.2024.108269> PDF
- **Zhou Lyu**, Pacifica Sommers, Steven K. Schmidt, Marta Magnani, Mihai Cimpoiasu, Oliver Kuras, **Qianlai Zhuang**, **Youmi Oh**, Maria De La Fuente, Margaret Cramm, James A. Bradley, Seasonal dynamics of Arctic soils: Capturing year-round processes in measurements and soil biogeochemical models, *Earth-Science Reviews*, Volume 254, 2024, 104820, ISSN 0012-8252, <https://doi.org/10.1016/j.earscirev.2024.104820> PDF
- **Yiming Xu**, **Qianlai Zhuang**, **Bailu Zhao**, Michael Billmire, Christopher Cook, Jeremy Graham, Nancy HF French and Ronald Prinn, 2024, Impacts of wildfires on boreal forest ecosystem carbon dynamics from 1986 to 2020, *Environmental Research Letters*, 19 064023, DOI 10.1088/1748-9326/ad489a PDF
- Taheripour, F.; Mueller, S.; Emery, I.; Karami, O.; Sajedinia, E.; **Zhuang, Q.**; Wang, M. Biofuels Induced Land Use Change Emissions: The Role of Implemented Land Use Emission Factors. *Sustainability* 2024, 16, 2729. <https://doi.org/10.3390/su16072729> PDF
- **Zhao, B.** & **Zhuang, Q.** (2024). Nitrogen cycling feedback on carbon dynamics leads to greater CH4 emissions and weaker cooling effect of northern peatlands. *Global Biogeochemical Cycles*, 38, e2023GB007978. <https://doi.org/10.1029/2023GB007978> PDF
- Coelho, Paula\*; Fitzgerald, Gracie; Isaacson, Kristofer; Diop, Rasul; **Prabhakar, Gouri**; Heffner, Stephanie; Verma, Akshat; Youngblood, Jeffrey; Choi, Youn Jeong; Surdyka,

Stefanie; Spears, Samuel; **Frisbee, Marty D.**; Del Real, Katherine; Gustafson, Lauren; Torrez, Ana Maria; Proctor, Caitlin; Lee, Linda; Whitehead, Heather ; Doudrick, Kyle; Harpur, Brock; Whelton, Andrew (2024): Environmental and Private Property Contamination Following the Norfolk Southern Chemical Spill and Chemical Fires in Ohio, *Environ. Sci.:Water Res. Technol.*, <https://doi.org/10.1039/d4ew00456f>

- **Tremblay, M.M.**, Mark, D.F., Barfod, D.N., Cohen, B.E., **Ickert, R.B.**, Lee, M.R., Tomkinson, T., Smith, C.L. (2024) Dating recent aqueous activity on Mars. *Geochemical Perspective Letters* 32, 58–62. <https://doi.org/10.7185/geochemlet.2443>

## MEETINGS/EXPOS/ OPPORTUNITIES OUTSIDE OF PURDUE

### WESTERN KENTUCKY UNIVERSITY SEEKING FOUR M.S. GRAD STUDENTS

The Department of Earth, Environmental, and Atmospheric Sciences ([EEAS](#)) at Western Kentucky University ([WKU](#)) is inviting applications for four M.S.-level [graduate students](#) to start August 2025. Students will work as a part of the state-wide CLIMBS (<https://kynsfepscor.uky.edu/climbs/>) initiative, a 5-year, \$20 million National Science Foundation EPSCoR grant to advance research in climate resilience for Kentucky. The successful applicants will be expected to contribute to one of the following projects: (a) Identification and analysis of the synoptic-scale atmospheric environments associated with high-impact weather; (b) Dynamical downscaling of future 21st century climate projections for the Mid-South region of the U.S.; (3) Comprehensive assessment of historical state-wide weather and climate-related threats and hazards; and (4) An historical, wide-ranging study of casualties associated with high-impact weather and climate events.

These positions include a 12-month stipend and tuition. Applicants should have a B.S. degree in the atmospheric, environmental, or geographic sciences, or a closely related discipline. Prior experience in computer programming (e.g., Python, FORTRAN, NCL, Linux shell scripting) is necessary, and experience in application to climatic processes, numerical weather simulation, and/or AI-driven data analytics is preferred. Interested candidates are encouraged to contact



Dr. Jerry Brotzge (<[Jerald.brotzge@wku.edu](mailto:Jerald.brotzge@wku.edu)>) for more information.

### **SIPARCS APPLICATIONS ARE OPEN!**

We are pleased to announce that we are now accepting applications for the 2025 Summer Internships in Parallel Computational Science. **The application deadline for the 2025 SIParCS program is January 21, 2025 at 5pm Mountain Time.**

This year we are offering undergraduate and graduate students the opportunity to work with technical projects ranging in topic from machine learning, data science, software engineering, data assimilation, digital asset management, visualization, and application optimization/parallelization in HPC among others. If you're interested in applying, please [visit our website](#) to review our technical [statements of work](#) and apply to up to two projects you would like to work with. Watch our videos to learn more about the [SIParCS experience](#) or about [NSF NCAR](#) as a science organization for a resilient, sustainable society.

We also have a [CISL Outreach, Diversity, and Education \(CODE\) Intern](#), for graduate students in Higher Education Administration / Student Affairs, Science Education, Education Policy, Social Work, or related programs who are interested in learning about HPC Education and Outreach.

See [How to Apply](#) for tips on applying to SIParCS and [Frequently Asked Questions](#). Applicants will be required to submit the following:

1. Application through HR website (no more than two (2) projects)
2. CV/Resume
3. Personal Statement
4. Unofficial Transcript (from all institutions attended)

Share this email widely to students who may be interested in an internship at NSF NCAR next summer. International Students who are eligible to work in the U.S. are welcomed and encouraged to apply. The individual project qualifications describe the ideal skill set we look for in candidates. We encourage candidates to apply even if they do not possess all of the listed qualifications.

As part of our goal of making a long-term, positive impact on the quality and diversity of the HPC workforce, the SIParCS program welcomes and encourages applications from students who are pursuing their first professional internship. As many CISL staff can attest, the path to an HPC career can follow many twists and turns. Be sure to tell us in your personal statement how all of your work,

school, and life experiences have prepared you for taking on a SIParCS project.

As always, if you have any questions about the program or the application process, you can reach us at [siparcs@ucar.edu](mailto:siparcs@ucar.edu). Feel free to set-up an appointment to learn more about our program.

### **WATERSHED SCHOLARS PROGRAM**

We are excited to announce the Watershed Scholars Program for students interested in pursuing a master's degree in environmental sciences, biology, chemistry, civil engineering, or geography with an emphasis in watershed sciences topics broadly at Southern Illinois University Edwardsville (SIUE). Students selected for the program will receive a tuition waiver and \$10,000 scholarship for each of the two years they are in the program, as well as funding to attend conferences and to purchase equipment and tools needed to complete their research. In addition, students will participate in thesis and research workshops, career panels, scientific and technical seminars, and mentoring from a variety of people. Eligible students are required to have an income of \$26,355 (single household)/ \$35,770 for family of 2) or less while a student at program start date (Fall 2025). Income in the prior year is not considered. Scholars must be U.S. citizens, permanent residents, or admitted refugees. Interested individuals can read more about the program [here](#).

SIUE is located near the confluence of the Mississippi and Missouri Rivers and offers opportunities to study watersheds at multiple scales and from rural to urban environments. The SIUE campus is on 2,600 acres of beautiful rolling hills and woodlands, on the bluff above the Mississippi floodplain. Students applying to SIUE master's programs in [Geography & GIS](#), [Biological Sciences](#), [Chemistry](#), [Civil Engineering](#), or [Environmental Sciences](#) are eligible to apply for the Watershed Scholars program. Students with an interest in sustainable watersheds and backgrounds in biology, chemistry, engineering, ecology, geography, geology, environmental sciences, fisheries sciences, wildlife management, natural resources, environmental archaeology, and geosciences, are encouraged to apply. After being admitted to the SIUE graduate program, potential scholars must then apply to the [Watershed Scholars Program](#) (or they should apply to both the graduate program and scholarship program at the same time). Potential scholars will be asked to provide a written statement (250-500 words) describing their interest in

watershed science research and, if applicable, any prior relevant research experience.

**Students should apply before February 15, 2025**, for priority consideration. Further information, including details on how to apply, can be found on the [Watershed Scholars website](#). If students have any questions, please encourage them to contact the Watershed Scholars project lead, Dr. Adriana E. Martinez at [admart@siue.edu](mailto:admart@siue.edu). This program is funded by the National Science Foundation - DUE Award #2130471.

**MASTER OF ARTS IN TEACHING EARTH SCIENCE RESIDENCY PROGRAM**

The [Master of Arts in Teaching Earth Science Residency Program](#) in the Richard Gilder Graduate School at the American Museum of Natural History in New York City is **looking for graduates with Earth and space science backgrounds** (geology, mineralogy, paleontology, oceanography, astronomy, environmental geology, and more) who want to make a difference in the world of STEM education. This teaching fellowship combines coursework, mentoring, and real-world experience to prepare Earth and space science graduates for **rewarding careers as culturally responsive middle and high school teachers**.

All degree candidates will receive **free tuition, books, and a \$40,000 stipend** towards the cost of living. In return, candidates commit to teaching in a high-needs school for three years.

With a sole focus on preparing new Earth science teachers, the program is a full-time, 15-month Master's degree program that takes place at the Museum and in urban partner schools. We seek a student body with a passion for social justice and diverse life and career experiences.

**We are currently accepting applicants for the class that will begin in June 2025.** Prospective students are encouraged to attend an Information Session or to contact us for more information.

You can also visit the program website to learn more and/or join our mailing list (make sure to click MAT for Earth Science Grads). For questions, you can contact the program office directly at [mat@amnh.org](mailto:mat@amnh.org) or (212) 313-7464.

**STUDENT PATHWAYS SCHOLARSHIP**

now accepting applications for the Fall 2024 cycle. Please apply for the [Student Pathways Scholarship](#), which has a deadline of **December 1st, 2024!**

This scholarship is a one-time award of \$500-\$1000, depending upon the number of applicants, for students with disabilities pursuing fields of study

within the geosciences. This scholarship is open to both full-time and part-time students and can be used to cover the cost of tuition, rent, bills, or other financial obligations they may be dealing with. Apply here: [form is here](#).

**NSF SOARS FIRST YEAR PROTÉGÉ APPLICATIONS OPEN**

We are happy to announce that the NSF SOARS 2025 First-Year Protege Applications are now open until **January 21, 2025**.

Applications must be submitted through the SOARS website: <https://soars.ucar.edu/apply> NSF SOARS is an undergraduate-to-graduate bridge program, designed to broaden participation of marginalized communities in the atmospheric and related sciences. Students are invited from multiple STEM disciplines including: chemistry, computer science, ecology, engineering, environmental studies, geography, mathematics, meteorology, oceanography, physics, science education, social sciences, and other related fields.

Program Benefits:

- Multiple-Year Support: Successful Protégés can participate in NSF SOARS for up to four years.
- Stipend: NSF SOARS Protégés work 40 hours a week for 11-weeks and earn a competitive wage.
- Housing and Transportation: The program provides furnished apartments, round-trip airfare, and a bus pass.
- Conferences: Protégés are funded to attend national scientific conferences to present their summer research.

Eligibility Requirements:

- Must be enrolled in a degree-granting institution
- Must not have received a Bachelor's degree in STEM and at least one more semester left of undergrad.
- Must be a U.S. Citizen or Permanent Resident

For more information about the program and how to apply, visit <https://soars.ucar.edu/>

**INTERNSHIP OPPORTUNITIES FOR GRADS AND UNDERGRADS - NRO**

National Reconnaissance Office (NRO) is currently [accepting undergrad and graduate student intern applications](#) for summer 2025. This is what EAPS Alumna Mariah Romero had to say about this program:

“Last summer I supervised three interns that had broad backgrounds (environmental sciences, political science, and earth sciences). I strongly encourage EAPS grads and undergrads to apply. The NRO is interested in individuals from all STEM fields. The intern application is super quick, students just need to fill out the portal and upload their resume/CV and transcript. The ‘Apply Now’ button is buried under a lot of text and is at the very bottom, left side of the webpage.”

Additional links about NRO:

<https://www.nro.gov/>

<https://www.nro.gov/Careers/Student-Programs/Student-Opportunities/#cadreintern>

**UCAR STUDENT OPPORTUNITIES WEBSITE**

Check the opportunities website for opportunities at UCAR.

**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 [Air Force Science & Technology Fellowship Program \(AF STFP\)](#).

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](http://www.nas.edu/afstfp).

**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. 15<sup>th</sup> of each year.**

**2024 AGU ANNUAL MEETING**

**December 9-13, 2024**

**Washington, DC**

[Meeting info](#)

**ITOKAWA AND THE DAWN OF ASTEROIDAL SAMPLE RETURN WORKSHOP**

**January 28-30, 2025**

**Houston, Texas**

[Meeting info](#)

**56<sup>th</sup> LUNAR PLANETARY SCIENCE CONFERENCE**

**March 10-14, 2025**

**The Woodlands, Texas / Virtual**

[Meeting info](#)

**8<sup>th</sup> International Planetary Dunes Workshop**

**May 19-22, 2025**

**Sardina, Italy / Virtual**

[Meeting info](#)

**POSITIONS AVAILABLE- CAREER OPPORTUNITIES**

- [CIWRO Research Scientist Warn-on-Forecast Modeling](#) - Cooperative Institute for Severe

and High-Impact Weather Research and Operations (CIWRO)

- [Open Rank Professor, Atmospheric Sciences, Tenure Track](#) – University of North Dakota
- [Tenure-track Assistant Professor position in Geological Engineering, with a focus on geohydrology](#) - Department of Geological and Mining Engineering and Sciences at Michigan Technological University
- [Professor of Atmospheric and Oceanic Sciences](#), University of Wisconsin-Madison
- [Assistant Professor of Geography](#) (tenure track)- Ohio University
- [Future Faculty in the Physical Sciences \(FFPS\) Fellowship](#) – Princeton
- [Deep Learning and Coupled Human-Climate Postdoctoral Fellow](#) Colorado State
- [New Mexico 50yr Water Plan. We currently have 8 open positions to support this effort!](#)
  - [Junior Hydrogeologist](#) - Bachelor's degree in Earth Sciences required
  - [Senior Hydrogeologist](#) - Master's degree in Earth Sciences required
  - [Water Data Engineer/Developer](#) - Bachelor's degree in Computer Sciences required
  - [Database Developer/Administrator](#) - Associate's degree or 18+ months experience in computer sciences or related fields
  - [Geothermal Research Associate](#) - Master's degree in Geoscience/Geophysics/Engineering required
  - [Argon Lab Manager](#) - Master's degree in Argon geochronology
- [Tenure-track asst. professor](#) – Dept. of Marine, Earth, and Atmospheric Sciences (MEAS) at NC State University
- [Aviation Meteorology Assoc. Professor](#) - University of Oklahoma. Contact search chair Dr. Jens Redemann ([jredemann@ou.edu](mailto:jredemann@ou.edu))
- [Tenure-track Meteorology Faculty Position](#) – Valparaiso University
- [Multiple Positions with Enviroforensics](#)
- [Meteorology and Atmospheric Science – multiple positions from various companies](#)
- [AGI Geoscience Job Center – multiple positions](#)
- [Gradient Corp – multiple opportunities](#). contact [Qian Zhang](#)
- [National Weather Service – multiple opportunities](#)

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 [Cheryl Pierce](#) 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, [click here](#). As an additional resource for information about departmental events, seminars, etc., see our [departmental calendar](#).

## NEWSLETTER INFO

### IMPORTANT NOTICE ABOUT THIS NEWSLETTER