

# EAPS WEEKLY NEWSLETTER

December 2, 2024

[Facebook](#) [Twitter](#) [LinkedIn](#) [Instagram](#) [Website](#)

## EAPS MEETINGS & EVENTS

[PURDUE REGISTRAR CALENDARS](#)

[EAPS SEMINARS AND EVENTS CALENDAR](#)

[EAPS K-12 OUTREACH CALENDAR OF EVENTS](#)

[REPORT YOUR OUTREACH AND ENGAGEMENT  
ACTIVITIES](#)

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

- Congrats to Prof. Cauê S. Borlina for being awarded a grant from the Purdue Experiential Education Program for “Enhancing Accessibility to Caves through Virtual Reality in Collaboration with the Classroom.” Profs. Ali Bramson and Anastasia Kouvaras (from CGT) are also involved with the grant.
- 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.
- It’s been a busy Fall field season for Dr. Frisbee’s Hydrogeology Research Group with multiple projects focused on investigating groundwater flow processes and groundwater/surface-interactions in the state. The students have done research in Shades State Park, sites along the Wabash River,

Ross Biological Reserve, and with private wells near the Granville Bridge area. Srilani Wickramasinghe is investigating the use of iodine-129 as a hydrogeological tracer for bomb-pulse aged groundwater and groundwater flow through fractured shale. Diana Pinto, an UREP-C undergraduate researcher, is designing a field-ready anion-exchange column that allows us to collect bromide from natural waters that tend to have very low bromide concentrations. Her work will allow us to use bromine-81 to trace the origin and exchange of saline brines with surface water systems. The Hydrogeology undergraduate crew, including Timothy Hartzler, Canada Speier, Tristyn Berube, Leah Montgomery, Destin Gentillon, and Thomas Lambert, have been working primarily on projects at the Ross Biological Reserve. They have been collecting water samples from the streams and seeps in the RBR, analyzing temperature time series of the seeps in different sand & gravel units, installing piezometers in the sand & gravel units, and making connections between the hydrogeological processes and their ecological functioning. For example, a few of our surprise observations include the importance of seeps for amphibians such as salamanders who tend to congregate near the seeps in the winter and remain active near the seeps throughout the coldest parts of winter since the seeps stay a warm 50°F in the winter, and the importance of the seeps for migrating birds, especially hummingbirds, which tend to congregate around the autumn flowers that bloom in the fall around the seeps. The team plans to couple the temperature time series of the seeps and piezometers with isotopic data that will hopefully arrive in the spring semester. So it should be a busy spring with respect to local groundwater. Check out photos from the team on our departmental Instagram!

- Prof. Jie Shan is teaching CE/EAPS 50801 Geographic Information Systems again this coming Spring! This is open to undergrads and grads. Sign up today!

## NEWS/OPPORTUNITIES AT PURDUE

**EAPS SEMINAR – JESSIE CHRISTIANSEN**  
**Thursday, December 5, 3:30 pm, HAMP 1252**  
Jessie Christiansen is a research scientist at CalTech/IPAC  
Host: graduate student Colin Hammill

# ASTRONOMY ON TAP

**3 December The Spot Tavern (21+)**  
**7-9 Pm 406 S 4th St Lafayette**

*Featuring Purdue Researchers*

*Dr. Abigail Polin*



*A Century of Distant Measures*

*Mr. James McFadden*



*Using classical geology to study the Moon*

*Interested in speaking?*




*Twitter: @AoT\_CoA*

Come learn about astronomy in a fun, casual setting! Featuring informal talks by professional scientists, fun trivia, prizes, and beer!

**DECEMBER ASTRONOMY ON TAP EVENT**

December 3<sup>rd</sup> at 7pm at The Spot in Lafayette

**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

- 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

## LEGACY FOUNDATION SCHOLARSHIP

Scholarship offered through Legacy Foundation: O'Shea Patrick McCarthy Scholarship. It is in memory of O'Shea, a student in the Earth and Atmospheric Sciences program at Purdue who passed away several years ago. The scholarship was started by his mother and brother in his memory. The \$1000 scholarship is aimed at students in the Earth and Atmospheric Science program at Purdue or students from NWI who are studying in the arts. I want to ensure that the students in the program are made aware of this opportunity.

**Students apply through our Legacy Foundation Universal Scholarship Application. Students must START applications by December 31, 2024. All started applications must be SUBMITTED by January 24, 2025.** Students can check out our website & [apply here](#).

## NSF NCAR/ACOM RALPH CICERONE FELLOWSHIP PROGRAM

**The NSF NCAR/ACOM Ralph Cicerone Fellowship Program** for graduate students in Atmospheric Chemistry and related Earth System Science fields is now accepting applications for the 2025-2026 program. See the [Cicerone Program website](#) for more information.

**Applications are due January 31, 2025.**

## 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.

### **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](#)

**32<sup>nd</sup> MEETING OF THE NASA SMALL BODIES**

**ASSESSMENT GROUP**

**January 7-9, 2025**

**Orlando, FL / Virtual**

[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
- [Professor of Atmospheric and Oceanic Sciences](#), University of Wisconsin-Madison
- [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 open positions to support this effort!](#)
  - [Junior Hydrogeologist](#) - Bachelor's degree in Earth Sciences required
  - [Senior Hydrogeologist](#) - Master's degree in Earth 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
- [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](#)

## 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 [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](#).