

EAPS WEEKLY NEWSLETTER

November 22, 2021



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EAPS MEETINGS & EVENTS

Faculty Meetings (3:30-5pm, Executive Committee 3-3:30pm)

- 7 December

**Faculty Workshop November 30
HAMP 2244 3:30 – 4:30**

[PURDUE CALENDAR](#) 2021-22

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

[REPORT YOUR OUTREACH AND ENGAGEMENT ACTIVITIES](#)

OUTREACH NEWS

Did you know, faculty use the Superheroes of Science [YouTube](#) channel for broader impacts on their grants and in their instruction? The channel has had over 10,000 views this year so far. Help us

continue to grow the channel and increase the impact by subscribing and sharing videos.

The Purdue University Superheroes of Science Podcast is on most podcast players as well as [YouTube](#)!

Social sites:

[TikTok SuperHeroesofScience](#)

[Facebook EAPS Outreach](#)

[Facebook Superheroes of Science](#)

[Twitter](#) [EAPS departmental outreach web page](#)

[Instagram](#)

WANT TO HELP OUTREACH? Write a favorable review on the Superheroes of Science podcast. This helps their ratings go up and helps them become more visible in various podcast platforms.

NEWS/OPPORTUNITIES

WELCOME ROGER WIENS!

Just announced: Roger Wiens will join our Purdue EAPS faculty in March, 2022!

1 MINUTE SCIENCE CHALLENGE

Do you have what it takes to explain a science topic in one minute? Make a video (vertically) explaining any science topic and send it to the EAPS K-12 Outreach Coordinator (mrsmith@purdue.edu) as an MP4. Submitted videos will be posted on the Superheroes of Science YouTube Shorts (@PurdueSOS) playlist and on the Superheroes of Science TikTok (@superheroesofscience) channel. Videos with the most likes before finals week will win a prize. **Prizes include a Fuel Coffee shop gift card, a Superheroes of Science shirt, and a cinch bag of Purdue swag. Video metrics will be totaled on Friday, December 3.** The sooner you submit a video, the better your chance at winning a prize. Good luck! Videos must be 59 seconds or less, in a vertical format, and 'G' rated. *Also, check out the other videos and vote with your likes!*

ANNOUNCING THE FIFTH HANDS-ON TRAINING IN HANDLING AND MANIPULATION OF SMALL EXTRATERRESTRIAL SAMPLES

April 13–15, 2022

Purdue University, West Lafayette, Indiana

(Boiler up!)

Applications are being accepted!

Many current and future extraterrestrial sample collections do and will consist of small particles — less than 100 micrometers across — and these can be challenging to work with. Such samples include Earth-collected cosmic dust, returned comet and interstellar samples from Stardust; and returned asteroid samples from the Hayabusa, Hayabusa2, and OSIRIS-REx missions. In this training, attendees will receive hands-on training in manipulation and micromanipulation of comparable small samples, learning from the experts from the Astromaterials Research Division at Johnson Space Center (JSC) and Purdue University.

Application deadline: January 31, 2022

For training details and to submit your application, please visit the [website](#).

For more information, contact, Meeting and Publication Services, USRA/Lunar and Planetary Institute, meetinginfo@hou.usra.edu

LPI SUMMER INTERN PROGRAM IN PLANETARY SCIENCE

The LPI Summer Intern Program in Planetary Science provides undergraduate students with an opportunity to perform cutting-edge research, learn from widely respected planetary scientists, and discover exciting careers in planetary science. During the 10-week internship, students have opportunities to participate in enrichment activities, including lectures and career development workshops. Many of today's leaders in planetary science began as LPI summer interns. Every career starts somewhere, and we encourage you to join us as you embark on your journey.

Program dates: June 6–August 12, 2022

Application deadline: December 13, 2021

Given the uncertainty of the COVID-19 pandemic, the 2022 program may be held in person, virtually, or as a combination of those formats. Selected participants will be notified in March 2022 of the internship format. [Apply and learn more](#).

MEXAG22 –

CALL FOR ABSTRACTS AND REGISTRATION

MExAG Annual Meeting

February 1–3, 2022

Virtual #MExAG22

This is the second meeting of the Mercury Exploration Assessment Group (MExAG). The agenda will include an overview of NASA programs, ongoing science of the innermost

planet, updates on ongoing concepts for future spacecraft missions, and discussion of the MExAG Goals Document for the future of Mercury science and exploration. This meeting is open to everyone with an interest in the science and exploration of the planet Mercury.

Call for Abstracts: Abstract submission deadline — **December 2, 2021**, 5:00 p.m. U.S. Central Standard Time (GMT –6)

Registration fees are not being collected for this virtual meeting, but registration is required.

Registration will be available through February 3. Virtual connection information will be provided to registrants before the meeting.

<https://www.lpi.usra.edu/mexag/meetings/2022/>

DECADAL SURVEY ON BIOLOGICAL & PHYSICAL SCIENCES RESEARCH IN SPACE 2023–2032

The Decadal Survey on Biological and Physical Sciences Research in Space 2023–2032 is now accepting white papers. White papers can either be “topical” and focus on a single research area, scientific investigation, or experiment, or be for “research campaigns” that address broad or large-scale goals and can span multiple topics or research disciplines. Of particular interest is “[transformative research](#)” for ideas, discoveries, or tools that radically change our understanding of an important existing scientific or engineering concept or that lead to the creation of a new paradigm or field of science or engineering.

The National Academies of Science, Engineering and Medicine (NASEM) has released this call for white papers and the white papers will contribute to the development of their report for the next [Decadal Survey on Life and Physical Sciences Research in Space 2023-2032](#). These white papers serve as the input from the scientific community into the decadal survey. The report will be used by the Science Mission Directorate of the National Aeronautics and Space Administration (NASA) to provide the framework for the vision, priorities, and strategic plan and budget for NASA's research efforts in the area of biological and physical sciences in reduced gravity environments.

The [call for 2- to 5-page white papers](#) has the following due date:

- “Research Campaign” white papers should be received by **December 23, 2021**.

Information about past microgravity materials science research conducted aboard the

International Space Station (ISS) may be found at [A Researcher's Guide to Microgravity Materials Research](#).

The most recent decadal survey was entitled "[Recapturing a Future for Space Exploration: Life and Physical Sciences Research for a New Era](#)," which was subsequently followed by "[A Midterm Assessment of Implementation of the Decadal Survey on Life and Physical Sciences Research at NASA](#)."

VENERA-D: VENUS CLOUD HABITABILITY SYSTEM WORKSHOP

Nov. 29–Dec. 3, 2021 - Virtual

[The Venera-D: Venus Cloud Habitability System Workshop](#) will be delivered as a [virtual workshop](#).

Program and Presenter Information: Detailed information about the schedule is available by viewing the program and abstracts. Authors should check the [author index](#) to see where their presentations have been scheduled. Session chairs and abstract authors: please review your name in these products and, if updates are needed, [e-mail them](#).

Registration: No registration fees are being collected for this meeting, but registration is required for communication and planning purposes.

[Register](#) through December 3, 2021. Virtual connection information will be provided to registrants before the workshop.

For more [information](#), contact Meeting and Publication Services, USRA/Lunar and Planetary Institute, meetinginfo@hou.usra.edu

LUNAR SURFACE SCIENCE WORKSHOP INCLUSIVE LUNAR EXPLORATION

[January 26–27, 2022, Virtual](#)

The goal of this LSSW session is to begin an open dialogue about how to explore the Moon responsibly, ethically, and inclusively.

As the Artemis era begins, this is a time to intentionally make key decisions that will impact the lunar and planetary workforce and the future of exploration. Inclusion is one of NASA's core values. This session will discuss best practices related to advancing inclusion and diversity in the lunar science and exploration community and initiate conversations about how to explore the Moon responsibly, ethically, and inclusively. One expected outcome of this session is a publicly available report of key findings and

recommendations to NASA and the community, including best practices.

Registration fees are not being collected, but registration is required. Registration will be available through January 27. Virtual connection information will be provided to registrants before the session. For more information, contact: [Meeting and Publication Services](#), USRA/Lunar and Planetary Institute

SCHOLARSHIP OPPORTUNITY - SWANA

SWANA, a solid waste disposal organization has statewide scholarships available to college students. Applicants must be student members of the organization but membership is free. [For more information](#).

MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE FUNDED GRADUATE ASSISTANTSHIP – VILLANOVA UNIVERSITY

The Department of Geography and the Environment at Villanova University invites applications for a graduate student to participate in a [NOAA-funded research project](#) investigating why tornado disaster potential and mortality is greater in the Southeast compared to any other U.S. region. Overall, the project is focused on developing tangible and actionable solutions to the Southeast tornado problem, especially for the region's more vulnerable demographics. We seek a student who is excited to engage in a collaborative, interdisciplinary project that will culminate in an M.S. degree in Environmental Science. The successful applicant will lead and work alongside undergraduates who are assisting on research aimed at uncovering the relationships between tornado risk, warnings, reports, and societal vulnerability. The candidate will also develop a thesis project that supports this funded NOAA project.

The successful candidate must: (1) fulfill all admission requirements for the MS in Environmental Science program and the Graduate College of Liberal Arts and Sciences at Villanova University; (2) have a BS in environmental science, atmospheric science, geography, earth sciences, or related discipline; (3) have existing or be willing to develop their geographic information system (GIS) skillset; and (4) be willing to lead a group of and work alongside undergraduate students to solve problems central to the project goals. We welcome and encourage applicants from groups

historically underrepresented in STEM and Environmental Science. The fully funded student position (stipend + tuition waiver) is available starting August 2022. Villanova is a Catholic university sponsored by the Augustinian order, located in the ethnically, racially, and culturally diverse Philadelphia metro region. Diversity and inclusion have been and will continue to be an integral component of the University's and the Department's missions. To apply, email a cover letter, CV, copies of transcripts, GRE scores, and the names and contact information of three references able to speak about your academic experiences to [Dr. Stephen Strader](#). For full programmatic requirements see [here](#). In addition, we ask the candidate to also **apply to the program using the prior link officially by 1 February 2022**. Only those students who officially apply to the MSES program through the Graduate School by 1 February 2022 will be considered. Note: Please indicate in your application materials that you wish to be considered for "Dr. Strader's NOAA grant funding". Applications will be reviewed beginning 1 February 2022, with funding decisions made by 1 April 2022.

FORD FOUNDATION FELLOWSHIP PROGRAMS

Through its program of fellowships, the Ford Foundation seeks to increase the diversity of the nation's college and university faculties by increasing their ethnic and racial diversity, maximize the educational benefits of diversity, and increase the number of professors who can and will use diversity as a resource for enriching the education of all students.

Predoctoral, dissertation, and postdoctoral fellowships are awarded in a national competition administered by the National Academies of Sciences, Engineering, and Medicine on behalf of the Ford Foundation.

Eligibility to apply for a Ford fellowship is limited to: All U.S. citizens, U.S. nationals, and U.S. permanent residents (holders of a Permanent Resident Card); individuals granted deferred action status under the Deferred Action for Childhood Arrivals Program;¹ Indigenous individuals exercising rights associated with the Jay Treaty of 1794; individuals granted Temporary Protected Status; asylees; and refugees, regardless of race, national origin, religion, gender, age, disability, or sexual orientation;

Individuals with evidence of superior academic achievement (such as grade point average, class rank, honors or other designations); and

individuals committed to a career in teaching and research at the college or university level in the U.S.

Eligibility includes individuals with current status under the DACA Program, as well as individuals whose status may have lapsed but who continue to meet all the USCIS guidelines for DACA. Receipt of the fellowship award is conditioned upon awardees providing satisfactory documentation that they meet all the eligibility requirements.

Awards will be made for study in research-based Ph.D. or Sc.D. programs; practice-oriented degree programs are not eligible for support (see eligible fields). Prospective applicants should carefully review the eligibility requirements, the terms of the fellowship awards, application instructions and other information pertaining to the individual fellowship (Predoctoral, Dissertation, or Postdoctoral) for which they are applying. In addition to the fellowship award, new Ford Fellows are invited to attend the Conference of Ford Fellows, a unique national conference of a select group of high-achieving scholars committed to diversifying the professoriate and using diversity as a resource for enriching the education of all students.

[2022 Competition Dates:](#)

[2022 Online Application:](#)

[STATUS: OPEN](#)

2022 Dissertation and Postdoctoral application deadlines: Dec. 9, 2021, 5:00 PM EST

2022 Predoctoral application deadline: Dec. 16, 2021 5:00 PM EST

Supplementary Materials deadline for submitted applications: January 6, 2022, 5:00 PM Eastern EST

Notification of 2022 awards:

Mid- to late March 2022

APOLLO 17 – ANGSA WORKSHOP

[October 26–28, 2022](#)

[Lunar Planetary Institute](#)

[Houston, Texas](#)

The 3-day workshop is currently planned as an in-person workshop, October 26–28, 2022, at the Lunar and Planetary Institute in Houston, Texas. The 50th anniversary of the Apollo 17 mission is in Dec. 2022. By every metric, this mission to the Taurus-Littrow Valley (TLV) was the most accomplished of any of the Apollo missions to the moon, leading to 50 years of extensive, continuing analytical investigations of its observations, samples, photography, and geophysical data. The goals of this workshop are:

- revisiting the TLV by integrating new geologic and exploration context, new ANGSA sample data, orbital observations, and the full breadth of data sets from all six Apollo landed missions for a fuller understanding of the moon, the sun, and the earth
 - establishing links among multiple generations of lunar scientists and engineers as we prepare for our future on the moon
 - focusing on scientific and design lessons learned from both Apollo and from ANGSA in preparation for near-term human exploration of the moon.
- We will also focus on specific topics, with short reports expected from the breakout groups and presented during the workshop. Presentations and results of the workshop will form the basis of a special issue in a peer-reviewed journal. Manuscripts for this special issue will be due within three months after the workshop.

EAPS GRAD STUDENT RESEARCH OPPORTUNITIES

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

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, [click here](#). A short video about the CIGP/CSE program can be found [here](#).

Spring Application Deadline: March 1

Fall Application Deadline: October 1

POSITIONS AVAILABLE-CAREER OPPORTUNITIES

GEOLOGICAL RESEARCH SPECIALIST

The Indiana Geological and Water Survey

Positions at IGWS:

Directions on how to apply:

1. [Non-IU employees should click here](#) to access the careers site.

2. Review the job description and then click on "Apply for Job" to begin your application.
3. Non-IU employees will need to sign in to access your account. If you do not already have an account, click on "Register Now" to create an account. Current IU employees will be recognized through CAS Authorization.
4. Complete the application process.

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 \(AF STFP\)](#).

We are 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 and 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.

NATIONAL WEATHER SERVICE POSITIONS AVAILABLE

[Check here for available positions](#) with the National Weather Service.

ASTROCAMP

AstroCamp is looking for graduating students (undergraduate or graduate) for a full-time program instructor position for physical sciences and astronomy concepts at their [outdoor science school in California](#). Link to job [here](#).

AGI GEOSCIENCE JOB CENTER

[Check listings here](#).

FULL TIME METEOROLOGIST WITH KDRV-TV

[Full-time newsroom opening for an on-air meteorologist](#). Will prepare and present the forecast for weekday morning and midday newscasts. This is a great opportunity for a meteorologist looking to develop his or her forecasting skills in a dynamic weather environment with ocean beaches, mountain ranges, and scenic river valleys as microclimates in our coverage area. For more information, contact Mark Hatfield, former News Director, turned General Manager for KDRV-TV, the Allen Media Broadcasting-owned ABC affiliate in Medford, Oregon: markhatfield@kdrv.com. Recent grads or students soon to be graduating are encouraged to apply.

GRADIENT CORP

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.

FURMAN UNIVERSITY

Assistant/Associate/Professor in Water Resources

The Department of Earth, Environmental, and Sustainability Sciences at Furman University invites applications for a tenure-track Assistant/Associate/Professor position in Water Resources beginning in August 2022. The successful candidate will have a Ph.D. in Earth Sciences with a specialization in hydrology, hydrogeology, hydroclimatology, or closely related fields prior to August 1, 2022. Candidates must demonstrate a commitment to excellence in teaching, mentoring, and establishing a productive research program that leads to transformative experiences for undergraduate students through mentored thesis research, which is a required hallmark of our program. We seek candidates whose teaching and

scholarship align with the department's integrated focus on sustainability, resilience, equity, and social justice within the context of the water, energy, food, and climate nexus. Teaching responsibilities consist of four courses with labs per year, including an introductory level earth science course and upper-level courses in Hydrogeology and Watershed Hydrology. In addition, there will be opportunities to offer a first-year writing seminar and courses in the area of candidate's expertise.

POSTDOC RESEARCH ASSOCIATE - TEXAS A&M

Texas A&M is looking for a postdoc starting in the January-May 2022 time period. This opportunity is part of the TAMU component of the DOE TRACER project. While there is an aerosol-cloud interaction component, they are particularly looking for someone with experience or interests in idealized modeling of convection and/or radar analysis. They are also looking for someone that can take a leading role in field deployments (mobile radiosonde launches) in summer 2022. [LEARN MORE](#)

POSTDOC IN STABLE ISOTOPES AND REACTION KINETICS – INDIANA UNIVERSITY

[Applications](#) are invited for a Postdoctoral Research Associate at Indiana University, USA. The project aims using non-traditional stable isotopes to measure reaction rates and understand the mechanisms of mineral-aqueous solution reactions. See our recent publications for details (Zhu et al., 2016, Chemical Geology; Zhu et al, 2020, 2021, GCA). The project will employ a combined experimental, analytical, theoretical, and modeling approach.

The successful candidate will hold a Ph.D. in earth sciences or a closely related field. A strong background in either stable isotopes or kinetics and thermodynamics is required. Experience performing aqueous geochemical experiments, and using geochemical equilibrium and kinetics models is highly desirable.

Salary is competitive and includes fringe benefits. The initial appointment will be for one year, with the expectation of renewable for another two years, subject to performance and funding availability. The candidate will be based on the Bloomington campus of Indiana University, and will have access to an extensive suite of analytical tools, including MC-ICP-MS, TIMS, ICP-OES, ICP-MS, FESEM, and FETEM. Indiana University has some of

the most powerful high-performance computing facilities in the nation that are free for faculty and students to use. The position requires excellent communication and interpersonal skills, intellectual curiosity, and a willingness to explore unfamiliar aspects of earth sciences.

ASSISTANT PROFESSOR – DEPT OF GEOSCIENCES – PRINCETON UNIVERSITY

The Department of Geosciences at Princeton University is seeking applications for a tenure-track assistant professor faculty position in geology, broadly defined. Possible fields of specialty include, but are not limited to, petrology, geochemistry, volcanology, tectonics, glaciology, geomorphology, sedimentology, Earth history, and paleontology. We are particularly interested in interdisciplinary scientists who could interact productively with existing faculty across the department.

[Applicants should send](#) a curriculum vitae, including a publication list, statements of research and teaching interests, a separate statement outlining how they see themselves contributing to our mission of building a diverse and inclusive discipline, and contact information for three references. Evaluation of applications will begin as they arrive; for fullest consideration, **apply by December 1, 2021**, but applications will be accepted until the position is filled.

[General information](#) about applying to Princeton and how to self-identify.

OPEN POSITIONS AT UTAH STATE

[Assistant Professor, Climate Resiliency Extension Specialist](#)- We seek an individual with expertise in climate mitigation, adaptation, and resilience science alongside a depth of knowledge in any related natural resource management field (e.g., water resources and conservation, water quality, aquatic ecology, fish ecology, fisheries management, plant, riparian, and wetland management, biogeochemistry). Successful candidates must have a commitment to stakeholder engagement, co-production of knowledge, collaborative decision-making, teamwork, and communication, as well as strong interpersonal skills. We are particularly interested in innovative candidates committed to helping natural resource managers adapt to and mitigate climate change impacts. The primary clientele for this Extension Specialist will be local, federal, and state agency staff and/or industry partners

charged with managing natural resources in Utah and throughout the Intermountain West. The position consists of 60% extension, 30% research, and 10% service, with an anticipated start date of August 1, 2022.

[Assistant Professor, Climate Data Analysis](#)- We seek an engaging educator and researcher with the technical proficiency and broader conceptual awareness of climate science who can help position and adapt watershed science research and management within the realities of the climate emergency. Other valuable characteristics include experience working with large, multi-dimensional data (e.g., netCDF, HDF, GRIB, TIFF), climate model outputs (i.e., CMIP GCMs, downscaled data), translating gridded climate data into other formats for hydroclimate and ecological analysis, uncertainty and risk quantification, meteorological station time series data, and/or making climate data tools for policymakers and decisionmakers. Other preferred characteristics include proficiency in Python and/or R, strong data visualization and communication skills, and experience leading collaborative efforts. The position consists of 60% teaching, 30% research, and 10% service, with an anticipated start date of August 1, 2022.

POSITIONS AVAILABLE – ARGONE NATIONAL LABORATORY

[Postdoctoral Appointee – AI and Climate Science](#)

[Postdoctoral Appointee - Numerical
Modeler/Regional Climate](#)

POSITIONS AVAILABLE IN METEOROLOGY AND ATMOSPHERIC SCIENCE

[View current career listings](#)

UNIVERSITY NEWS

PURDUE WRITING LAB SCHEDULE

Grad Writers' Rooms

Writers' Rooms for the Fall 2021 sessions will be held virtually from 3:00 p.m. - 5:00 p.m. on the following days. This is a great opportunity for graduate students to make progress on their dissertations or

thesis. Sign up will be available starting next week in MyWCO using the [online scheduler](#).

- December 1

English Conversation Groups

If you are a Purdue University student or scholar whose first language is not English, the Writing Lab's conversation groups are a terrific way to improve your fluency and expand your vocabulary. Sign up will be available starting September 7th in MyWCO using the [online scheduler](#).

- Mondays 2:30 p.m. - 3:30 p.m.
- Tuesdays 2:30 p.m. - 3:30 p.m.
- Virtual Wednesdays 2:30 p.m. - 3:30 p.m.
- Thursdays 2:30 p.m. - 3:30 p.m.
- Fridays 2:30 p.m. - 3:30 p.m.

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 (pierce81@purdue.edu) **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](#).