

# EAPS WEEKLY NEWSLETTER

October 18, 2021

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## EAPS MEETINGS & EVENTS

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

- 26 October
- 9 November
- 7 December

[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](#)

**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.

## RECENT PUBLICATIONS

- Liu, S., and Zhuang, Q.. 2021. Leaf 13C data constrain the uncertainty of the carbon dynamics of temperate forest ecosystems. *Ecosphere* 12(10):e03741. 10.1002/ecs2.3741
- Wang, S.; Zhou, M.; Zhuang, Q.; Guo, L. Prediction Potential of Remote Sensing-Related Variables in the Topsoil Organic Carbon Density of Liaohekou Coastal Wetlands, Northeast China. *Remote Sens.* 2021, 13, 4106. <https://doi.org/10.3390/rs13204106>

## NEWS/OPPORTUNITIES

### 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](mailto: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!*

### SUMMER 2022 NAVAL RESEARCH ENTERPRISE INTERNSHIP PROGRAM

**at the Naval Research Laboratory Marine  
Meteorology Division (Monterey, CA)**

Each year the U.S. Navy offers summer internships through the [Naval Research Enterprise Internship Program \(NREIP\)](#). This 10 week paid internship provides opportunities for undergrads (who currently have 31 or more college credits and are enrolled at a 4 year U.S. college or university) and grad students to participate in research, under the guidance of a mentor, at participating Navy laboratories. The U.S. Naval Research Laboratory (NRL) is one of the many U.S. Navy laboratories and institutions participating in NREIP at the [NRL Marine Meteorology Division \(MMD\)](#).

We encourage the top students from our nation's best meteorology and atmospheric science programs to apply. Students with backgrounds in computer science, data mining, and machine learning and an interest in how these areas intersect with meteorological applications are also strongly encouraged to apply. To increase the likelihood of receiving an internship offer in a specific area of research, students are encouraged to carefully review the list of eligible laboratories and identify those that have matching research interests, and then indicate their preferred laboratory/ies on their application where appropriate. We are currently planning next summer as an in-person program, but students should be aware that the program may be shifted to a virtual or hybrid format at any time between now and summer 2022.

Below is a list of some research topics available at NRL MMD in summer 2022.

- *In-situ and Satellite-based Wind Observation Data Assimilation*
- *Meteorological Decision Aids, Post-Processing, and Weather and Air Quality Verification*
- *Web Development (Python, JavaScript, and SQL Background Encouraged)*
- *Python-based Processing of Large Satellite Datasets*
- *Machine Learning*
- *Subseasonal Prediction and Coupled Global Modeling*
- *Aerosol Model and Satellite Analysis*
- *Smoke Emission and Transport*
- *NWP Infrastructure Improvement and Distributed Computing*

**Stipends:**

- \$7,000 New Undergraduate Interns
- \$8,500 Returning Undergraduate Interns
- \$11,000 Graduate Student Interns

**Deadline for Summer '22: Nov. 1st, 2021**

**INDIANA STORM CHASER'S CONVENTION**

This year is our 10th anniversary of the convention and we have a two-day event set for Sat. November 13 - Sun. November 14, 2021 in Danville, Indiana. We have already received interest from students from around the region about attending and wanted to reach out to some of the universities around the area to let them know there is a discount price for students! This is a great opportunity for students to not only learn, but network with others in the field of meteorology. Here is the lineup of speakers we have for this year's event.

- **Reed Timmer- Meteorologist/Storm Chaser**
- **Brian Wilkes - Chief Meteorologist at FOX 59 Indianapolis**
- **Sam Lashley- Warning Coordination Meteorologist at NWS Indy**

- **Dr. Victor Gensini - Associate Professor at NIU, Meteorologist, Storm Chaser**
- **Liz Szweczyk - Meteorologist at WPTA Ft. Wayne, IN**
- **Jay Farlow - 30 Year Storm Spotter & HAM Radio Operator**
- **Adam Lucio - Veteran Storm Chaser**
- **Simon Brewer - Meteorologist & Extreme Weather Journalist**

If you have any questions or would like to see more about the event please [visit](#) or feel free to email us at [inchasercon@gmail.com](mailto:inchasercon@gmail.com).

**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/>

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### **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 (NAEM) 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](#) have the following due dates:

- “Topical” white papers should be received by **October 31, 2021**.
- “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](#).”

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### **LOW-COST SCIENCE MISSION CONCEPTS FOR MARS EXPLORATION - CALL FOR ABSTRACTS**

[January 11-13, 2022](#)

The Low-Cost Science Mission Concepts for Mars Exploration workshop is scheduled for January 11-13, 2022, in the Southern California area (final location to be announced soon). Emerging small spacecraft capabilities and innovative new mission concepts offer opportunities for compelling science discoveries at Mars at unprecedented low costs. NASA’s Mars Exploration Program invites the community to this three-day workshop to explore this potential new class of Mars missions from multiple perspectives. In this forum, Mars scientists, engineers, technologists, and industry representatives will share ideas and approaches for low-cost exploration of the Red Planet. Here, “low-cost” equates to mission costs that fall well below the current Discovery Program cost cap. The recent Mars Architecture Strategy Working Group suggested that small spacecraft missions in the \$100-\$300M cost range (including delivery) may offer a sweet spot in terms of achievable science per unit cost. Missions in this class could represent an important new program element in a future balanced portfolio of Mars missions.

**Abstract submission deadline — October 28, 2021, 5:00 p.m. U.S. Central Daylight Time (GMT -5)**

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### **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](#).

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

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

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### **MS AND PHD EAPS STUDENTS**

## **BROADEN YOUR GRAD EXPERIENCE**

For those MS and PhD students in EAPS that would like to broaden their graduate experiences while at Purdue, EAPS is affiliated with the Computational Interdisciplinary Graduate Programs (CIGP) at Purdue. While working toward a graduate degree in EAPS, graduate students can also have a concentration (specialization) in the area of Computational Science and Engineering (CSE). For more information, [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**

## **NATIONAL WEATHER SERVICE POSITIONS AVAILABLE**

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

## **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](mailto:markhatfield@kdrv.com). Recent grads or students soon to be graduating are encouraged to apply.

## **ASST. PROFESSOR - SYNOPTIC METEOROLOGY**

### ***The Ohio State University***

The Department of Geography in the College of Arts and Sciences at The Ohio State University invites applications for a tenure track position at the assistant professor level, commencing autumn semester 2022. We seek a scholar with research interests in synoptic meteorology and weather forecasting. The successful candidate will teach synoptic meteorology and forecasting courses at the undergraduate level and graduate classes in

atmospheric science that are commensurate with their research interests. We are particularly interested in candidates whose research focuses on mid-latitude weather systems, numerical weather prediction, radar meteorology, or severe weather. The successful candidate will be expected to attract external funding and have a demonstrated commitment to excellence in teaching.

Qualifications: A Ph.D. in Atmospheric Science or a closely related field is required. All applicants are expected to have fundable research programs and to contribute to both graduate and undergraduate supervision and instruction. Preferred qualifications include experience developing or working in interdisciplinary research teams, ties to operational weather forecasting activities, university teaching experience and experience mentoring members of underrepresented groups.

[Apply](#). A complete application consists of a cover letter including teaching, research and service credentials, a curriculum vitae; a diversity statement articulating your demonstrated commitments and capacities to contribute to diversity, equity, and inclusion through research, teaching, mentoring, or outreach and engagement; up to three representative publications, and contact information for three references. Inquiries may be directed to [Darla Munroe](#). **Applications received prior to November 15, 2021 will receive priority consideration.**

## **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.

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### **ASSISTANT PROFESSOR IN LITHOSPHERE DYNAMICS - USC**

The Department of Earth Sciences, University of Southern California (USC), invites applications for a tenure track [Assistant Professorship in lithospheric geoscience](#), to complement existing strengths in thermochronology, surface processes, and earthquake science. We seek an outstanding emerging scholar poised to tackle the complexity of lithospheric deformation processes from new perspectives, including a combination of field observations with recently developed analytical techniques and integration across traditional sub-disciplines. The successful candidate will be expected to sustain and further develop the undergraduate and graduate curricula in solid-Earth geoscience in areas potentially including, but not limited to, field methods, structural geology, petrology, rock mechanics, and/or geochronology.

Applicants should have a Ph.D. (or equivalent) and the demonstrated ability to conduct compelling independent research and to attract external research funding. **The review of applications will begin on November 15, 2021.**

Applicants should submit a curriculum vitae, a cover letter, the contact information for 3-5 references, and research, teaching, and DEI statements, each not exceeding 3 pages.

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### **TENURE-TRACK ASST. PROFESSOR IN PHYSICS AND EARTH & ENVIRONMENT**

***School of the Earth, Ocean and Environment  
University of South Carolina, Columbia, SC***

The School of the Earth, Ocean and Environment (SEOE) invites [applications for a tenure-track, Assistant Professor position in Physics of the Earth & Environment beginning August 16, 2022](#). We seek an individual who uses innovative and interdisciplinary approaches to geophysics to examine physical processes anywhere from the Earth's deep interior to surface layers. Applicant's research interests may address geophysical aspects of environmental and near-surface issues, engineering and petrophysical applications, geohazard prediction and mitigation, as well as deep Earth and tectonic processes. The successful candidate will complement, strengthen, and diversify the School's research program in Earth and environmental sciences, and will direct an active, externally-funded research program. Teaching responsibilities will include an undergraduate non-majors course, an upper-level undergraduate course for SEOE majors and a graduate-level course related to the candidate's specialty.

For additional information, please contact [Dr. Andrew Leier](#), Physics of the Earth & Environment Search Chair. **Review of complete applications will begin November 12, 2021.**

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### **PRESIDENT'S POSTDOC-FELLOWSHIP PROGRAM University of California**

The President's Postdoctoral Fellowship Program was established in 1984 to encourage outstanding women and minority Ph.D. recipients to pursue academic careers at the University of California. The current program offers postdoctoral research fellowships and faculty mentoring to outstanding scholars in all fields whose research, teaching, and service will contribute to the diversity and equal opportunity at the University of California. The contributions to diversity may include public service towards increasing equitable access in fields where women and minorities are under-represented. In some fields, the contributions may include research focusing on underserved populations or understanding inequalities related

to race, gender, disability or LGBTQ. The program is seeking applicants with the potential to bring to their academic and research careers the critical perspective that comes from their non-traditional educational background or understanding of the experiences of members of groups historically underrepresented in higher education in the United States.

Fellowships are awarded for research conducted at any one of the University of California's ten campuses. The award includes a salary starting at approximately \$54,540 depending on field and experience, benefits including health insurance and paid vacation/sick leave, and up to \$5,000 for research-related and program travel expenses. Each award is for a minimum of 12-months and may be renewable for an additional term upon demonstration of academic/research productivity.

Applicants must receive a Ph.D. or terminal degree from an accredited university before the start of their fellowship. Successful applicants must present documents demonstrating that they are legally authorized to work in the United States. Individuals granted deferred action status under the Deferred Action for Childhood Arrivals program are [encouraged to apply](#).

**DEADLINE: November 1, 2021.** [More information.](#)

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### **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.

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### **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](#)

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**POSITIONS AVAILABLE IN METEOROLOGY AND  
ATMOSPHERIC SCIENCE**

[View current career listings](#)

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## UNIVERSITY NEWS

### COVID VACCINES

[Purdue is offering COVID vaccines.](#) Have you been fully vaccinated? Purdue requests that you [submit documentation to Protect Purdue Health Center.](#)

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### PURDUE WRITING LAB SCHEDULE

**Workshops** are from 2:30-3:30 PM, in HEAV 220, on the dates below. In the event that a workshop needs to be rescheduled, the listed backup dates will be followed. To sign up now, use the Group Programs tab in MyWCO using the [online scheduler](#).

- **Citing and Documenting Sources** - October 20- Style guides and citations can be tricky to navigate. At this workshop you will learn how to properly cite and document sources in your writing.
- **Strategies for Self-revision and Self-editing** - November 10- Join us to learn strategies for revising and editing your academic, professional, and personal writing.

### 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](#).

- October 20
- November 3
- November 17
- 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](#).