

# EAPS WEEKLY NEWSLETTER

December 12, 2022

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## EAPS MEETINGS & EVENTS

[PURDUE CALENDAR 2022-23](#)

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

[REPORT YOUR OUTREACH AND ENGAGEMENT  
ACTIVITIES](#)

## PUBLICATIONS

- Kollias, P.; Palmer, R.; Bodine, D.; Adachi, T.; Bluestein, H.; Cho, J. Y. N.; Griffin, C.; Houser, J.; Kirstetter, Pierre. E.; Kumjian, M. R.; Kurdzo, J. M.; Lee, W. C.; Luke, E. P.; Nesbitt, S.; Oue, M.; Shapiro, A.; Rowe, A.; Salazar, J.; **Tanamachi, R.**; Tuftedal, K. S.; Wang, X.; Zrnec, D.; Puigdomenech Treserras, B., 2022: Science Applications of Phased Array Radars. *Bull. Amer. Meteor. Soc.*, **103**, E2370–E2390, <https://doi.org/10.1175/BAMS-D-21-0173.1>.
- **Zhao, B., Zhuang, Q., & Frolking, S.** (2022). Modeling carbon accumulation and permafrost dynamics of northern peatlands since the Holocene. *Journal of Geophysical Research: Biogeosciences*, 127, e2022JG007009. <https://doi.org/10.1029/2022JG007009> PDF
- Lu, Y., Huang, Y., **Zhuang, Q.** et al. China's terrestrial ecosystem carbon balance during the 20th century: an analysis with a process-based biogeochemistry model. *Carbon Balance Manage* 17, 16 (2022). <https://doi.org/10.1186/s13021-022-00215-9> PDF
- **Dan Kou**, Tarmo Virtanen, Claire C. Treat, Juha-Pekka Tuovinen, Aleksii Räsänen, Sari Juutinen, Juha Mikola, Mika Aurela, Lauri Heiskanen, Maija Heikkilä, Jan Weckström, Teemu Juselius, Sanna R. Piilo, Jia Deng, Yu Zhang, Nitin Chaudhary, Conghong Huang, Minna Väiliranta, Christina Biasi, **Xiangyu Liu, Mingyang Guo, Qianlai Zhuang**, Atte Korhola, Narasinha J. Shurpali (2022). Peatland heterogeneity impacts on regional

carbon flux and its radiative effect within a boreal landscape. *Journal of Geophysical Research: Biogeosciences*, 127, e2021JG006774.

<https://doi.org/10.1029/2021JG006774> PDF

- **Oh, Y., Zhuang, Q.,** Welp, L.R. et al. Improved global wetland carbon isotopic signatures support post-2006 microbial methane emission increase. *Commun Earth Environ* 3, 159 (2022). <https://doi.org/10.1038/s43247-022-00488-5> PDF
- **Huang, C., Zhuang, Q.,** Meng, X. et al. A fine spatial resolution modeling of urban carbon emissions: a case study of Shanghai, China. *Sci Rep* 12, 9255 (2022). <https://doi.org/10.1038/s41598-022-13487-5> PDF
- **Zhao, B., Zhuang, Q.,** Treat, C., & Frolking, S. (2022). A model intercomparison analysis for controls on C accumulation in North American peatlands. *Journal of Geophysical Research: Biogeosciences*, 127, e2021JG006762. <https://doi.org/10.1029/2021JG006762> PDF

## NEWS/OPPORTUNITIES AT PURDUE

### COLLEGE OF SCIENCE SCI-SPY

We are attempting to create a big Eye-Spy type photo for College of Science departments. We'd like to include items that depict our sciences, and any other weird/random/neat items you might have lying about. If you have items that are smaller than a business card, would you mind placing them on a white piece of paper and photographing them with your phone and [uploading the images here](#)? The more images we get, the better this graphic will be.

### AGU 2022

If you are at the meeting next week and post pics of your science, people, groups, etc, please tag @PurdueEAPS and use the hashtag #AGU22. Our social accounts will repost. Thanks!

### 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

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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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## OUTREACH NEWS

Don't forget to submit any activities you do with K-12:  
<https://bit.ly/EAPSOut>

### Did you know that Outreach is working on an online science demonstration repository?

If you know a science demo that educators would enjoy, let us know!



Follow us on Social media to see now demos on Fridays.

#### Social sites:

[TikTok SuperHeroesofScience](#)   [Twitter](#)  
[Facebook EAPS Outreach](#)   [Instagram](#)  
[Facebook Superheroes of Science](#)  
[EAPS departmental outreach web page](#)

### SUPERHEROES OF SCIENCE

Please help us by subscribing and sharing our podcast and our [YouTube](#) channel!

On Apple: [https://bit.ly/SOS\\_apple](https://bit.ly/SOS_apple)

On Spotify: [https://bit.ly/SOS\\_spotify](https://bit.ly/SOS_spotify)

On Amazon: [https://bit.ly/Superheroes\\_amazon](https://bit.ly/Superheroes_amazon)

## MEETINGS/EXPOS/

# OPPORTUNITIES OUTSIDE OF PURDUE

### DEVELOPING EXPERTISE AND BUILDING COLLABORATIONS TO ADVANCE ATMOSPHERIC SCIENCE EDUCATION RESEARCH (ASER) PROFESSIONAL DEVELOPMENT WORKSHOP

We would like to invite you to apply to our NSF-funded workshop, Developing Expertise and Building Collaborations to Advance Atmospheric Science Education Research (ASER). This workshop for the ASER community will take place from May 22nd - 24th, 2023 in Minneapolis, MN. The purpose of the workshop is to build collaborations and increase research expertise among emerging and current atmospheric science education researchers. We invite SoTL\* scholars, DBER\*\* scholars, and newcomers to apply. The workshop will consist of small focus sessions on research topics and new research collaborations among ASER scholars (see attached flyer). Workshop events will include dinner with an invited speaker, and time to network and collaborate with atmospheric science educators and education researchers. All travel expenses and meals will be provided for workshop participants. Workshop participants will be asked to complete a series of pre-workshop tasks (~ 3 hours), and we hope that collaborations will continue post-workshop. To apply, please complete a short application by clicking [HERE](#). **Please apply before Wednesday, January 18th, 2023.** Thank you for considering this invitation.

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### FELLOWSHIPS IN GEOPHYSICAL FLUID DYNAMICS AT WOODS HOLE OCEANOGRAPHIC INSTITUTION

**June 20 to August 25, 2023**

Since 1959 the GFD program has promoted an exchange of ideas among researchers in the many distinct fields that share a common interest in the nonlinear dynamics of fluid flows in oceanography, meteorology, geophysics, astrophysics, applied mathematics, engineering and physics. Each year, the program is organized around a ten-week course of study and research for a small group of competitively selected graduate-student fellows. The overall philosophy is to bring together researchers from a variety of backgrounds to provide a vigorous discussion of concepts that span different disciplines, and thereby to create an intense research experience. For the student fellows, the centerpiece of the program is a

research project, pursued under the supervision of the staff. At the end of the program, each fellow presents a lecture and a written report for the GFD proceedings volume.

The Program commences with two weeks of Principal Lectures focusing on a particular theme in GFD. **For 2023, the theme is "GFD on Other Worlds"** and the lecturers will be Heather Knutson (Caltech), who will concentrate on recent observations from other worlds, and Geoff Vallis (University of Exeter), who will review our theoretical understanding of GFD on other worlds.

**Up to ten competitive fellowships are available for graduate students. Successful applicants will receive stipends of \$7,793 and an allowance for travel expenses within the United States.** A small number of unpaid fellowships may also be available for strongly qualified students who can support themselves financially. **The application deadline is February 1, 2023.** Awards will be announced by March 31, 2023. We seek applicants from all areas of Geophysical Fluid Dynamics, and particularly encourage applications from women and members of underrepresented groups. It is expected that fellows will be in residence for the full ten weeks of the program, and that visitors will spend extended periods of at least one week participating in the program. Further information and application forms may be obtained at <https://gfd.whoi.edu>, or by writing to: [gfd@whoi.edu](mailto:gfd@whoi.edu)

Prospective visitors should contact Tiffany Shaw at [tasl@uchicago.edu](mailto:tasl@uchicago.edu), or Pascale Garaud at [pgaraud@soe.ucsc.edu](mailto:pgaraud@soe.ucsc.edu)

*WHOI is an Equal Employment Opportunity/Affirmative Action Organization. The GFD Program is funded by the National Science Foundation and the Office of Naval Research.*

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**SCHOLARSHIPS AVAILABLE -  
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.](#)

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

[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 \$30,000 living stipend.** 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 2023. 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 <mailto:atmat@amnh.org> or (212) 313-7464.

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**FORD FOUNDATION FELLOWSHIP PROGRAMS  
LEARN MORE**

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.

Predocctoral, 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.

#### 2023 Competition Dates

- **2023 Predoctoral application deadline: December 15, 2022, 5:00 PM Eastern Standard Time (EST)**
- Supplementary Materials deadline for submitted applications January 5, 2023, 5:00 PM Eastern Standard Time (EST)
- Notification of 2023 awards: TBD

#### ICES IN THE SOLAR SYSTEM

January 9-11, 2023

Montreal, Canada

[Meeting Info](#)

#### 28<sup>th</sup> MEETING OF THE NASA SMALL BODIES

ASSESSMENT GROUP

January 24-26, 2023

Pasadena, CA/Virtual

[Meeting info](#)

#### VENUS SURFACE AND ATMOSPHERE CONFERENCE

January 30 – February 1, 2023

*Change of Conference Location-*

Houston, TX/Virtual

[Meeting info](#)

#### MERCURY EXPLORATION ASSESSMENT GROUP

(MEXAG) ANNUAL MEETING

February 1-3, 2023

Virtual

[Meeting info](#)

#### 54TH LUNAR AND PLANETARY SCIENCE CONFERENCE

March 13–17, 2023

The Woodlands, TX/Virtual

[Meeting info](#)

#### 4TH INTERNATIONAL PLANETARY CAVES

CONFERENCE

May 4-7, 2023

Haria Municipality, Lanzarote, Spain

[Meeting info](#)

#### BRINES ACROSS THE SOLAR SYSTEM: ANCIENT AND FUTURE BRINES CONFERENCE

May 15-18, 2023

Reno, NV

[Meeting info](#)

#### ASTERIODS, COMETS, & METEORS CONFERENCE

June 18-23, 2023

Flagstaff, AZ

[Meeting info](#)

#### URANUS FLAGSHIP: INVESTIGATIONS AND INSTRUMENTS FOR CROSS-DISCIPLINE SCIENCE

July 25-27, 2023

Pasadena, CA

[Meeting info](#)

#### 2<sup>nd</sup> INTERNATIONAL ORBITAL DEBRIS CONFERENCE

Dec. 4-7, 2023

Houston, TX / virtual

[Meeting info](#)

## POSITIONS AVAILABLE- CAREER OPPORTUNITIES

#### POST-DOC POSITION OPEN AT MIT IN THE FIELD OF ATMOSPHERIC DYNAMICS

The research tackles questions on the interface between weather and climate. Topics include but are not limited to:

- Midlatitude storm tracks, Rossby Wave Breaking events, atmospheric circulation regimes, and their projected changes.
- Temperature variability, climate and weather extremes, dynamics of heat waves.
- Subseasonal-to-seasonal predictability

For more information about the position, please contact Talia Tamarin-Brodsky at [taliatamarin@gmail.com](mailto:taliatamarin@gmail.com). Applications from women and under-represented minorities are strongly encouraged. Please include a detailed CV and a list of references in your application. Job Requirements: Ph.D. in atmospheric sciences or a related field by the date of hire. Strong background in atmospheric dynamics/geophysical fluid dynamics is an advantage. Demonstrated ability to carry out creative, innovative,



independent research, and to publish in peer-reviewed literature, and effective written and verbal communication skills. [More info about positions at MIT.](#)

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**MULTIPLE POSITIONS OPEN WITH ENVIROFORENSICS**

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

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**STUDENT TRAINEE –**

**OHIO KENTUCKY INDIANA WATER SCIENCE CENTER**

We're hiring! The Ohio Kentucky Indiana Water Science Center is hiring a student trainee (Hydrology) in the Williamsburg, KY office.  
[Click here to apply](#)

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**McGILL - ASSISTANT PROFESSOR IN THE DEPARTMENT OF ATMOSPHERIC AND OCEANIC SCIENCES**

tenure-track faculty position at McGill University in the area of "Tropical-Extratropical Interactions."  
[Learn more and apply](#)

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**ASSISTANT PROFESSOR OF ENVIRONMENTAL & GEOSPATIAL SCIENCES - WESTERN KENTUCKY UNIVERSITY**

The Department of Earth, Environmental, & Atmospheric Sciences (EEAS) at Western Kentucky University is seeking highly qualified applicants for a 9-month tenure-track Assistant Professor of Environmental & Geospatial Sciences position beginning August 2023. [Learn more here.](#)

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**ENTRY-LEVEL OPERATIONAL FORECASTER FOR COMMODITY WEATHER GROUP**

Starting salary: \$55,000 with bonuses, advancement potential, and fully funded health care  
An energetic and enthusiastic meteorologist is being sought for weather forecasting and consulting with the Commodity Weather Group (CWG).  
The position is full time and fully remote.  
Required:

- bachelor's degree in meteorology or related science
- strong interest in weather forecasting
- excellent communication skills
- customer service experience

- self-motivated individual
- creative, positive-minded
- able to collaborate in team environment

Benefits include a fully paid healthcare option, stipends for office equipment and phone/internet expenses, and a 401(k) plan with company match. Significant opportunities exist for performance-based increases in compensation, including semiannual bonuses.

CWG consults for hundreds of companies in energy/agriculture risk management, including renewables, crop data, and weather-driven demand information on short-term to seasonal time scales. CWG also owns/manages the StormVista weather models services.

CWG has a very high client retention rate with extremely low employee turnover and is looking for another great addition to its dedicated weather team. The open organizational structure allows all team members to play a significant role in the future growth and development of the company. Send Cover Letters and Resumes to [applications@commoditywx.com](mailto:applications@commoditywx.com)

Decision will be made in December 2022 with start date in early January 2023.

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**SENIOR GEOSCIENTIST AT FREEPORT-MCMORAN**

Freeport-McMoRan is a leading international mining company with headquarters in Phoenix, Arizona. We operate large, long-lived, geographically diverse assets with significant proven and probable reserves of copper, gold, and molybdenum. The company has a dynamic portfolio of operating, expansion and growth projects in the copper industry. Freeport-McMoRan is one of the world's largest publicly traded copper producers, the world's largest producer of molybdenum and a significant gold producer. We have a long and successful history of conducting our business in a safe, highly efficient and socially-responsible manner. Please note: This position has the possibility to work remotely up to 100% of the time.  
[Apply here.](#)

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**ASSISTANT OR ASSOCIATE PROFESSOR ATMOSPHERIC AND PLANETARY SCIENCES – HAMPTON UNIVERSITY**

The Hampton University (HU) Department of Atmospheric and Planetary Sciences (APS) invites nominations and applications for two tenure-track faculty positions at the rank of Assistant or Associate Professor beginning January 2023.

Founded in 1868, Hampton University is a leading historically black university (HBCU) located on the Virginia Peninsula in the City of Hampton. It is a privately endowed, co-educational, nonsectarian institution. HU established the Center for Atmospheric Science (CAS) in 1996, which led to creation of the Department of Atmospheric and Planetary Sciences in 2007. APS offers M.S. and Ph.D. degrees in the fields of Atmospheric Science and Planetary Science. This program has established a reputation of excellence in education, outreach and research, with particular emphasis on satellite applications for atmospheric studies. [Learn more here.](#)

**INDIANA EHS ADVISOR JOB POSTING**

**U.S. Compliance:** Searching for high performing EHS professionals who want to make a difference. Join our fast-growing EHS compliance firm to help us **CARE** for people, **PROTECT** the environment and **GROW** our clients' business. [Link to posting.](#)

**POSTDOCTORAL APPOINTEE AT ARGONNE - WIND ENERGY AND CLIMATE SCIENCES**

We have an exciting opportunity for a Postdoctoral Researcher position focusing on Wind Energy and Climate Science at the Argonne National Laboratory. This appointment will be at the Environmental Science Division embedded within our Computer, Environment, and Life Sciences Directorate. The project aims to improve our understanding of factors modulating winds in an offshore wind farm environment, with an ultimate goal of improving their representation in models used for forecasting wind energy. The three-year multi-institutional project titled Observationally driven Resource Assessment with CoupLEd models (ORACLE) is funded by Department of Energy Wind Energy Technology Office. [Learn more here.](#)

**METEOROLOGIST POSITIONS AVAILABLE TEGNA**

Multiple [meteorology positions](#) are open with TEGNA.

**BRYAN ENVIRONMENTAL CONSULTANTS**

Homewood, IL

**SEEKING PART-TIME TO FULL-TIME POSITIONS**

- Bachelor's or Master's degree in environmental engineering, civil engineering, geotechnical engineering, geology

- Knowledge of State and Federal environmental regulations a plus
- Experience with Phase I and II Environmental Site assessments a plus
- Strong writing skills
- Proficient in all Microsoft Office applications
- Must have cell phone and computer (laptop)
- Valid Driver's License

**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).

**PURDUE ENVISION CENTER (UNDER ITAP) RECRUITING EAPS STUDENTS**

At the Envision Center looking to recruit EAPS students with background and interest in weather visualization. Details on the job opening can be found [here](#).

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**POSITIONS AVAILABLE IN METEOROLOGY AND  
ATMOSPHERIC SCIENCE**

[View current career listings](#)

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**AGI GEOSCIENCE JOB CENTER**

[Check listings here.](#)

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**GRADIENT CORP**

**MULTIPLE OPPORTUNITIES**

Please feel free to contact [Qianlai Zhang](#) if you are interested in applying and/or have any questions about the company and the opportunities.

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**NATIONAL WEATHER SERVICE  
POSITIONS AVAILABLE**

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

## **NEWSLETTER INFO**

### **IMPORTANT NOTICE ABOUT THIS NEWSLETTER**

This newsletter is used as the primary information source for current and upcoming events, announcements, awards, grant opportunities, and other happenings in our department and around campus. Active links to additional information will be provided as needed. Material for inclusion in the newsletter should be submitted to [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](#).