March 2019—Education Newsletter

Dear Education Section Member:

Welcome to our March edition of the Education newsletter!

We offer our congratulations to Christopher Bauco and Jeremy Stock on their Outstanding Student Paper Awards for their presentations at Fall Meeting 2018. Find out more about their award-winning work and our lineup of upcoming events in this newsletter.

AGU is committed to developing an inclusive program for a diverse and equitable Fall Meeting. Please consider convening or coconvening an Education session and creating an inclusive program together. We are pleased to feature ideas about possible topics and session formats in this newsletter. The deadline for session proposals is 17 April.

The deadline to submit nominations for Union awards, medals, and prizes has been extended to 15 April. Please take this opportunity to recognize a colleague, mentor, peer, or student for his or her achievements! Follow this link for details.

If you have any visually stunning or artistic images from your education-related activities, please consider sharing them with us. These images could be from your educational fieldwork, for instance. We would like to feature them in our future online communications. Please include a one-line caption about the image, which should not contain any commercial messages or identifiable people. We will be able to include a URL link to the project website or a related publication. Please email the images and information directly to Vincent Tong.

Happy Reading!

Best wishes,

Vincent Tong, Secretary, Education Section, AGU; Chair of the Communication Working Group
Tanya Furman, President-elect, Education Section, AGU
Mark Moldwin, President, Education Section, AGU

AGU Education News Items

1. Outstanding Student Paper Awards, Education Section

Two students earned Outstanding Student Paper Awards in the Education section for their presentations at Fall Meeting 2018 in Washington, D.C.

Christopher Bauco, a senior at Westlake High School in Thornwood, N.Y., shared his scientific research in the fields of paleoceanography and paleoclimate through his presentation titled “Investigating Paleoclimate Through the Deposition of Ice Rafted Debris from the Western Mid-Atlantic Ridge.” He studies connections among sediment
sources, sediment transport patterns, ocean temperatures, and ocean currents. Bauco’s work contributes to our understanding of Earth’s past so that we are better able to understand and predict future changes.

Jeremy Stock, a graduate student pursuing a master’s degree in geology at the State University of New York at Buffalo, shared his science, technology, engineering, the arts, and mathematics (STEAM) project through a presentation titled “Wonder Woman Is a Climate Modeler: The ‘Scientists Are Superheroes’ Program for Empowering Youth.” His project focuses on educating young people about scientific research and climate change through art and pop culture. His work aims to lower barriers between scientists and the general public, including students.

Both Bauco and Stock described Fall Meeting 2018 as a valuable opportunity to share their work, learn from others, and connect with attendees over science, art, education, and communication. For their fellow science communicators, they advise considering their audience’s knowledge base and needs and connecting with all kinds of audiences through curiosity and creativity.

2. Education Sessions at Fall Meeting 2019

Are you thinking about submitting a session proposal for Fall Meeting? Please consider convening or coconvening an Education session! Here are some suggested topics:

- Diversity and Inclusion
- Undergraduate and Graduate Education
- Outreach
- Early-Career Mentoring (pipeline)
- K–12 Education (students and/or teachers)
- Assessment and Evaluation
- Research Experiences
- Lifelong Learning
- Cross-Disciplinary Topics in Education
- Science Communication

There is a wide variety of available formats, such as eLightning sessions, short talks, and poster-only sessions. Please consider flexibility in your proposed session format; for example, the number of slots available for panels is anticipated to be extremely limited, while more than half of all sessions at AGU Fall Meeting are poster sessions.

The deadline for session proposals is 17 April 2019. If you have any questions, please do get in touch.

For Higher Education/Postsecondary Faculty

1. Minority-Serving Institutions Are Well Positioned to Help Meet STEM Workforce Needs

The National Academy of Sciences recently held a convocation on the newly released consensus study titled “Minority Serving Institutions: America’s Underutilized Resource for Strengthening the STEM Workforce.” The report outlines strategies and highlights the need of investing and better utilizing minority-serving institutions (MSIs) to strengthen the current science, technology, engineering, and mathematics (STEM) workforce and meet
future STEM workforce needs. To learn more, visit the National Academy of Sciences web page to access the free PDF publication of the report.

2. Undergraduate Research Mentor Award

The Geosciences Division of the Council on Undergraduate Research has established an annual award to highlight the importance of mentoring undergraduate research activities. All geoscience faculty involved in mentoring undergraduate research are eligible. Evidence of transformative student–faculty mentoring relationships includes leadership in fostering and sustaining the undergraduate research enterprise, student–mentor collaborations culminating in presentations at national or regional meetings and/or publication with student coauthors in peer-reviewed journals, and innovative approaches to involving undergraduates in research experiences incorporating research activities into the classroom and service learning. Nomination (including self-nomination) materials are the following: a two-page detailed narrative exploring how the candidate meets the criteria of the award, an up-to-five-page CV that is focused on interactions with students, and two to five letters of support (at least one letter from a former student). The application remains on file for 3 years. Questions and inquiries can be addressed to Erin Kraal or Dan Brabander. Send materials electronically to the cochairs of the award committee working group no later than 1 May.

3. Outstanding Educator Award

Established in 1988, the premier professional award of the Association of Women Geoscientists acknowledges the role of teachers and mentors in every woman geoscientist’s life story. The Outstanding Educator Award honors well-established women college or university teachers who have played a significant role in the education and support of geoscientists within and beyond the classroom, in advancing the persistence of females and underrepresented minorities in geoscience careers, and in raising the profile of the geosciences by teaching to and for the broadest audience of students. Learn more about the award and nomination process here. The deadline for nominations is 1 April.

4. Nominate a Colleague: Excellence in Earth and Space Science Education Award

The Excellence in Earth and Space Science Education Award is given annually to a mid-career or senior scientist team, individual or group demonstrating a sustained commitment to excellence in geophysical education. Successful candidates have made long-lasting, positive impacts in the Earth and space sciences at any education level from kindergarten through postgraduate studies.

Additional details about the award criteria and nomination process can be found at: https://honors.agu.org/medals-awards/excellence-in-geophysical-education-award/.

To submit a nomination no later than 15 April, please visit: https://agu-unionamp.secure-platform.com/a

For K–12/Secondary Teachers and Informal Educators

1. A Catalog of Music Inspired by Astronomy
A new annotated guide (part of a series devoted to resources for enjoying or teaching astronomy) features over 250 pieces of music inspired by serious astronomy, including both classical and popular music examples. YouTube links
are given for the vast majority, so you (and your students) can listen to them without expense. Among the pieces included are a Hubble Space Telescope cantata; eight rock songs about black holes with reasonable science; Moon songs by the Grateful Dead, George Harrison, and the Police; operas about Galileo, Kepler, and Einstein; and many more. You can access this guide directly by going to [http://bit.ly/astronomymusic](http://bit.ly/astronomymusic). The collection of resource guides, including one on plays inspired by astronomy, is at [http://www.fraknoi.com/resource-guides-on-astronomy-education/](http://www.fraknoi.com/resource-guides-on-astronomy-education/).

2. **Dig into the Basics of Soil!**
   Explore this free hour-long recorded webinar in which you'll learn what soil is, how it forms, and how it affects our lives every day through hands-on activities for the classroom. The webinar was presented by professional members of the Soil Science Society of America in collaboration with the National Earth Science Teachers Association.

*For Undergraduate and Graduate Students*

1. **Preparing Graduate Students for Climate Conversations**
   Along with the need for advancements in climate science research comes the need for improving scientific communication and application to interdisciplinary topics. This *Eos* article addresses the importance of introducing graduate students to interdisciplinary challenges related to climate change and how to effectively collaborate with faculty and students from other disciplines.

2. **Graduate School, Internships**
   Here are two blog posts of interest to students who are considering graduate school or thinking about the value of internships.

3. **Your Career Path**
   Are you a graduate or postdoc wondering what career path you want to take after your education finishes? In this *Inside Higher Ed* advice article, Melissa Dalgleish details steps you can choose to find your career journey and who you might consult with, such as your faculty advisor, to help you gather knowledge about different job opportunities aside from academia.

AGU galvanizes a community of Earth and space scientists that collaboratively advances and communicates science and its power to ensure a sustainable future.