Oct. 2017 Spotlight: LeeAnna Chapman

The October 2017 GER Spotlight is Dr. LeeAnna Chapman, Adjunct Assistant Professor in the Department of Environmental and Ocean Sciences at the University of San Diego. In her profile, she describes her unique interdisciplinary background and ways to incorporate DBER research into a non-research position. Read the full October 2017 Spotlight here!

Save the Date: Upcoming GER Webinar

On Tuesday, Oct. 17 at 11am PT (12pm MT/1pm CT/2pm ET), the GER Division will host the first in a new series of webinars. Dr. Julie Sexton, Assistant Director of Assessment for the Office of the Provost and Research Associate at the Mathematics and Science Teaching Institute at the University of Northern Colorado, will discuss getting started in GER. Look for more details coming soon!
Featured Article

**Required peer-cooperative learning improves retention of STEM majors**

"...In this article, we examine the effects of introducing a required, comprehensive peer-cooperative learning system across five departments simultaneously at a master's public university, looking not only at students’ success in supported classes, but also their retention within STEM fields two years hence. Combining institutional demographic data with students’ course grades and retention rates, we compare outcomes between 456 students who took their major’s introductory course in the two years prior to implementation of the program, and 552 students who did so after implementation. While these two student groups did not significantly differ in either their demographic profile or their SAT scores, the post-implementation group earned significantly higher grades in their introductory courses in each major, due largely to an erasure of the mediating effect of SAT scores on course grades. Further, this increase in introductory course grades was also associated with an increase in the two-year retention rate of students in STEM majors. This finding is significant as it suggests that implementing comprehensive educational reform using required peer-led cooperative learning may have the proximate effect of mitigating differences in academic preparation (as measured by SAT scores) for students in introductory STEM courses. Furthermore, this increase in success leads to increased retention rates in STEM, expanding the pipeline of students retained in such fields."


Job, Internship, and Scholarship Opportunities
### Extension Director, Sea Grant Program, North Carolina State University

Doctoral Research Assistantships in Science Education, the University of Georgia and the University of Alabama (contact Daniel Capps, dacapps@uga.edu, and Jonathan Shemwell, jshemwell@ua.edu)

### Postdoctoral Research Fellow for University Science Education, Department of Education in collaboration with Biology and Physics, Tufts University

Science Education and Outreach Coordinator, College of Science, California State University, Monterey Bay (priority application deadline **October 2, 2017**)

Science & Technology Policy Fellowships, American Association for the Advancement of Science (AAAS), Washington, DC (deadline **November 1, 2017**)

Assistant Professor in STEM Education/Science Education, Theory and Practice in Teacher Education, College of Education, Health, and Human Services, The University of Tennessee, Knoxville (deadline **November 15, 2017**; contact Dr. Mehmet Aydeniz, tptesearch@utk.edu)

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### GER Division-Sponsored Sessions at GSA

The **2017 GSA Annual Meeting** in Seattle, WA (Oct. 22-25) is right around the corner! Check out the following GER division-sponsored sessions:

**T100. Barriers, Misconceptions, and Progress in Improving Climate Literacy and Strategies for Communicating about Climate Change**  
**Monday, Oct. 23, 8am-12pm, Washington State Convention Center Room 3A**  
The session will focus on research and evaluation of climate literacy efforts, effective
ways of communicating about climate change in general, but also in culturally relevant contexts.

T113. Geoscience Education Research: Implications for Undergraduate Geoscience Teaching and Learning
TALKS: Monday, Oct. 23, 1:30pm-5:30pm, Washington State Convention Center Room 2A
POSTERS: Tuesday, Oct. 24, 9am-6:30pm, Washington State Convention Center Halls 4EF
These sessions highlight how GER findings can be translated into teaching and identifying future directions for research with the broader geoscience community. Specific topics may include active learning, teaching with technology/modeling, diversity, and interdisciplinary collaborations.

T120. Making Thinking Visible: Actions and Expressions of Problem Solving and Decision Making in the Geosciences
TALKS: Tuesday, Oct. 24, 8am-12pm, Washington State Convention Center Room 2B
POSTERS: Tuesday, Oct. 24, 9am-6:30pm, Washington State Convention Center Halls 4EF
These sessions present evidence-based studies that aim to make thinking visible in order to understand geologic problem solving. We encourage rigorous research investigating approaches and techniques to externalize, document, and understand geologic thinking and cognition.

GSA Town Hall on Geoscience Education Research Grand Challenges and Strategies
The NSF-funded GER Town Hall is the first opportunity for public examination and
peer review of the outcomes of working group discussions for a variety of important areas of research. Your feedback will contribute to the development of a framework to focus future GER on questions of high interest to the geoscience education researcher and practitioner community.

Monday, October 23, 5:30 - 6:30 PM
Washington State Convention Center - Room 2A

Note: the GER Town Hall will be held immediately following, and in the same room as, the NAGT GER Division oral session 137: T113. Geoscience Education Research: Implications for Undergraduate Geoscience Teaching and Learning. Light snacks will be provided.

Upcoming Grant and Award Deadlines

K. Patricia Cross Future Leaders Award, Association of American Colleges and Universities (AAC&U), Nomination Deadline October 2, 2017

National Science Foundation Improving Undergraduate STEM Education: Education and Human Resources (Exploration and Design Tier) Proposal Submission Window October 1, 2017-October 1, 2018

Spencer Foundation Small Research Grants deadline November 1, 2017

National Science Foundation Alliances for Graduate Education and the Professoriate (AGEP) Full Proposal Deadline December 8, 2017

National Science Foundation Improving Undergraduate STEM Education: Education and Human Resources (Development and Implementation Tier) Full Proposal Deadline December 12, 2017
Submit to the GER Exchange

NAGT-GER provides monthly updates on professional opportunities, funding, articles of note, researcher profiles, and other content of interest to our membership. Please consider contributing items of interest for inclusion in future editions of the Exchange!

For questions, or to join the GER Communications Committee, contact Communications Committee Chair Kelsey Bitting.