

SEPTEMBER 2017



THE GER EXCHANGE

Promoting high-quality scholarly research in geoscience education.

Featured Article

[Challenging instructors to change: A mixed methods investigation on the effects of material development on the pedagogical beliefs of geoscience instructors](#)

"...The most effective professional development experiences are those that not only help an instructor redesign a course, but that also result in a permanent realignment of the teaching beliefs of participating instructors... We investigated changes in the teaching beliefs of college faculty resulting from their participation in the Interdisciplinary Teaching about the Earth for a Sustainable Future (InTeGrate) project that guided them in the development of reformed instructional materials for introductory college science courses. A convergent parallel mixed methods design was employed using the Teacher Belief Interview, the Beliefs About Reformed Science Teaching and Learning survey, and participants' reflections on their experience to characterize pedagogical beliefs at different stages of their professional development... The majority of participants' Teacher Belief Interview (TBI) scores improved toward more student-centered pedagogical beliefs. Instructors who began with the most

traditional pedagogical beliefs showed the greatest gains."

Pelch, M. A., & McConnell, D. A. (2016). [Challenging instructors to change: A mixed methods investigation of the effects of material development on the pedagogical beliefs of geoscience instructors.](#) International Journal of STEM Education, 3(1), 5.

Job, Internship, and Scholarship Opportunities

[Research Project Manager](#), Education Technology Services, Pennsylvania State University, University Park, PA (review begins immediately)

Postdoctoral Fellows for project on inclusive departmental climate and novel instructional strategies, Department of Biomedical Engineering, Georgia Tech University (review begins immediately; email joe.ledoux@bme.gatech.edu for details)

[Research Associate](#), Office of Quality, Curriculum, and Assessment, Association of American Colleges & Universities (AAC&U), Washington, DC (review begins September 10, 2017)

[Assistant, Associate or Full Contract/Grant Professor and Director of Science and Mathematics Improvement](#), Western Michigan University (review begins September 13, 2017; search for position number 0604095)

[Assistant Professor of Science Education](#), Department of Physics, Astronomy, and Geosciences, Towson University, Baltimore, MD (review begins October 20, 2017)

[Midcareer Science & Technology Policy Fellowships](#), American Academy for the Advancement of Science (AAAS) (deadline November 1, 2017)

Upcoming Grant and Award Deadlines

GSA Geoscience Education Division [student travel grants](#) to present geoscience education work at the 2017 Annual Meeting in Seattle, WA, Application Deadline September 6, 2017

National Science Foundation [ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers](#) "Adaptation" Full Proposal Deadline September 13, 2017

Spencer Foundation [Midcareer Grant Program](#) Proposal Deadline September 14, 2017

Spencer Foundation [Small Research Grants](#) Full Proposal Deadline November 1, 2017 ([informational webinar](#) on Wednesday, September 20, 2017 at 11:00am CDT)

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

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 Birting](#).



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