

THE GER EXCHANGE

Promoting high-quality scholarly research in geoscience education.

Mar. 2018 Spotlight: Christopher Atchison

The February 2018 [GER Spotlight](#) is Dr. Christopher Atchison, Associate Professor of Geoscience Education in the School of Education and Department of Geology at the University of Cincinnati and Executive Director of the International Association for Geoscience Diversity. In this GER Spotlight, Atchison focuses on the importance of inclusive design and the need to think beyond the traditional, and often exclusive, approaches to teaching and learning in the geosciences. Check out the full [March 2018 Spotlight here!](#)

Featured Article

[Assessing students' disciplinary and interdisciplinary understanding of global carbon cycling](#)

"Global carbon cycling describes the movement of carbon through atmosphere, biosphere, geosphere, and hydrosphere; it lies at the heart of climate change and sustainability. To understand the global carbon cycle, students will require

interdisciplinary knowledge. While standards documents in science education have long promoted interdisciplinary understanding, our current science education system is still oriented toward single-discipline-based learning. Furthermore, there is limited work on interdisciplinary assessment. This article presents the validated Interdisciplinary Science Assessment of Carbon Cycling (ISACC), and reports empirical results of a study of high school and undergraduate students, including an analysis of the relationship between interdisciplinary items and disciplinary items... Findings indicated significantly higher levels of interdisciplinary understanding among the Freshman–Sophomore group compared to high school students. There was no statistically significant difference between Freshman–Sophomore group and Junior–Senior group. Items assessing interdisciplinary understanding were more difficult than items assessing disciplinary understanding of global carbon cycling; however, interdisciplinary and disciplinary understanding were strongly correlated. This study highlights the importance of interdisciplinary understanding in learning carbon cycling and discusses its potential impacts on science curriculum and teaching practices.

You, H. S., Delgado, C., & Marshall, J. A. (2018). [Assessing students' disciplinary and interdisciplinary understanding of global carbon cycling](#). *Journal of Research in Science Teaching*, 55(3), 377-398.

Job and Internship Opportunities

[Post Doctoral Fellow](#), Center for STEM Research, Education, and Outreach, Southern Illinois University Edwardsville

[Assistant Director](#), Center for the Integration of Research, Teaching, and Learning (CIRTL), Northwestern University (search for position #79628; deadline **March 1, 2018**)

[Director](#), CalTeach Undergraduate Blended Program in Math and Science, University of California, Irvine (deadline **March 1, 2018**)

[Assistant Professor of Geology](#) (joint appointment with the Department of Geosciences and Environment and with the Natural Science Program), California State University, Los Angeles (deadline **March 12, 2018**)

Distinguished Postdoctoral Scholar, College of Arts, Science, & Education (including the STEM Transformation Institute), Florida International University (deadline **March 31, 2018**; contact alidelga@fiu.edu for details)

Postdoctoral Fellow, "A Partnership to Adapt, Implement, and Study a Practice-based Professional Learning Model and Build District Capacity to Meet the Challenge of NGSS," Graduate School of Education, Stanford University (review begins **April 10, 2018**; contact Dr. Hilda Borko, hildab@stanford.edu for details)

Grant, Award, and Scholarship Deadlines

2017 Emerald/HETL Education [Outstanding Doctoral Research Award](#) deadline **March 1, 2018**

Association for Women Geoscientists [Chrysalis Scholarship](#) deadline **March 31, 2018**

Association for Women Geoscientists [Outstanding Educator Award](#) deadline **April 1, 2018**

National Science Foundation *Improving Undergraduate STEM Education: Education and Human Resources* (Exploration and Design Tier for Engaged Student Learning & Institution and Community Transformation) Submission Window **October 1, 2017-October 2, 2018**

Submit to the GER Exchange

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