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NAGT




THE GER EXCHANGE

Promoting high-quality scholarly research in geoscience education.

2019 NAGT GER Transformation Award Cathryn A. Manduca



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Photo of Cathryn A. Manduca. 06/25/07 

Citation written by Leilani Arthurs, CSU Boulder:

Dr. Cathryn A. Manduca is the 2019 Awardee for the NAGT-GER Division's Transformation Award. For more than two decades, Cathy has been an adroit advocate for high-quality geoscience education and geoscience education research.

leading capacity-building activities for both geoscience education practitioners and geoscience education researchers; (3) developing collaborations that produced fruitful new lines of geoscience education research; (4) providing expanded opportunities to publish GER literature; and (5) engaging and working with a diversity of individuals, groups, and institutions.

Cathy was one of three leaders whose early community visioning and strategic planning efforts in the mid- to late-1990s produced the initial conceptualization for Geoscience Education Research during the *Shaping the Future of Undergraduate Earth Science Education* workshop. The vision for linking geoscience education with education research was formalized during the *Bringing Research on Learning to the Geosciences* workshop in 2002, which was funded by the National Science Foundation and the Johnson Foundation and for which Cathy was the lead PI. This workshop brought together twenty leaders from geoscience education, learning sciences, and STEM disciplines who had already introduced learning sciences into their disciplines' education to initiate the development of a community engaged in applying learning sciences to geosciences education. The workshop defined areas of high potential for collaboration and generated recommendations for building capacity in geoscience education research. Through more than a decade of advocacy, in 2015, the NAGT's Geoscience Education Research Division came into being, fostered under Cathy's leadership as the Executive Director for NAGT.

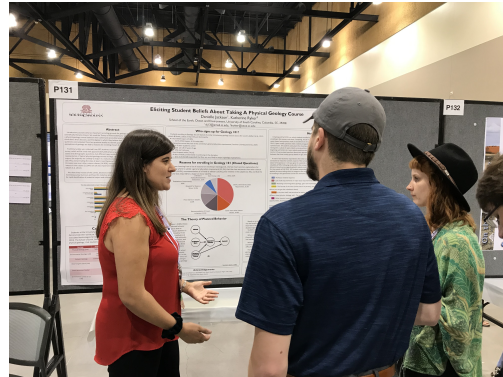
Cathy is perhaps most well known for the capacity building of geoscience education practitioners through her work as the Founding Director for the Science Education Resource Center (SERC). Under her directorship, SERC has offered program after program to facilitate geoscience education practitioners' capacity to provide students at all grade levels with high-quality geoscience education. Such programming has been delivered through *On the Cutting Edge*, *Building Strong Geosciences Programs*, *InTeGrate*, *Teach the Earth*, and the *Earth Educators' Rendezvous*. Cathy has also been a leader in the capacity building of geoscience education researchers. Perhaps the most notable examples include her advocacy for GER-dedicated sessions at the *Earth Educators' Rendezvous* and her central role in the NSF-funded *Spatial Intelligence and Learning Center* (SILC). According to Nora Newcombe, PI of the SILC, Cathy helped "identify other great working partners and board members" and together they studied specific mechanisms by which students grasp or fail to grasp geoscience concepts. **Read more about Cathy Manduca's work on the [NAGT GER awards page](#).**

GER Updates from the GSA Meeting in Phoenix

● Presentations from NAGT-GER sessions entitled *Making Sense of Methodologies and Theoretical Frameworks in Geoscience Education*

NAGT GER officers (Katherine Ryker, Karen McNeal, Leilani Arthurs, Emily M. Geraghty Ward) chaired a GSA session titled [Making Sense of Methodologies and Theoretical Frameworks in Geoscience Education Research](#). In an effort to disseminate the information shared more widely, we have posted the session schedule and shared slides to the website: <https://nagt.org/nagt/divisions/geoed/methods>. These will continue to be updated as we receive materials from presenters, so keep checking back! The NAGT GER officers were very pleased with the strong submissions to this methods-based GER session again this year. Thank you to all the presenters!

Below (left-photo by K. Ryker) a picture from dinner with the invited speakers [Stephanie Pfirman](#), [Daniel Reinholz](#), [Kathy Quardokus-Fisher](#) and (right-photo by L. Arthurs) activity at the Wednesday poster session.



Job and Internship Opportunities

- [Postdoctoral Researcher](#) - Cal State University
- [Professional Practice Assistant Professor](#) - Utah State University
- [Assistant/Associate Professor of STEM Education Research](#) - Clemson University
- [Postdoctoral Research Positions](#) - Texas State University

Positions related to studying, supporting, and/or enacting instructional change efforts in undergraduate STEM. The positions are associated with three new, NSF-funded projects: (1) [Building Capacity: Creating Faculty-Student Communities for Culturally Relevant Institutional Change](#) (2 positions); (2) [Furthering the Work of Undergraduate STEM Transformation: Modeling Instructional Change Teams](#); and (3) [Developing Faculty Resources of Evidence-Based Practices that Improve Learning and Equity in STEM](#). One of the positions will primarily focus on programmatic work and may involve synergistic research activities. The other three

preferred start dates are between January 1 and May 1, 2020. Applications (cover letter, CV) should be sent to STEMEdPostdocs@txstate.edu.

● [Northern Illinois University](#) is seeking a Postdoctoral Researcher to support NSF #1835950 and Graduate Research Assistant to support NSF #1834076.

Postdoctoral Position: Lead a mixed-methods investigation of students' spatial conceptions of erosional processes, support the collection and analysis of quantitative classroom data, develop and publish manuscripts for education and geoscience journals, and develop proposals for external funding. This is a **one-year** position funded by NSF #1835950, with the possibility of an additional year of funding, and the opportunity for a week-long residency at the Research in Spatial Cognition laboratory at Temple University.

Interested candidates should contact Nicole LaDue (nladue@niu.edu). Applications will be considered until the position is filled. Preferred start date is January 2020, but a later start date in Summer 2020 is possible.

Graduate Research Assistant: Lead mentoring meetings for high achieving STEM students with high financial need, learn qualitative and mixed-methods research methodologies, and investigate the personal and contextual factors associated with students' persistence in STEM majors. This project is funded, in part, by NSF #1834076. To apply for funding, please contact Nicole LaDue (nladue@niu.edu). Application review for this position will begin in **January 2020**.

Announcements

The Dissemination of Undergraduate Research Initiatives that Support Diversity and Inclusion in the Geosciences: A Writing Workshop

November 14-16, 2019

New York City College of Technology, Brooklyn, New York

This hands-on writing intensive workshop focused on diversity and inclusion in the geosciences is uniquely designed for geoscience scholars, practitioners, and program directors who are actively engaged with or concerned about issues in the realm of diversity and inclusion. We seek participants who are willing to dedicate the time and the effort to write about outcomes, best practices, and innovative strategies in pursuit of scholastic equity in the geosciences. Participants are expected to have data collected, and the goal of the workshop is for the participants to have a manuscript ready for publication at the end of the workshop. For more information, please visit <https://openlab.citytech.cuny.edu/nsf-geosciences-workshop/>. The deadline to apply is October 7, 2019.

Join an open discussion on the challenges of balancing the need to grow enrollment but doing so without sacrificing quality or rigor in your program. If you would like to share what you are doing in the classroom and learn from others, please [register](#) for the webinar that is being held on Friday October 11 from 1-2 pm Eastern Time.

Grant, Award, and Scholarship Deadlines

- NSF [Improving Undergraduate STEM Education: Education and Human Resources](#) (Engaged Student Learning and Institutional and Community Transformation Level 2 and 3) **deadline December 04, 2019**
- NaEd/Spencer [Dissertation Fellowship Program](#) (deadline **October 3, 2019**)
- NaEd/Spencer [Postdoctoral Fellowship Program](#) (deadline **November 20, 2019**)
- Spencer Foundation [Small Research Grants](#) (deadline **November 1, 2019**)
- NSF [ADVANCE: Organizational Change for Gender Equity in STEM Academic Professions \(ADVANCE\)](#) "Partnerships" (letter of intent deadline **November 1, 2019**)
- NSF [Alliances for Graduate Education and the Professoriate \(AGEP\)](#) (full proposal deadline **December 13, 2019**)

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 Media Director [Emily Ward](#).



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