

# John McDaris

Science Education Resource Center  
Carleton College  
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## PROFESSIONAL PREPARATION

Ph.D., Geophysics, 2018-in progress  
University of Minnesota, Minneapolis, MN  
*Advisor: Joshua Feinberg*

M.S., Geophysics, 1997-2000  
University of Minnesota, Minneapolis, MN  
Investigation of Iron Germanate Spinel as a Mantle Mineral Analogue  
*Advisor: Shun Karato*

B.S. *cum laude*, Physics, 1992-1997; Minor—Mathematics  
North Carolina State University, Raleigh, NC

## PROFESSIONAL EXPERIENCE

2018—Present: Graduate Research Assistant / Graduate Teaching Assistant  
University of Minnesota, Twin Cities

Aug-Dec, 2009: Adjunct Earth Science Faculty  
Rochester Community & Technical College

2003—Present: Geoscience Education Associate  
Science Education Resource Center (SERC), Carleton College

2000—2003: Office Manager / Business Manager  
YMCA of Metropolitan Minneapolis

1997—2000: Graduate Teaching Assistant / Graduate Research Assistant  
University of Minnesota, Twin Cities

1993—1997: Undergraduate Laboratory Instructor / Undergraduate Physics Tutor  
North Carolina State University

## HONORS AND AWARDS

- Gil Gabanski Scholarship – 2020, Minnesota Groundwater Association
- Banerjee Fellowship – 2019-2020, University of Minnesota
- Gruner Fellowship – 1999-2000, University of Minnesota
- Mooney Fellowship – 1998-1999, University of Minnesota
- Sigma Pi Sigma – National Physics Honor Society
- NCSU Outstanding Undergraduate Physics Tutor/Laboratory Instructor (1997)
- NCSU University Scholars Program Completed (1997)
- NCSU Physics Department Humanities Award (1997)

## PROFESSIONAL ACTIVITIES

2020 Earth Educators' Rendezvous Workshop Convener

- Designing and Running Effective Professional Development Workshops

Member: Minnesota Groundwater Association Diversity, Equity, and Inclusion Committee  
Member: UMN Department of Earth Sciences Diversity and Equity Committee  
Reviewer: Journal of Geoscience Education (1 paper)

2019 Reviewer: NASA National Space Grant College and Fellowship Program (3 project proposals)  
Member: UMN Department of Earth Sciences Diversity and Equity Committee

2018 Reviewer: Journal of Geoscience Education (1 paper)

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- Member: UMN Department of Earth Sciences Diversity and Equity Committee  
Reviewer: NASA Minority University Research and Education Project (MUREP)  
Aerospace Academy - MAA. (4 project proposals)
- 2017 Reviewer: NASA ESTEEM-TCU Program (1 project proposal)
- 2015 Member of Outreach, Diversity, and Education Committee (OEDC) for the NSF  
Continental Scientific Drilling Coordination Office (CSDCO) at the University of  
Minnesota.  
Reviewer: NASA Minority University Research and Education Project (MUREP)  
Aerospace Academy - MAA. (3 project proposals)
- 2013 Reviewer: NASA Innovations in Climate Education – Tribal (NICE-T) Program (2  
project proposals)  
Introductory Earth Science Text Book Focus Group – W.W. Norton & Company  
Publishers
- 2012 Co-Convener AGU Sessions
- ED43E. Teaching Structural Geology, Geophysics, and Tectonics I
  - ED53B. Quintessential Field Sites: Model Field Areas and Active Learning  
(Posters)
- GSA Workshop Co-Convener
- 511B. Teaching about Hazards in the Geoscience Classroom.
- 2011 GSA Workshop Presenter
- 519B. Teaching Climate Science with Active Learning Strategies
- Co-convener: On the Cutting Edge Hazards Webinars Series  
<http://serc.carleton.edu/NAGTWorkshops/hazards/webinars/>
- 2009 Reviewer: NASA Global Climate Change Education (GCCE) Program (2 project  
proposals)
- 2008 Reviewer: NASA Global Climate Change Education (GCCE) Program (5 project  
proposals)

## PROFESSIONAL SOCIETY MEMBERSHIPS

National Association of Geoscience Teachers  
American Geophysical Union  
Geological Society of America  
International Association for Geoscience Diversity  
National Organization of Gay and Lesbian Scientists and Technical Professionals  
Minnesota Groundwater Association

## PUBLICATIONS

### *Journal Articles and Book Chapters*

#### **In Review**

1. McDaris, J.R., Feinber, J.M., Runkel, A.C., Levine, J., Kasahara, S., Alexander, Jr., E.C.  
(in review). Increasing Influence of Chloride-rich Surface Water on Groundwater  
Quality in the Twin Cities Metropolitan Area: The Case for Monitoring with Specific  
Conductance. *Journal of Hydrology*.

#### **Published**

10. St. John, K., McNeal, K. Macdonald, R.H., Kastens, K., Bitting, K., Cervato, C., McDaris,  
J.R., Petcovic, H., Pyle, E., Riggs, E., Ryker, K., Semken, S., and Teasdale, R.  
(2020). A Community Framework for Geoscience Education Research: Summary and  
Recommendations for Future Research Priorities. *Journal of Geoscience Education*.  
DOI: 10.1080/10899995.2020.1779569
9. Macdonald, R.H., Beane, R.J., Baer, E.M.D., Eddy, P.L., Emerson, N.R., Hodder, J.,  
Iverson, E.R., McDaris, J.R., O'Connell, K., and Ormand, C.J. (2019). Accelerating

- Change: The Power of Faculty Change Agents to Promote Diversity, Equity, and Inclusive Teaching Practices. *Journal of Geoscience Education*. DOI: 10.1080/10899995.2019.1624679
8. St. John, K., Bitting, K., Cervato, C., Kastens, K.A., Macdonald, R.H., McDaris, J.R., McNeal, K.S., Petcovic, H., Pyle, E., Riggs, E., Ryker, K., Semken, S., and Teasdale, R. (2019), An evolutionary leap in how we teach geosciences. *Eos*, 100, <https://doi.org/10.1029/2019EO127285>. Published on 08 July 2019.
  7. McDaris, J.R., Iverson, E.R., Manduca, C.A., Orr, C.H. (2019). Teach the Earth: Making the Connection Between Research and Practice in Broadening Participation. *Journal of Geoscience Education*. DOI: 10.1080/10899995.2019.1616272
  6. Orr, C.H. and McDaris, J.R. (2019). Supporting implementation of program-level changes to increase learning about Earth. In Gosselin, D.C., Egger, A., Taber, J. (Eds), *Interdisciplinary Teaching about Earth and the Environment for a Sustainable Future*. Springer, New York, NY.
  5. St. John, K., Bitting, K., Cervato, C., Kastens, K.A., Macdonald, R.H., McDaris, J.R., McNeal, K.S., Petcovic, H.L., Pyle, E.J., Riggs, E.M., Ryker, K., Semken, S., and Teasdale, R. (2018). Synthesis: Discussion and Implications. In St. John, K. (Ed), *A Community Framework for Geoscience Education Research*. National Association of Geoscience Teachers. [https://doi.org/10.25885/ger\\_framework/15](https://doi.org/10.25885/ger_framework/15)
  4. McDaris, J.R., Manduca, C.A., Iverson, E.R., and Orr, C.H. (2017). Looking in the Right Places: Minority-Serving Institutions as Sources of Diverse Earth Science Learners. *Journal of Geoscience Education*, November 2017, Vol. 65, No. 4, pp. 407-415.
  3. Banta, L.M., Crespi, E.J., Nehm, R.H., Schwarz, J.A., Singer, S., Manduca, C.A., Bush, E.C., Collins, E., Constance, C.M., Dean, D., Esteban, D., Fox, S., McDaris, J., Paul, C.A., Quinan, G., Raley-Susman, K.M., Smith, M.L., Wallace, C.S., Withers, G.S., Caporale, L., (2012) Integrating Genomics Research throughout the Undergraduate Curriculum: A collection of inquiry-based genomics lab modules. *CBE Life Science Education*, vol. 11, 1–5, Fall 2012.
  2. Manduca, C.A., Mogk, D.W., B. Tewksbury, Macdonald, R.H., S.P. Fox, Iverson, E.R., K. Kirk, McDaris, J.R., C. Ormand, and M. Bruckner (2010). SPORE: Science Prize for Online Resources in Education: On the Cutting Edge: Teaching Help For Geoscience Faculty: *Science*, v. 327, no. 5969, pp. 1095-1096.
  1. Williams, M.L., Mogk, D.W., and J. McDaris (2010). Research and Teaching about the Deep Earth. *Eos*, Vol. 91, No. 32, 10 August 2010.

## Websites

One major component of my position at SERC is developing web resources for undergraduate faculty. For each of the websites listed below, I have compiled and organized the resources and/or conducted literature research to develop content for the web pages.

- Broadening Access to the Sciences  
[http://serc.carleton.edu/broadening\\_access/index.html](http://serc.carleton.edu/broadening_access/index.html)
- Building Strong Geoscience Departments  
<http://serc.carleton.edu/NAGTWorkshops/departments/index.html>
- The Carleton Interdisciplinary Science and Math Initiative (CISMI)  
<http://serc.carleton.edu/cismi/index.html>
- Climate Change in an Age of Media (CAM)  
[http://cleanet.org/cced\\_media/index.html](http://cleanet.org/cced_media/index.html)
- CUREnet  
<http://serc.carleton.edu/curennet/index.html>
- EarthLabs: Hurricanes  
<http://serc.carleton.edu/earthlabs/hurricanes/>
- Geoscience in Two-Year Colleges  
<http://serc.carleton.edu/geo2yc/>

- InTeGrate: Increase the Diversity of Your Graduates  
<http://serc.carleton.edu/integrate/programs/diversity.html>
- National Association of Geoscience Teachers  
<http://nagt.org>
- North Star STEM Alliance (LSAMP)  
<http://serc.carleton.edu/northstarstem/index.html>
- On the Cutting Edge: Teaching About Hazards in Geoscience  
<http://serc.carleton.edu/NAGTWorkshops/hazards/>
- On the Cutting Edge: Teaching Geoscience in the Field  
<http://serc.carleton.edu/NAGTWorkshops/field/>
- On the Cutting Edge: Teaching Geoscience with Visualizations  
<http://serc.carleton.edu/NAGTWorkshops/visualization/>
- Starting Point: Teaching Introductory Geoscience - Cooperative Learning  
<http://serc.carleton.edu/introgeo/cooperative/>
- Preparing Teachers to Teach Earth Science  
<http://serc.carleton.edu/teacherprep/>
- Supporting and Advancing Geoscience Education at Two-Year Colleges (SAGE 2YC)  
<http://serc.carleton.edu/sage2yc/>
- Supporting Two-Year College Faculty Across the Disciplines  
<http://serc.carleton.edu/2yc/>
- Teach the Earth: Broaden Participation in the Geosciences  
[https://serc.carleton.edu/teachearth/broad\\_partic/index.html](https://serc.carleton.edu/teachearth/broad_partic/index.html)
- Teaching in the Field  
<http://www.nagt.org/nagt/field/>
- Teaching Quantitative Skills in the Geosciences  
<http://serc.carleton.edu/quantskills/>

## ***Invited Talks***

### **2020**

**McDaris, J.R.** (2020). Chloride Concentrations in Twin Cities Metropolitan Area Groundwater and Future Monitoring using Specific Conductance. November 18, 2020 Minnesota Geologic Survey Brown Bag Lecture Series

## ***Presentations at Professional Conferences***

### **2020**

**McDaris, J.R.**, and Feinberg, J. (2020). Using real-time electrical conductivity measurements to understand chloride in groundwater. Geological Society of America Abstracts with Programs. Vol. 52, No. 5, ISSN 0016-7592

**McDaris, J.R.**, Baer, E.M.D., Macdonald, R.H., and Ormand, C.J. (2020). Supporting Student Success at Multiple Scales: Lessons on Promoting Change from SAGE 2YC Change Agents. Geological Society of America Abstracts with Programs. Vol 52, No. 6, 2020 doi: 10.1130/abs/2020AM-358211

**Ormand, C.J.**, Macdonald, R.H., Baer, E.M.D., Emerson, N., Hodder, J., McDaris, J.R., and O'Connell, K. (2020). Engaging your faculty colleagues in evidence-based practices using SAGE 2YC resources, Book clubs, journal clubs, and implementation groups. Presented at 2020 Earth Educators' Rendezvous.

### **2019**

**Awalt, M.**, Mogk, D., and McDaris, J. (2019). Designing Successful Student Field Experiences: Resources and Strategies. Earth Educators' Rendezvous, (Nashville, Tennessee).

**Baer, E.**, Blodgett, R., Emerson, N., Hodder, J., Iverson, E., McDaris, J. McDonald, R. H., and Ormand, C. (2019). SAGE 2YC Regional Workshops: Disseminating Educational

Practices, Developing Leadership, and Building Communities, Geological Society of America annual meeting, (Phoenix, Arizona).

- Hodder, J.**, Macdonald, R.H., Baer, E.M.D., Beane, R., Bragg, D., Emerson, N., Iverson, E.R., McDaris, J.R., O'Connell, K., Ormand, C. (2019). Engaging Two-year Geoscience College Faculty to Promote Diversity, Equity, and Inclusion: The SAGE 2YC Project. Presented at ASLO 2019 Aquatic Sciences meeting.
- McDaris, J.R.**, Baer, E.M.D., Emerson, N., Hodder, J., Macdonald, R.H., and Ormand, C. (2019). Synthesizing lessons for creating change in faculty, programs, institutions, and regional networks: SAGE 2YC Faculty as Change Agents. Presented at the 2019 Earth Educators' Rendezvous, (Nashville, Tennessee).
- McDaris, J.R.**, Feinberg, J.M., and Maxson, J. (2019). Developing an Urban Field Course as an Engagement and Transfer Tool. Abstract ED23F-1073 presented at 2019 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.
- McDaris, J.R.**, Macdonald, R.H., Ormand, C., Iverson, E.R., Baer, E., and Emerson, N. (2019). Increasing Diversity, Equity, and Inclusion in Two-Year College Geoscience: Lessons Learned from the SAGE 2YC Project. Abstract ED31B-04 presented at 2019 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.
- Ormand, C.**, McDaris, J., Macdonald, R. H., Baer, E., Emerson, N., and Hodder, J. (2019). SAGE 2YC Materials for Faculty Professional Development Workshops: Earth Educators' Rendezvous, (Nashville, Tennessee).
- Ormand, C.**, Macdonald, R. H., McDaris, J., Hodder, J., Baer, E., and Emerson, N. (2019). SAGE 2YC Virtual Professional Development for Geoscience Faculty in Two-Year Colleges: Engaging Faculty in Exploration of Evidence-Based Practices: Geological Society of America annual meeting (Phoenix, Arizona).

## **2018**

- Bruckner, M.**, Manduca, C.A., McDaris, J.R., Orr, C.H. (2018). Supporting Interdisciplinary Teaching about the Earth for a Sustainable Future through the InTeGrate Project, Earth Educators' Rendezvous (Lawrence, KS).
- Iverson, E.R.**, Macdonald, R.H., Baer, E.M.D., Bragg, D., Eddy, P., Emerson, N.R., Hodder, J., McDaris, J.R., O'Connell, K., Ormand, C.J. (2018). Building a Community of Practice Among Geoscience Two-Year College Faculty: A Framework to Support Individual Learning and Collective Change. Geological Society of America Abstracts with Programs. Vol. 50, No. 6, ISSN 0016-7592.
- Macdonald, R.H.**, Baer, E.M.D, Beane, R.J., Bragg, D., Emerson, N.R., Hodder, J., Iverson, E.R., McDaris, J.R., O'Connell, K., Ormand, C.J. (2018). Promoting Diversity, Equity, and Inclusion: Engaging SAGE 2YC Faculty to Transform Geoscience in Two-Year Colleges. Geological Society of America Abstracts with Programs. Vol. 50, No. 6, ISSN 0016-7592.
- Macdonald, R.H.**, Baer, E.M.D., Bragg, D., Eddy, P., Emerson, N.R., Hodder, J., Iverson, E., McDaris, J.R., O'Connell, K., and Ormand, C.J. (2018). Catalyzing Inclusive Education Practices in Two-Year College Geoscience Programs and Departments: SAGE 2YC and Faculty Change Agents: American Geophysical Union annual fall meeting (Washington, DC).
- McDaris, J.R.**, Manduca, C.A, Iverson, E.R., Orr, C.H. (2018). Teach the Earth: Linking research and practice to attract, support, and prepare diverse students for geoscience careers. Abstract ED11A-10 presented at 2018 Fall Meeting, AGU, Washington, D.C., 10-14 Dec.
- McDaris, J.R.**, Ormand, C., Baer, E.M., Hodder, J., Macdonald, R.H., Emerson, N. (2018). SAGE 2YC: Sustaining Faculty Learning. Poster presented at the 2018 Earth Educator's Rendezvous (Lawrence, KS).
- Ormand, C.J.**, Macdonald, R.H., Maer, E.M.D., Beane, R.J., Hodder, J., McDaris, J.R., O'Connell, K. (2018). Diversity, Equity, and Inclusion: SAGE 2YC Resources for the

Geoscience Community. Geological Society of America Abstracts with Programs. Vol. 50, No. 6, ISSN 0016-7592.

**Orr, C.H.**, Dolan, E.L., McDaris, J.R., Haveles, A.W. (2018). CUREnet : Faculty Network for Designing, Teaching, and Evaluating CUREs. Geological Society of America Abstracts with Programs. Vol. 50, No. 6, ISSN 0016-7592.

**Orr, C.H.** and McDaris, J.R. (2018). Working with and across networks to support institutional change. Earth Educators' Rendezvous (Lawrence, KS).

## **2017**

**Baer, E.M.D.**, Blodgett, R.H., Emerson, N.R., Hodder, J., McDaris, J.R., Macdonald, R.H., Ormand, C.J. (2017). Adapting and Extending the On the Cutting Edge Model of Professional Development to Bring Workshops to Two-Year College Faculty. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-307279

**Bruckner, M.Z.**, Manduca, C.A., McConnell, D.A., Hanselman, J., Orr, C.H., McDaris, J.R., Fox, S.P. (2017). Using Instructor Stories to Demonstrate the Adaptability of the InTeGrate Interdisciplinary Sustainability Curricula. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-300554

**Egger, A.E.**, Fox, S.P., McDaris, J.R., Gilbert, L.A. (2017). Facilitating Three-Dimensional Learning with Adaptable, Searchable, NGSS-Aligned Curricular Materials from InTeGrate. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-306673

**Iverson, E.R.**, McDaris, J.R., C. Ormand, Macdonald, R.H. (2017). Supporting and Advancing Geoscience Education in Two-Year Colleges (SAGE 2YC): Building a Foundation for Change through a Network of Regional Communities of Practice. Earth Educators' Rendezvous. Albuquerque, NM.

**Macdonald, R.H.**, Baer, E.M.D., Bragg, D., Eddy, P., Emerson, N.R., Hao, Y., Hodder, J., Iverson, E., McDaris, J.R., Ormand, C.J. (2017). Student success in Geoscience: A SAGE 2YC Perspective. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-306192

**Macdonald, R.H.**, Manduca, C.A., Beane, R.J., Doser, D.I., Ebanks, S.C, Hodder, J., McDaris, J.R., Ormand, C.J. (2017). Diversifying Geoscience by Preparing Faculty as Workshop Leaders to Promote Inclusive Teaching and Inclusive Geoscience Departments. Abstract ED21C-03 presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.

**McDaris, J.R.**, Baer, E.M.D., Macdonald, R.H., Ormand, C.J., Hodder, J., Emerson, N.R. (2017). The SAGE 2YC Website: Updated Content to Support 2YC Faculty as Agents of Change. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-300600

**McDaris, J.R.**, Bralower, T., Anbar, A., Leinbach, A.A. (2017). Best Practices in Teaching Online: faculty-Sourced Guidance from InTeGrate. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-301314

**McDaris, J.R.**, Bralower, T., Anbar, A., Leinbach, A.A. (2017). Teaching about the Earth Online: Faculty-Sourced Guidance from InTeGrate. Abstract ED53E-0197 presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.

**McDaris, J.R.** and Orr, C.H. (2017). Lessons from the InTeGrate Implementation Teams: Synthesizing Real-World Experience. Earth Educators' Rendezvous. Albuquerque, NM.

**Orr, C.H.**, McDaris, J.R., Manduca, C.A. (2017). For Higher Ed portal to Resources Supporting Change from Individual to Program Scales. Earth Educators' Rendezvous. Albuquerque, NM.

**Orr, C.H.**, McDaris, J.R., Manduca, C.A. (2017). Lessons from InTeGrate on Program-Scale Change: Synthesizing Real-World Experience. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-301604

**St. John, K.**, Cervato, C., Kastens, K.A., Macdonald, R.H., McDaris, J.R., McNeal, K., Petcovic, H.L., Pule, E.J., Riggs, E.M., Ryker, K., Semken, S., Teasdale, R. (2017). Identifying and Prioritizing Geoscience Education Research Grand Challenges: Draft Plans for a Community Research Agenda. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-298851

**St. John, K.**, Semken, S.C., Teasdale, R., Ryker, K., Riggs, E.M., Pyle, E.J., Petcovic, H.L., McNeal, K., McDaris, J.R., Macdonald, R.H., Kastens, K., Cervato, C. (2017). Proposed Grand Challenges in Geoscience Education Research: Articulating a Community Research Agenda. Abstract ED23D-0321 presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.

## **2016**

**Baer, E.**, Emerson, N.R., Hodder, J., Macdonald, R.H., and McDaris, J.R. (2016). SAGE 2YC: Two-Year College Geoscience Faculty as Change Agents. Earth Educators' Rendezvous, Madison, WI.

**Baer, E.**, Emerson, N.R., Hodder, J., MacDonald, H.R., McDaris, J.R., Ormand, C.J. (2016). Community College Geoscience Faculty as Change Agents. Geological Society of America Abstracts with Programs. Vol. 48, No. 7.

**Orr, C.H.**, Manduca, C.A., McDaris, J.R., and Baldassari, C. (2016). Models of program-scale change: Common elements in the implementation of the InTeGrate design philosophy and teaching materials. Earth Educators' Rendezvous, Madison, WI.

**McDaris, J.R.** and Manduca, C.A. (2016). Drawing Diverse Students into your Class. Earth Educators' Rendezvous, Madison, WI.

**McDaris, J.R.** and Manduca, C.A. (2016). Showcasing Approaches to Inclusivity and Broadening Participation in Geoscience and STEM. Geological Society of America Abstracts with Programs. Vol. 48, No. 7.

**St. John, K.**, Kastens, K.A., MacDonald, R.H., McDaris, J.R., McNeal K.S. (2016). Emerging Priorities and New Online Resources to Support Geoscience Education Researchers. Geological Society of America Abstracts with Programs. Vol. 48, No. 7.

## **2015**

**Kirk, K.B.**, Kulick, K.M., Defur, S.H., McLaughlin, V., McDaris, J.R., Baer, E.M.D., and Macdonald, R.H. (2015). Teaching the Students You Have: Insights and Strategies for Inclusive Instruction. Geological Society of America Abstracts with Programs. Vol. 47, No. 7, p.107.

**Macdonald, R.H.**, Layou, K.M., McDaris, J.R., Baer, E.M.D., Blodgett, R.H., Hodder, J. (2015). Resources for Supporting the Transfer of Community College Students to Four-Year Colleges and Universities. Geological Society of America Abstracts with Programs. Vol. 47, No. 7, p.478.

**Manduca, C.A.**, Macdonald, R.H., McDaris, J.R., and Weissmann, G. (2015). Supporting Success for All Students. Abstract ED21E-08 presented at 2015 Fall meeting, AGU, San Francisco, Calif., 14-19 Dec.

**McDaris, J.R.** and Manduca, C.A. (2015). Characterizing the Prevalence and Practices of Geoscience Programs at Minority Serving Institutions. Geological Society of America Abstracts with Programs. Vol. 47, No. 7, p.46.

**McDaris, J.R.**, Manduca, C.A., and Macdonald, R.H. (2015). Broadening Access to STEM and Geoscience through Support for the Whole Student. Earth Educators' Rendezvous, Boulder, CO.

**McDaris, J.R.**, Manduca, C.A., Macdonald, R.H., and Iverson, E.R. (2015). Addressing Issues of Broadening Participation Highlighted in the Report on the Future of Undergraduate Geoscience Education. Abstract ED14B-06 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-19 Dec.

**Orr, C.H.**, Manduca, C.A., Blockstein, D, Davis, F., McDaris, J.R. (2015). Teaching Coastal Hazard, Risk, and Environmental Justice. Abstract ED33E-03 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-19 Dec.

**St. John, K.**, Macdonald, R.H., Feig, A.D., Ladue, N., Lukes, L.A., McNeal, K.S., Riggs, E.M., McDaris, J.R. (2015). Shaping the Future of Geoscience Education Research: A Community Effort. Geological Society of America Abstracts with Programs. Vol. 47, No. 7, p.255.

## **2014**

**Bruckner, M.Z.**, O'Connell, K., McDaris, J.R., Kirk, K.B., Larsen, K., Kent, M., Manduca, C.A., Egger, A., Blockstein, D., Mogk, D.W., and Taber, J. (2014). Infusing Sustainability Across Disciplines to Build Student Engagement. Abstract ED13B-3452 presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 14-19 Dec.

**Hickson, T.A.**, Gastaldo, R.A., Gran, K., Macdonald, R.H., McDaris, J.R., Theissen, K.M. (2014). Getting Together: Reporting on an Interdisciplinary Workshop for Sedimentary Geologists, Paleontologists, and Geomorphologists. Geological Society of America Abstracts with Programs. Vol. 46, No. 6, p.437

**Macdonald, R.H.**, Baer, E.M.D., Blodgett, R.H., Hodder, J., McDaris, J.R. (2014). Transforming a Community: Supporting and Advancing Geoscience Education in Two-year Colleges. Geological Society of America Abstracts with Programs. Vol. 46, No. 6, p.599

**Macdonald, R.H.**, McDaris, J.R., Kulick, K.M., Baer, E.M.D., Blodgett, R.H., Hodder, J. (2014). Supporting Student Success in Geoscience at Two-year Colleges. Geological Society of America Abstracts with Programs. Vol. 46, No. 6, p.244

**McDaris, J.R.**, Hodder, J., Macdonald, R.H., Baer, E.M.D., Blodgett, R.H. (2014). Undergraduate Research in Geoscience with Students from Two-year Colleges: SAGE 2YC Resources. Abstract ED21D-3477 presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 14-19 Dec.

**McDaris, J.R.**, Layou, K.M., Macdonald, R.H., Baer, E.M.D., Hodder, J., Blodgett, R.H. (2014). Preparing, Supporting, and Advising 2YC/4YC Transfer Students. Geological Society of America Abstracts with Programs. Vol. 46, No. 6, p.111

**McDaris, J.R.**, Macdonald, R.H., Manduca, C.A. (2014). Supporting Diverse STEM Students using the Whole Student Framework. Geological Society of America Abstracts with Programs. Vol. 46, No. 6, p.191

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**Baer, E.M.D.**, Macdonald, R.H., McDaris, J.R., Granshaw, F.D., Wenner, J.M, Hodder, J., van der Hoeven Kraft, K.J., Filson, R.H., Guertin, L., Wiese, K. (2011). Professional Development Opportunities for Two-Year College Geoscience Faculty: Issues, Opportunities, and Successes. Abstract ED42A-05 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

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**McDaris, J.R.** and Manduca, C.A. (2011). On the Cutting Edge: Faculty Professional Development in the Geosciences. Poster presented at AACC's Broadening Impact: NSF-Funded Projects at Two-Year Colleges Conference. June 16-17, 2011.

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**Teasdale, R.**, Budd, D., Cervato, C., Iverson, E.R., van der Hoeven Kraft, K.J., Manduca, C.A., McConnell, D.A., McDaris, J.R., Murray, D.P., and Slattery, W. (2011). Enhancing Student-Centered Teaching Practices: Approaches Developed On the New Cutting Edge Geosciences RTOP Website, Geological Society of America Abstracts with Programs, Vol. 43, No. 5, p. 255.

**Wysession, M.E.**, McDaris, J.R., Mogk, D.W. (2011), Tools and Methods for Visualizing and Representing Seismic Waves in College Classrooms, Abstract ED51B-0744 Poster presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

## **2010**

**McDaris, J.R.** and Macdonald, R.H. (2010). Teaching About Hazards Using Current Events. Geological Society of America *Abstracts with Programs*, Vol. 42, No. 5, p. 24

**McDaris, J.R.**, Kirk, K.B., Mogk, D.W., and Bruckner, M.Z. (2010), Virtual Workshop Experiences for Faculty: Lessons Learned from On the Cutting Edge, Abstract ED31B-0641 Poster presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.

**Williams, M.L.**, Mogk, D.W., McDaris, J.R. (2010). Understanding the Deep Earth: Slabs, Drips, Plumes and More - An On the Cutting Edge Workshop. Abstract ED44A-01 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.

## **2009**

Iverson, E., Manduca, C.A., **McDaris, J.R.**, and Lee, S. (2009). Refining MARGINS Mini-Lessons Using Classroom Observations. *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract ED13D-0616.

**Kirk, K.B.**, Manduca, C.A., Ormand, C.J., and McDaris, J.R. (2009). Resources for Designing, Selecting and Teaching with Visualizations in the Geoscience Classroom. *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract ED53E-01.

## **2008**

**McDaris, J.R.**, Dahlman, L., and Barstow, D. (2008). EarthLabs: A National Model for Earth Science Lab Courses, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract ED21B-0624.

## **2007**

**McDaris, J.R.**, Dahlman, L., and Barstow, D. (2007). EarthLabs- Investigating Hurricanes: Earth's Meteorological Monsters, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract ED42A-07.

## **2006**

**Manduca, C.A.**, Rissler, H., Anderson, J., Bezanson, C., Moosavi, S.C., and McDaris, J.R. (2006). Preparing Teachers to Teach Earth Science. Geological Society of America Abstracts with Programs, 38(7), 398.

**McDaris, J.R.** and Manduca, C.A. (2006). Teaching in the Field: Gathering the Collective Expertise. Geological Society of America Abstracts with Programs, 38(7), 524.

**McDaris, J.R.**, Manduca, C.A., and Macdonald, R.H. (2006). Geohazards Visualizations and Teaching Materials Just-In-Time. Geological Society of America Abstracts with Programs, 38(7), 153.

## **2005**

**McDaris, J.R.**, Macdonald, R.H., and Manduca, C.A. (2005). "The 2004 Indian Ocean Tsunami: Using a Disaster as a Teachable Moment." *Geological Society of America Abstracts with Programs*, 37(5), 98.

## **2004**

**McDaris, J.R.**, Fox, S., and Manduca, C.A. (2004). Supporting Reusability. Tucson, AZ, 2004 Joint Conference on Digital Libraries, June 2004.

**McDaris, J.R.** and Manduca, C.A. (2004). "Developing Effective Online Learning Resources in the Geosciences." *EOS Trans. AGU*, Fall Meeting Supplement, Abstract ED41A-0246 85(47).

**Wenner, J.M.**, Manduca, C.A., Macdonald, R.H., Patterson, S., and McDaris, J.R. (2004). "Teaching Quantitative Skills in the Geosciences: Resources for Faculty." *EOS Trans. AGU*, Fall Meeting Supplement, Abstract ED41A-0245 85(47).

## Workshop Support

One major component of my position at SERC is supporting professional development workshops for faculty. For each of the workshops listed below, I provided leadership, and/or organizational and technical support.

- 2020: SAGE2YC Faculty as Change Agents Cohort 3 Virtual Spring Workshop  
SAGE2YC Faculty as Change Agents Cohort 3 Virtual Summer Workshop  
Developing and Running Effective Workshops  
Earth Educators' Rendezvous (virtual)
- 2019: SAGE2YC Faculty as Change Agents Culminating Workshop  
CUREnet CURE Sustainability Meeting  
Earth Educators' Rendezvous (Nashville, TN)
- 2018: CURE Institute - Hampton University  
North Star STEM Alliance Transfer Stakeholder Group Meeting  
2018 Network of STEM Education Centers Working Meeting: Strengthening Our Networks through Improving Communication  
SAGE2YC Faculty as Change Agents Cohort 1 Workshop (Year 3)  
SAGE2YC Faculty as Change Agents Cohort 2 Virtual Workshop (Year 1)  
Earth Educators' Rendezvous (Lawrence, KS)
- 2017: Teaching about Earth Online  
SAGE2YC Faculty as Change Agents Cohort 1 Workshop (Year 2)  
Geoscience Education Research Grand Challenges and Strategies Workshop (Earth Educators' Rendezvous 2017)  
Building Pathways for Success: Supporting Student Transfer from Two-Year Colleges to Four-Year Colleges and Universities (Earth Educators' Rendezvous 2017)  
Putting Sustainability into Action: New Strategies for Courses and Programs  
CUREnet Planning Workshop  
Earth Educators' Rendezvous (Albuquerque, NM)
- 2016: SAGE2YC Faculty as Change Agents Cohort 1 Workshop (Year 1)  
Geoscience Education Research Community Planning (Earth Educators' Rendezvous 2016)  
NSEC STEM Centers Toolkit Workshop  
InTeGrate Implementation Programs Synthesis of Lessons Learned  
Earth Educators' Rendezvous (Madison, WI)
- 2015: 2015 Summit on the Implementation of the NGSS at the State Level  
Coastal Hazards, Risk, and Environmental Justice  
Synthesizing Geoscience Education Research: Where are we? What is the path forward? (Earth Educators' Rendezvous 2015)  
Improving the Odds of Student Success: Academic supports and more (Earth Educators' Rendezvous 2015)  
Colorado's Changing Energy Portfolio: Essential Teaching Strategies and Resources  
Earth Educators' Rendezvous (Boulder, CO)
- 2014: Broadening Access to the Earth and Environmental Sciences  
Innovative Approaches to Teaching Sedimentary Geology, Geomorphology, and Paleontology  
Undergraduate Research in Earth Science Classes: Engaging Students in the First Two Years  
2014 Supporting and Advancing Geoscience Education in Two-year Colleges (SAGE 2YC) Webinar Series  
AGU Workshop: Broadening Access to the Earth and Environmental Sciences
- 2013: Supporting Student Success in Geoscience at Two-year Colleges  
Teaching Hydrogeology, Soils, and Low-T Geochemistry in the 21<sup>st</sup> Century

- Interpreting and Teaching with Tomograms  
2013 Economics in Two-Year Colleges Webinar Series  
Creating a National Network of STEM Education Centers Workshop
- 2012: GSA Workshop: Teaching about Hazards in the Geoscience Classroom.  
Preparing Students in Two-year Colleges for Geoscience Degrees and Careers  
Teaching Structural Geology, Geophysics, and Tectonics in the 21<sup>st</sup> Century  
Teaching Environmental Geology  
On the Cutting Edge Hazards Webinar Series  
2012 Economics in Two-Year Colleges Webinar Series  
Designing Effective and Innovative Courses in Mineralogy, Petrology, and  
Geochemistry
- 2011: Teaching Economics at Community Colleges  
Designing GIS and Remote Sensing Courses  
Visualizing Seismic Waves for Teaching and Research
- 2010: Teaching Geoscience in the Field in the 21<sup>st</sup> Century  
Using GIS and Remote Sensing to Teach Geoscience in the 21<sup>st</sup> Century  
Using on-line volcano monitoring data in college and university courses: The Volcano  
Exploration Project: Pu`u`O`o (VEPP)  
Integrating Sustainability into the Undergraduate Curriculum  
Designing Effective and Innovative Courses in the Geosciences  
Understanding the Deep Earth
- 2009: Teaching Paleontology in the 21<sup>st</sup> Century  
Teaching with MARGINS Data and GeoMapApp Webinar  
Broadening Access to STEM  
Using MARGINS Data in Your Classroom
- 2008: Teaching Geomorphology in the 21<sup>st</sup> Century  
Urban Students, Urban Issues: Opportunities and Challenges for Teaching  
Geoscience Courses
- 2007: Teaching Geophysics in the 21<sup>st</sup> Century  
Designing Effective and Innovative Courses in the Geosciences  
Geoscience Courses that Prepare Future Teachers
- 2006: Infusing Quantitative Literacy into Introductory Geoscience Courses  
Designing Effective and Innovative Courses in the Geosciences  
Discoveries from Mars: Using a Planetary Perspective to Enhance Undergraduate  
Geoscience Courses  
Improving the Quantitative Training of Earth Science Graduate Students
- 2005: Teaching Hydrogeology in the 21<sup>st</sup> Century  
Developing Quantitative Activities for Upper Division Geoscience Students
- 2004: Teaching Geoscience with Visualizations  
Teaching Quantitative Skills in the Geosciences