

Leema Kuhn Berland

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FORMAL EDUCATION

- August, 2008 **Ph.D., Learning Sciences**
Northwestern University, Evanston, IL
Thesis: Understanding the composite practice that forms when classrooms take up the practice of scientific argumentation
- June, 1999 **B.A. Computer Science, Minor in Educational Studies**
Carleton College, Northfield, MN
B.A. (Magna Cum Laude, and with departmental honors)
Computer Science and Educational Studies

POSITIONS HELD

- January 2013-
present **Assistant Professor**
University of Wisconsin-Madison, Department of Curriculum and Instruction
- August 2008 –
December
2012 **Assistant Professor**
University of Texas at Austin, STEM Education
- 2003-2008 **Research Assistant**
Northwestern University, Learning Sciences Program
- 2003-2005 **Teaching Assistant**
Northwestern University, Learning Sciences Program

Honors and Awards

- 2015 Best Poster Award Nominee
American Educational Research Association
- 2015 Article included in Routledge Education Journals 'Class of 2015' collection
- 2003-2008 Doctoral Fellow
Center for Curriculum Materials in Science
- 2006 Fellowship to attend International Conference of the Learning Sciences Doctoral Consortium
Indianapolis, IN
- 2005 Best Paper Award Recipient
National Association for Research in Science Teaching

RESEARCH AND PUBLICATIONS

Journal Articles

1. **Berland, L. K.**, & Steingut, R. (2016). Relationship between student perceived value of and engagement with math and science content for engineering design challenges. *International Journal of Science Education*, 38(18), p 2742-2761.
2. McNeill, K., & **Berland, L.K.** (in press). Close to Nature and Sensemaking: What is (or should be) the Evidence in K-12 Science Classrooms. *Journal of Research in Science Teaching*.
3. **Berland, L. K.**, Schwarz, C., Kenyon, L., Lo, A., Krist, C., & Reiser, B. (2016). Epistemologies in Practice: making scientific practices meaningful for students. *Journal of Research in Science Teaching*, 53(7), 1082-1112.
4. **Berland, L. K.**, & Crucet, K. C., (2015). Epistemological Tradeoffs: accounting for context when evaluating epistemological sophistication of student engagement in scientific practices. *Science Education*, 100(1), p 5-29.
5. Valtorta, C. & **Berland, L.K.** (2015) Math, Science, and Engineering Integration in a High School Engineering Course: A Qualitative Study. *Journal of Pre-College Engineering Education Research*, 5(1), 15-29.
6. **Berland, L.K.**, Steingut, R., & Ko, P. (2014). High school student perceptions of the utility of engineering design process: creating opportunities to engage in the engineering practices and apply math and science content. *Journal of Science Education and Technology*, 23(6), 705-720.
7. Hammer D. & **Berland L. K.** (2013) Confusing claims for data: A critique of common practices for presenting qualitative research on learning. *Journal of the Learning Sciences*, 23(1), 37-46.
8. **Berland, L.K.**, Martin, T., Ko, P. & Peacock, S. Rudolph, J., Golubski, C. (2013). Student learning in challenge-based engineering curricula. *Journal of Pre-Collegiate Engineering Education*, 3(1), 52-64.
9. **Berland, L.K.** (2013). Designing for STEM Integration. *Journal of Pre-Collegiate Engineering Education*, 3(1), 22-31.
10. Marshall, J., & **Berland, L.K.** (2012). Developing a Vision of Pre-college Engineering Education. *Journal of Pre-Collegiate Engineering Education*, 2(2), 36-50.
11. **Berland, L.K.**, McKenna, W., & Peacock, S. (2012). Understanding students' perceptions on the utility of engineering notebooks. *Advances in Engineering Education*, 3(2), 1-21.
12. **Berland, L.K.**, & McNeill, K.L. (2012). For whom is argument and explanation a necessary distinction? A response to Osborne and Patterson. *Science Education*, 96(5), 808-813.

13. **Berland, L.K.**, & Lee, V. (2012) In pursuit of consensus: disagreement and legitimization during small group argumentation. *International Journal of Science Education*, 34(12), 1857-1882.
14. Reiser, B.J., **Berland, L.K.**, Kenyon, L.O., (2012). Engaging students in the scientific practices of explanation and argumentation. *Science Teacher*, 79(4), 34-39; *Science Scope*, April/May, 6-11; *Science and Children*, 49(8), 8-13.
15. **Berland, L.K.**, & Hammer, D. (2012). Framing for scientific argumentation. *Journal of Research in Science Teaching*, 49(1), 68-94.
16. **Berland, L.K.** (2011). Explaining variation in how classroom communities adapt the practice of scientific argumentation. *Journal of the Learning Sciences*, 20(4), 625-664.
17. **Berland, L.K.**, & Reiser, B. J. (2011). Classroom communities' adaptations of the practice of scientific argumentation. *Science Education*, 95(2), 191-216.
18. **Berland, L.K.**, & McNeill, K.L. (2010). A learning progression for scientific argumentation: understanding student work and designing supportive instructional contexts. *Science Education*, 94(1), 765-793.
19. **Berland, L.K.**, & Reiser, B.J. (2009). Making sense of argumentation and explanation. *Science Education*, 93(1), 26-55.

Book Chapters

20. McNeill, K. L., **Berland, L. K.** & Pelletier, P. (2017). Constructing explanations. In B. Reiser, C. Schwarz, C. Passmore (Eds.). *Supporting next generation scientific and engineering practices in K-12 classrooms*. (205-228). Arlington, VA: National Science Teachers Association Press.
21. **Berland, L. K.**, McNeill, K. L. Pelletier, P., & Krajcik, J. (2017). Arguing from evidence. In B. Reiser, C. Schwarz, C. Passmore (Eds.). *Supporting next generation scientific and engineering practices in k-12 classrooms* (pp. 229-258). Arlington, VA: National Science Teachers Association Press
22. Purzer, S., Moore, T., Baker, D., & **Berland, L.** (2014). *Supporting the implementation of the Next Generation Science Standards (NGSS) through research: Engineering*. Retrieved from <https://narst.org/ngsspapers/engineering.cfm>
23. **Berland, L. K.**, & Hammer, D. (2012). Students' framings and their participation in scientific argumentation. In M. Khine (Ed.), *Perspectives on Scientific Argumentation: Theory, Practice and Research*. (pp. 73-93). New York: Springer.

Minor Publications (Peer Reviewed Conference Proceedings and Monographs)

24. **Berland, L.K.**, Allen, D., Crawford, R., Farmer, C., & Guerra, L. (2012, June) *Learning Sciences guided high school engineering curriculum development* Paper presented at the annual meeting of the American Society for Engineering Education, San Antonio, TX. (2 citations)

25. **Berland, L.K.**, & McKenna, W. (2012, June) *Student responses to challenge-based curricula*. Paper presented at the annual meeting of the American Society for Engineering Education, San Antonio, TX.
26. Guerra, L., Allen, D., **Berland, L.**, Crawford, R. & Farmer, C. (2012). A unique approach to characterizing the engineering design process. Presented at the American Society for Engineering Education, San Antonio, TX.
27. **Berland, L.K.**, & Busch, K.C. (2012, June) *Negotiating STEM epistemic commitments for engineering design challenges*. Paper presented at the annual meeting of the American Society for Engineering Education, San Antonio, TX. (3 citations)
28. **Berland, L.K.**, McKenna, W., & Peacock, S. (2011, June). *Understanding students' perceptions on the utility of engineering notebooks*. Paper Presented at the Annual Meeting of the American Society for Engineering Education. Vancouver, B.C.
29. **Berland, L.K.**, & Forte, A. (2010). When Students Speak, Who Listens? Constructing Audience in Classroom Argumentation. In K. Gomez, L. Lyons & J. Radinsky (Eds.), *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010)* (Vol. 2, pp. 314-315). Chicago, IL: International Society of the Learning Sciences. (7 citations)
30. **Berland, L.K.**, & Lee, V.R. (2010). Anomalous graph data and claim revision during argumentation In K. Gomez, L. Lyons & J. Radinsky (Eds.), *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010)* (Vol. 2, pp. 314-315). Chicago, IL: International Society of the Learning Sciences. (4 citations)
31. **Kuhn, L.**, Kenyon, L.O., & Reiser, B. J. (July, 2006). Fostering scientific argumentation by creating a need for students to attend to each other's claims and evidence. In S. Barab, K. Hay & D. Hickey (Eds.), *Proceedings of the seventh international conference of the learning sciences* (pp 370-375). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
32. Kenyon, L.O., **Kuhn, L.**, & Reiser, B. J. (July, 2006). Using students' epistemologies of science to guide the practice of argumentation. In S. Barab, K. Hay & D. Hickey (Eds.), - *Proceedings of the seventh international conference of the learning sciences* (pp 321-327). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Curriculum Materials

33. UTeachEngineering. (2014). *Engineer Your World* [High School Engineering Curriculum]. Austin, Texas: The University of Texas at Austin.
34. Finn, L-E., **Kuhn, L.**, Whitcomb, J. L., Bruozas, M., & Reiser, B.J. (2006). Where have all the creatures gone? In Krajcik & B. J. Reiser (Eds.), *IQWST: Investigating and questioning our world through science and technology*. Evanston, IL: Northwestern University.
35. Bruozas, M., Finn, L.-E., Tzou, C., Hug, B., **Kuhn, L.**, & Reiser, B. J. (2004). Struggle in natural environments: What will survive? In J. Krajcik & B. J. Reiser (Eds.), *IQWST: Investigating and questioning our world through science and technology*. Evanston, IL: Northwestern University.

RESEARCH AND PUBLICATIONS IN PROGRESS

36. Russ, R.S., & **Berland, L.K.** (to be submitted, 2016). Using design-based research to foster attention to student thinking in preservice science teachers.
37. Chan, W.Y., & **Berland, L.K.** (in prep). Supporting Students as They Make Connections Across Levels of Abstraction in Science.

RESEARCH SUPPORT

1. **Co-Principal Investigator:** *What Is (or Should Be) Evidence in Science Classrooms: Exploring Curricular Levers to Support Student Sensemaking*
National Science Foundation, Core Program
Submitted September 2015
\$1,500,000 (UW portion: \$513,409)
2. **Principal Investigator:** *Fostering Pedagogical Argumentation: Pedagogical Reasoning with Student Ideas*
National Science Foundation, DRK12 Program
2013-2016, \$447,706
3. **Sub-contractor:** *UTeachEngineering*
National Science Foundation, DUE Program
2008-2013, \$9,230,188
2010-2012 Berland Subcontract: \$289,138
4. **Co-Principal Investigator:** *Supporting Scientific Practices in Elementary and Middle School Classrooms*
National Science Foundation, DRK-12 Program
2010-2014, \$3,499,562
2010-2014 Berland Subcontract: \$264,000
5. **Principal Investigator:** *Comparing Argumentation Regarding Socio-Scientific and Scientific Questions*
University of Texas at Austin, Summer Research Assignment
June – July 2012, \$12,888

LIST OF PRESENTATIONS

Research Conference Presentations

1. **Berland L.K.**, Krist, C. (2016, April) *A novel framework for characterizing scientific epistemic sophistication*. Paper presented at the Annual Meeting of the American Educational Research Association. Washington, DC.
2. **Berland, L.K.**, Braaten, M., & Russ, R. (2015, April). *Supporting responsive teaching practices through pedagogical argumentation*. Paper presented at the National Association for Research in Science Teaching. Chicago, IL.

3. Braaten, M., **Berland, L.K.**, Russ, R. (2015, April). *Developing, Refining, and Sustaining the Next Generation of Responsive Science Teaching*. Symposium presented at National Association for Research in Science Teaching. Chicago, IL.
4. **Berland L.K.**, Crucet, K. (2015, April) *Epistemological Tradeoffs: One Student's Efforts to Fulfill Epistemological Criteria Within Classroom Constraints*. Paper presented at the Annual Meeting of the American Educational Research Association. Chicago, IL.
5. Russ, R., Braaten, M., and **Berland, L.K.** (2015, April) *Seeing people as sense-makers: Exploring teacher attention to their students' science ideas*. Paper presented at the Annual Meeting of the American Educational Research Association. Chicago, IL.
6. Steingut, R., **Berland, L.K.** (2015, April). *Supporting STEM integration: Relating high school students' perception of the value, their competence, and their efforts towards using math and science knowledge in engineering contexts*. Poster presented at the Annual Meeting of the American Educational Research Association. Chicago, IL.
7. McNeill, K., and **Berland, L.K.** (2015, April). *Design Heuristics to Enable Students Productive Use of Evidence in k-12 Classrooms*. Paper presented at the NARST 2015 Annual International Conference, Chicago, IL.
8. Crucet, K., and **Berland, L.K.** (2015, April). *Fostering Pre-service Teacher Attention and Response to Student Ideas*. Poster presented at the NARST 2015 Annual International Conference, Chicago, IL.
9. Russ, R., Braaten, M., and **Berland, L.K.** (2015, April). *Supporting Responsive Teaching Practices Through Pedagogical Argumentation*. Paper presented at the NARST 2015 Annual International Conference, Chicago, IL.
10. **Berland, L.K.**, and Milo, H., (2015, April). *Why ask why if you don't care?: Relating students' mechanistic moves to their purpose for engaging in the scientific investigation*. Paper presented at the NARST 2015 Annual International Conference, Chicago, IL.
11. Russ, R.S., & **Berland, L.K.** (2013, July). *Pedagogical argumentation: Putting the response back into responsive teaching*. Poster presented at the Science Teaching Responsiveness Conference, Seattle, WA July 2013.
12. **Berland, L.K.**, & Berland, M.W. (2013, May). *Disentangling perceptions of authenticity in disciplinary practices*. Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.
13. **Berland, L.K.**, Reiser, B. J., Kenyon, L. O., & Schwarz, C. (2013, May). *The role of epistemic commitments in supporting elementary and middle school students' scientific practices*. Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.
14. **Berland, L.K.**, Steingut, R., & Ko, P. (2013, May). *High school student perceptions of the utility of engineering design process: creating opportunities to engage in the engineering practices and apply math and science content*. Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.

15. **Berland, L.K.**, & McNeill, K. L. (2012, March) *For whom is argument and explanation a necessary distinction?* Paper presented at the NARST 2012 Annual International Conference, Indianapolis, IN.
16. Rogers, S., Busch, K.C., & **Berland, L.K.** (2012, March) *Variation in how individuals argue about scientific and socioscientific questions.* Paper presented at the NARST 2012 Annual International Conference, Indianapolis, IN.
17. Crucet, K., & **Berland, L.K.** (2012, March) *Middle school students constructing and explaining with models.* Paper presented at the NARST 2012 Annual International Conference, Indianapolis, IN.
18. **Berland, L.K.**, & Lee, V. R. (2011, April). *Analyzing argumentative discourse to identify factors underlying consensus-building processes.* Paper presented at the Annual Meeting of the American Educational Research Association. New Orleans, LA.
19. McKenna, W., & **Berland, L.K.** (2010, August). *Student communication in engineering design and the role of an object under construction.* Paper presented at the Inspire P-12 Engineering Summit, Seaside, OR.
20. **Berland, L.K.**, & McKenna, W. (2010, August). *Using scientific argumentation to enhance student work on engineering challenges.* Paper presented at the Inspire P-12 Engineering Summit, Seaside, OR.
21. Birchfield, J., & **Berland, L.K.** (2010, May). *Comparing the Complexity of Written and Verbal Arguments in a High School Biology Class.* Poster presented at the Annual Meeting of the American Educational Research Association, Denver, CO.
22. **Berland, L.K.**, & McNeill, K. L. (2009, June). *Learning progression to inform scientific argumentation in talk and writing.* Paper presented at the Learning Progressions in Science (LeaPS) conference, Iowa City, IA.
23. **Berland, L.K.**, & Hammer, D. (2009, April). *Tension between epistemology of scientific argumentation and institutional expectations for student and teacher roles.* Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.
24. **Berland, L.K.**, & Reiser, J. (2009, April). *Classroom communities' adaptations of the practices of scientific argumentation.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Garden Grove, CA.
25. **Kuhn L.** (2008, April). *Students' use of evidence in argumentative discourse.* Poster presented at the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
26. **Kuhn L.**, & Reiser, B.J. (2007, April). *Bridging classroom practices: Traditional and argumentative discourse.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
27. McNeill, K.L., & **Kuhn, L.** (2006, April). *Sequencing and supporting complex scientific inquiry practices in instructional materials for middle school students: Explanation and*

argumentation. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.

28. **Kuhn, L.**, & Reiser, B. J. (2006, April). *Structuring Activities to Foster Argumentative Discourse*. Paper presented at the American Educational Research Association, San Francisco, CA.
29. **Kuhn, L.**, & Reiser, B. J. (2005, April). *Students Constructing and Defending Evidence-Based Scientific Explanations*. Paper presented at the National Association of Research in Science Teaching, Dallas, TX.

Invited Presentations

30. **Berland, L.K.** & Loper, S. (2016, February) *Supporting teacher learning in new ways. STEM Smart: Lessons Learned from Successful Schools*. San Francisco, CA.
31. **Berland, L. K.** (2014, November). *Fostering Students' Meaningful Engagement in Scientific Practices*. Michigan State University, East Lansing, MI.
32. **Berland, L. K.** (2014, December). *Fostering Students' Sensible Engagement in Scientific Practices*. Indiana University, Bloomington, IN
33. **Berland, L.K.**, & Crucet, K. (2011, June). *Persuasion, sensemaking, and consensus in scientific argumentation*. Symposium Participant at the Jean Piaget Society Meeting, Berkeley, CA.
34. **Berland, L.K.** (2009, May). *A detailed discourse analysis of norms and epistemological resources influencing how one class engaged in scientific argumentation*. University of Maryland, College Park, MD.
35. Reiser, B.J., **Kuhn, L.**, McNeill, K., Schwarz, C., Schwartz, Y. (2007, July). *What does it mean to support scientific practices in K-12 classrooms?* Plenary Session at the CCMS Knowledge Sharing Institute, Washington, D.C.
36. **Kuhn, L.**, McNeill, K. L., Krajcik, J. & Reiser, B. J. (2006, February). *Learning progressions for scaffolding student participation in scientific explanation and argumentation*. Presented at the NSF K-12 Math, Science, and Technology Curriculum Developers Conference, Washington, D.C.
37. Reiser, B. J., Kenyon, L.O., & **Kuhn, L.** (2005, July). *Nature of Science in Action – what should it look like when students use the nature of science understandings in classroom practice?* Session at the CCMS Knowledge Sharing Institute, Lansing, MI.
38. **Kuhn, L.**, & Reiser, B.J. (2004, July). *Evidence-based scientific explanations: Student and designer understandings*. Poster presented at the CCMS Knowledge Sharing Institute, Evanston, IL.
39. McNeill, K. L., Kenyon, L., **Kuhn, L.** (2004, July). *Student Explanations*. Session at the CCMS Knowledge Sharing Institute, Evanston, IL.

Discussant

40. Served as a discussant for a symposium entitled, *Engaging students in scientific practices: the role of teachers in providing opportunities for student learning*, National Association for Research in Science Teaching, April 2015.

TEACHING

Chronology of Teaching

- UW, C&I 719 **Introduction to Qualitative Research Methods** (graduate)
(Spring 2016)
- UW, C&I 372 **Teaching Science**
(Spring 2013, Spring 2014, Fall 2014, Spring 2015, Fall 2015, Spring 2016)
- UW, C&I 975 **Designing Curriculum** (graduate)
(Spring 2015)
- UW, C&I 960 **Science Education Seminar** (graduate)
(Fall 2013)
- UT, C&I 370 **Elementary Science Methods**
(Fall 2008, Spring 2009, Fall 2009, Fall 2010, Spring 2011, Spring 2012, Fall 2012)
- UT, C&I 385 **Knowing and Learning in Math and Science** (graduate)
(Fall 2009, Fall 2010, Fall 2012)
- UT, C&I 385 **Argumentation and Learning** (graduate)
(Spring 2012)
- UT, C&I 388 **Discourse Analysis** (graduate)
(Fall 2011)
- UT, C&I 185 **Science and Math Education Forum** (graduate)
(Spring 2009)

Graduate Advising

Doctoral Advisees (Degree Granted): Braisel S. H. (UT, 2010)

Doctoral Advisees (Current): Emily Miller; Wan-Yueh Chan

Masters Advisees (Degree Granted): Crucet, K. (UW, 2014); Busch K.C. (UT, 2012); Crucet, K. (UT, 2011)

Graduate Research Assistants: Chan; Crucet; Duran; Joseph; Ko; Miller; Milo; Straek; Steingut; Valtorta

Dissertation Committee Membership (Degree Granted): McKenna, W. (UT, 2014); Owen, E. (UW, 2014); Gaertner, K. (UT, 2013); Oliveira, C. (UT, 2012); Petrick, C. (UT, 2012); Eberle, R. (UT, 2011)

Masters Thesis Committee Membership (Degree Granted): Milo, H. (UW, 2015); Fallin, P. (UT, 2013); Valtorta, C. (UT, 2013); Evans, M. (UT, 2011)

PROFESSIONAL SERVICE

Professional Service

- 2015-present **Chair**, American Educational Research Association, Learning Sciences Special Interest Group
- 2012, 2013, 2014 **Panelist member**, National Science Foundation Division on Research and Learning review panel
- 2013, 2014 **Ad hoc reviewer**, Israel Science Foundation
- 2013-present **Editorial Board Member**, Journal of Research in Science Teaching
- 2012-present **Member**, National Association for Research in Science Teaching, *Outstanding Dissertation Award Committee*
- 2011-2015 **Member**, American Educational Research Association, Learning Sciences Special Interest Group, *Outstanding Student Paper Award Committee*

Manuscript Reviewer

Cognition and Instruction
 The Elementary School Journal
 Journal of the Learning Sciences
 Journal of Research in Science Teaching
 Science Education
 Journal of Pre-Collegiate Engineering Education
 International Journal of Science Education

Proposal Reviewer for Professional Conferences

American Society for Engineering Education (ASEE)
 Annual meeting for the American Educational Research Association Conference (AERA)
 Annual meeting for the National Association for Research in Science Teaching (NARST)
 International Conference of the Learning Sciences (ICLS)

University Service

- 2013-present **Member**, Elementary Education Committee, University of Wisconsin Department of Curriculum and Instruction
- 2013-present **Member**, Graduate Programs Committee, University of Wisconsin Department of Curriculum and Instruction
- 2010-2012 **Member**, Programs and Courses Committee, University of Texas, Department of Curriculum and Instruction
- 2008-2012 **Member**, Undergraduate Fellowship Committee, University of Texas, STEM Education Program
- 2011-2012 **Member**, iPad Working Group, University of Texas, College of Education
- 2010-2011 **Member**, Technology Integration in the Pre-Service Teacher Program, University of Texas, Department of Curriculum and Instruction

Service to the Public

- 2016-present **Editorial Board**, Journal of the Learning Sciences
- 2016-2017 **Program Chair**, AERA Learning Sciences SIG
- 2015-2016 **Chair**, AERA Learning Sciences SIG
- 2013-2015 **Advisory board member** for Lawrence Hall of Science NSF funded project
- 2013-2015 **Advisory board member** for a Washington State MSP project awarded to the Seattle Public Schools
- July, 2014 **Co-leader of professional development workshop** hosted by National Science Education Leadership Development Forum. Smithsonian Institute, Alexandria, VA:

2013, 2014 *Supporting scientific practices: K-8 students arguing, explaining, and modeling.*
Ad hoc reviewer, Israel Science Foundation
 2013-2016 **Editorial Board Member**, Journal of Research in Science Teaching
 2012-2015 **Member**, National Association for Research in Science Teaching, *Outstanding
 Dissertation Award Committee*
 November, **Co-leader of professional development webinar** hosted by National Science
 2012 Teachers Association (NSTA): *Preparing for NGSS: Constructing explanations and
 designing solution*
 October, 2012 **Co-leader of professional development workshop** presented to the KNOWLES
 Science Teaching Fellowes: *Argumentation and Explanation*
 2011-2015 **Member**, American Educational Research Association, Learning Sciences Special
 Interest Group, *Outstanding Student Paper Award Committee*

Professional Affiliations

American Educational Research Association
 American Society for Engineering Education
 International Society for the Learning Sciences
 National Association for Research in Science Teaching