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Katherine Johnson Chair of Science Education
Peabody College, Vanderbilt University

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I. Education

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|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 2000 | Ph.D. Curriculum and Instruction, University of Colorado, Boulder
Title of dissertation: The cultural production of "science" and "scientist" in high school physics: Girls' access, participation, and resistance
Co-chairs: Margaret Eisenhart and Ronald Anderson | |
| 1991 | B.S. Science Education | North Carolina State University |

II. Professional Appointments

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|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 2021-present | Katherine Johnson Chair of Science Education
Peabody College, Vanderbilt University | |
| 2017-2021 | Hooks Distinguished Professor of STEM Education, The University of North Carolina at Greensboro (UNCG) | |
| 2015-2017 | Professor, Science Education, UNCG | |
| 2007 - 2015 | Associate Professor, Science Education, UNCG | |
| 2000-2007 | Assistant Professor, Science Education, UNCG | |
| 1995-2000 | Graduate Instructor, University of Colorado at Boulder, School of Education | |
| 1995-2000 | Graduate Research Assistant, University of Colorado at Boulder, School of Education
Under supervision of: Nancy Butler Songer, Clayton Lewis, and Mitchell Nathan | |

1991-1995

High School Science Teacher, Athens Drive High School,
Raleigh, NC (Biology, Earth Science, Physical Science,
Anatomy & Physiology)

III. Honors & Awards

- Honoree, Faculty Excellence in Research and Creative Activity, UNCG, Spring 2021
- Distinguished Senior Research Award, UNCG School of Education, Spring 2020
- Noted as one of the most cited and most downloaded articles in the past three years: Carlone & Johnson (2007). Understanding the science experiences of women of color: Science identity as an analytic lens. *Journal of Research in Science Teaching*, 44 (8), 1187-1218. (On JRST website on September 7, 2020)
- Presenter's Choice in 2019 STEM for All Video Showcase: Broadening identities for diverse groups engaging with STEM (BRIDGES) NSF Award #1657194 (<https://stemforall2019.videohall.com/presentations/1530>) (May 2019)
- Named a "Leader of Distinction", Recognition by the Junior League of Greensboro (March 2018)
- NARST's Publication Advisory Committee Recommendation to National Science Teachers Association top 5 JRST articles for teachers to read for 2011-2012:
 - Carlone, H.B., Haun-Frank, J., & Webb, A. (2011). Assessing equity beyond knowledge- and skills-based outcomes: A comparative ethnography of two fourth-grade reform-based science classrooms. *Journal of Research in Science Teaching*, 48(5), 459-485.
- The University of North Carolina at Greensboro Alumni Teaching Excellence Award, 2009
- School of Education Faculty Teaching Excellence Award, UNCG, 2008
- Early Career Research Award, National Association for Research in Science Teaching, 2006
- Early Career Faculty Development Award (CAREER), National Science Foundation, 2006-2012
- American Association of University Women American Dissertation Fellow, 1999-2000
- American Educational Research Association/Spencer Fellow, 1998-1999
- Elizabeth A. Wilson Memorial Scholarship for Outstanding Elementary Educator, University of Colorado (1996-1997)
- Jaycee's Young Educator of the Year Award Nominee for Athens Drive High School (1993 & 1994)
- Sallie Mae First-Year Outstanding Teacher Award for Wake County, NC (1991-1992)
- North Carolina Teaching Fellow (Fall, 1987-May, 1991)

IV. Publications

A. Peer Reviewed Articles

(*Denotes graduate student co-author)

Carlone, H.B., & Lancaster, M.* (accepted with revisions). "Getting along" and "using evidence" in elementary engineering: Desettling cultural narratives. *Journal of Research in Science Teaching*.

Matthews, C.E., Bentley, C., Jackson, M., Singleton, K., & Carlone, H. (accepted with revisions). What lies beneath? Using coverboards to explore biodiversity on school grounds. *Science Scope*.

Mercier, A. & Carlone, H. (in press). Science isn't for me, or is it? Integrating STEM for equity through environmental problem solving. *Science Scope*.

Stroupe, D., & Carlone, H.B. (2021; Early View). Leaving the laboratory: Using field science to disrupt and expand historically enduring narratives of science teaching and learning. *Science and Education*. <https://doi.org/10.1007/s11191-021-00296-x>

Carlone, H.B., Mercier, A.K.*, & Metzger, S.R.* (2021). The production of epistemic culture and agency during a first-grade engineering design unit in an urban emergent school. *Journal of Pre-College Engineering Education Research (J-PEER)*, 11(1), Article 10. <https://docs.lib.purdue.edu/jpeer/vol11/iss1/10/>

Mercier, A.K., & Carlone, H.B. (2021). Identi-beads and identi-badges as strategies to encourage STEM identity work. *Connected Science Learning*, 3(4). <https://www.nsta.org/connected-science-learning/connected-science-learning-july-august-2021/identi-beads-and-identi>

Mercier, A.K.*, Metzger, S.*, Blankmann, D.*, & Carlone, H. (2019). Can I build on that? Student-engaged talk stems from teachers' epistemological messages. *Science and Children*, 57(4), 26-31.

Kimmel, S. C., Carlone, H. B. (2019). Three bags full: Integrating text sets with engineering explorations for young children. *Science Activities*, 55(1-2), 58-67.

Huffling, L., Carlone, H.B., & Benavides, A., (2017). Re-inhabiting place in contemporary rural communities: Moving toward a critical pedagogy of place. *Cultural Studies of Science Education*, 12, 33-43.

Huffling, L.*, Benavides, A.*, Ash, M.*, Germuth, A., Matthews, C.E., & Carlone, H.B. (2016). Promoting equitable access to STEM in a summer herpetology fieldwork program. *Connected Science Learning*, 2, Available here: <http://csl.nsta.org/2016/11/promoting-equitable-access-to-stem/>

- Carlone, H.B., Benavides, A.*, Huffling, L.*, Matthews, C., Journell, W., & Tomasek, T. (2016). Field ecology: A practical but imaginable contestation of neoliberalism. *Mind, Culture, and Activity*, 23(3), 199-211.
- Ash, M.A.*, Carlone, H.B., & Matthews, C.E. (2015). "Almost a herpetologist": The iterative influence of four Lumbee male high school students on an informal herpetological research field experience. *Journal of American Indian Education*, 54(3), 54-75.
- Carlone, H.B., Huffling, L.D.*, Tomasek, T., Hegedus, T.A.*, Matthews, C.E., Allen, M.H.*, & Ash, M.C.* (2015). 'Unthinkable' selves: Identity boundary work in a summer field ecology enrichment program for diverse youth. *International Journal of Science Education*, 37(10), 1524-1546.
- Hegedus, T.*, & Carlone, H. (2015). You and your students as green engineers: Using creativity and everyday materials to design and improve a solar oven. *Science and Children*, 52(9), 74-81.
- Carlone, H.B., Webb, A.*, Archer, L., & Taylor, M.* (2015). What kind of boy does science? A critical perspective on the science trajectories of four scientifically talented boys. *Science Education*, 99(3), 438-464.
- Carlone, H.B., Johnson, A.C., & Scott, C.M. (2015). Agency amidst formidable structures: How girls perform gender in science class. *Journal of Research in Science Teaching*, 52(4), 474-488.
- Carlone, H.B., Scott, C.*, & Lowder, C.* (2014). Becoming (less) scientific: A longitudinal study of students' identity work from elementary to middle school science. *Journal of Research in Science Teaching*, 51(7), 836-869.
- Carlone, H. & Smithenry, D. (2014). Creating a "we" culture: Strategies to ensure all students connect with science. *Science & Children*, 52(3), 66-71.
- Huffling, L.*, Tomasek, T., Matthews, C., Benavides, A.*, Carlone, H., & Hegedus, T.* (2014). Using mobile devices in field science: A herpetology research experience to build students' 21st-century skills. *The Science Teacher*, 81(6), 35-40.
- Carlone, H., & Johnson, A. (2012). Unpacking 'culture' in cultural studies of science education: Cultural difference versus cultural production. *Ethnography and Education*, 7(2), 151-173.
- Carlone, H.B., Haun-Frank, J.*, & Webb, A.* (2011). Assessing equity beyond knowledge- and skills-based outcomes: A comparative ethnography of two fourth-grade reform-based

science classrooms. *Journal of Research in Science Teaching*, 48(5), 459-485.

Johnson, A., Brown, J., Carlone, H., & Cuevas, A.K. (2011). Authoring identity amidst the treacherous terrain of science: A multiracial feminist examination of the journeys of three women of color in science. *Journal of Research in Science Teaching*, 48(4), 339-366.

Bettez, S.C., Rockford Aguilar-Valdez, J.*, Carlone, H.B., & Cooper, J.E. (2011). On negotiating white science: A call for cultural relevance and critical reflexivity. *Cultural Studies of Science Education*, 6, 941-950, DOI 10.1007/s11422-011-9355-1.

Carlone, H.B., Haun-Frank, J.*, & Kimmel, S.* (2010). Tempered radicals: Elementary teachers' narratives of teaching science within and against prevailing meanings of schooling. *Cultural Studies of Science Education*, 5(4), 941-964.

Carlone, H.B., Kimmel, S.*, & Tschida, C.* (2010). A rural, math, science, and technology elementary school tangled up in global networks of practice. *Cultural Studies of Science Education*, 5(2), 447-476.

Brandt, C., Shumar, W., Hammond, L., Carlone, H., Kimmel, S.*, & Tschida, C.* (2010). Habitus, social fields, and circuits in rural science education. *Cultural Studies of Science Education*, 5(2), 477-493.

Carlone, H.B. & Johnson, A. (2007). Understanding the science experiences of women of color: Science identity as an analytic lens. *Journal of Research in Science Teaching*, 44 (8), 1187-1218.

Carlone, H.B. & Webb, S. M.* (2006). On (not) overcoming our history of hierarchy: Complexities of university/school collaboration. *Science Education*, 90(3), 544-568.

Buxton, C., Carlone, H.B., & Carlone, D. (2005). Boundary spanners as bridges of student and school discourses in an urban science and math high school. *School Science and Mathematics*, 105(6), 302-312.

Carlone, H.B. (2004). The cultural production of science in reform-based physics: Girls' access, participation, and resistance. *Journal of Research in Science Teaching*, 41(4), 392-414.

Carlone, H.B. (2003). Innovative science within and against a culture of "achievement." *Science Education*, 87, 307-328.

Carlone, H.B. (2003). (Re)Producing good science students: Girls' participation in high school physics. *Journal of Women and Minorities in Science and Engineering*, 9, 17-34.

Strahan, D., Carlone, H., Horn, S.*, Dallas, F.*, & Ware, A.* (2003). Beating the odds at Archer Elementary School: Developing a shared stance toward learning. *Journal of Curriculum and Supervision*, 18, 204-221.

Helms, J.V. & Carlone, H.B. (1999). Science education and the commonplaces of science. *Science Education*, 83, 233-245.

Genter, M.B., Owens, D.M., Carlone, H.B., & Crofton, K.M. (1996). Characterization of olfactory deficits in the rat following administration of 2, 6-dichlorobenzonitrile (dichlobenil), 3, 3'-iminodipropionitrile, or methimazole. *Fundamental and Applied Toxicology*, 29(1), 71-77.

B. Invited Journal Publications and/or Editorials

Kappler-Hewitt, K., Carlone, H., Faircloth, B., Gonzalez, L., He, Y., & Vetter, A. (2020). What we choose to remember: Imagined shared narratives of education during COVID-19. *Journal of Interdisciplinary Studies in Education*, 9(2). <https://doi.org/10.32674/jise.v9i2.2400>

Carlone, H.B. (2017). Disciplinary identity as analytic construct and design goal: Making learning sciences matter. *Journal of Learning Sciences*, 26, 525-531.

Parsons, E.C., & Carlone, H.B. (2013). Culture and science education in the 21st century: Extending and making the cultural box more inclusive. *Journal of Research in Science Teaching*, 50(1), 1-11.

Brandt, C. & Carlone, H.B. (2012). Ethnographies of science education: Situated practices of science learning for social/political transformation. *Ethnography and Education*, 7(2).

C. Books

National Academies of Sciences Engineering and Medicine. (2021). *Science and engineering in preschool through elementary grades: The brilliance of children and the strengths of educators*. Committee on Enhancing Science and Engineering in PreK through 5th Grade. Board on Science Education and Teacher Advisory Council Division of Behavioral and Social Science and Education. Washington, DC: The National Academies Press. (Member of the consensus committee.)

Brandt, C., & Carlone, H.B. (2014). *Ethnographies of science education: Situated practices of science learning for social/political transformation*. New York, NY: Routledge. (Republished as part of Routledge's Special Issues as Books).

D. Book Chapters

- Carlone, H.B., & Davis, E.A. (in press). Science and engineering curriculum and instruction that promotes equity and justice: Blind spots, bright spots, hot spots, and gathering spots. In J.V. Clark (Ed.). *STEM Education in the Nation's Schools: A Call to Action for Linking Equity, Access, and Excellence for Effective Teaching and Learning*. Baltimore, MD: Johns Hopkins University Press.
- Carlone, H. (in press). Understanding and contextualizing the field of science identity research. In L. Archer & H. Holmegaard (Eds.). *Science identities: Theory, method and research*.
- Blankmann, D.*, Mercier, A., & Carlone, H. (in press). Is only sticky important? Sensemaking through equitable discussion in a first-grade engineering classroom. In D. Tippins, S. Jeong, & L. Bryan (Eds.). *Cases in science teaching and learning: Exploring complexities, promises and dilemmas*.
- Metzger, S., Mercier, A., & Carlone, H. (in press). "It's like a puzzle in a rock wall.": Multiliteracies and design practices in first-grade engineering. In A. Wilson-Lopez, E. Tucker-Raymond, A. Escuinca, J.A. Mejia (Eds.), *The Literacies of Design: Studies of Equity and Imagination with Engineering and Making*. Purdue University Press.
- Zemal-Saul, C., Carlone, H., & Brown, M.* (2020). Flipping the script: A possibility-centric vision of elementary teachers and ambitious science teaching. In D. Stroupe, K. Hammerness, & S. McDonald (Eds.), *Working title: Preparing Science Teachers through Practice-Based Teacher Education*. Cambridge, MA: Harvard Education Press.
- Janke, E., Gonzalez, L., Carlone, H., & Vetter, A. (2018). Chapter 14: Advocacy-based research. In K.L. Wester & C.A. Wachter Morris (Eds.), *Making research relevant: Applied research designs for the mental health practitioner* (pp. 214-228). New York, NY: Routledge.
- Huffling, L. D.*, Benavides, A. W.*, Matthews, C. E., Compton, M. V., Kurtts, S. A., Carlone, H. B. (2018). Learning Frog Calls When You Can't Hear: Fieldwork with High School Students Who Are Deaf and Hard-of-Hearing. In M.H. Kooman, S. Kahn, C.L. Atchison, & T.A. Wild (Eds.), *Towards Inclusion of All Learners through Science Teacher Education* (pp. 165-173). Brill Sense Publishing.
- Tomasek, T.M., Huffling, L.D.*, Matthews, C.E., & Carlone, H.B. (2016). Diverse youth connect to their communities and contribute to science through research service-learning. In J. Newman & D. Sunal (Eds.). *Research-Based Science and Service-Learning*. Greenwich, CT: Information Age Publishing.
- Hegedus, T.*, & Carlone, H. (2016). You and your students as green engineers: Using creativity and everyday materials to design and improve a solar oven. In Froschauer, L. (Ed.). *Bringing*

STEM to the Elementary Classroom. Washington, DC: NSTA Press. (Re-print of Science & Children article).

Carlone, H. & Tan, E. (2015). Identity. In R. Gunstone (Ed.). Encyclopedia of Science Education, pp 476-479. New York, NY: Springer.

Archer, L., & Carlone, H. (2015). Feminism and science education. In R. Gunstone (Ed.). Encyclopedia of Science Education, pp. 430-432. New York, NY: Springer.

Carlone, H.B., Johnson, A., & Eisenhart, M.A. (2014). Cultural perspectives in science education. In N. Lederman & S.K. Abell (Eds.). Handbook of Research in Science Education (2nd edition) (pp. 2069-2135). New York: Routledge.

Jimenez, B., & Carlone, H.B. (2014). Chapter ten: Science as inquiry. In D. Browder, & F. Spooner, F. (Eds). More Language Arts, Math, and Science for Students with Severe Disabilities (pp. 195-213). Baltimore, MD: Paul H. Brookes.

Carlone, H., & Johnson, A. (2014). Unpacking 'culture' in cultural studies of science education: Cultural difference versus cultural production. In C.B. Brandt & H.B. Carlone (Eds.). Ethnographies of Science Education: Situated Practices of Science Learning for Social/Political Transformation (pp. 9-32). New York: Routledge. (Re-print as part of Routledge Special Issue book series).

Brandt, C.B., & Carlone, H. (2014). Introduction: Ethnographies of science education: Situated practices of science learning for social/political transformation. In C.B., Brandt & H.B., Carlone (Eds.). Ethnographies of Science Education: Situated Practices of Science Learning for Social/Political Transformation (pp. 1-8). New York: Routledge. (Re-print as part of Routledge Special Issue book series).

Carlone, H.B. (2012). Methodological considerations for studying identities in school science: An anthropological approach. In M. Varelas (Ed.), Identity construction and science education research: Learning, teaching, and being in multiple contexts (pp. 9-26). Rotterdam, Netherlands: Sense Publishers.

Strahan, D., Carlone, H., Horn, S.*, Dallas, F.*, & Ware, A. (2005). Developing a shared stance toward learning at Central Elementary School. In: Ponder, G. & Strahan, D. (Eds). Deep change: Cases and commentary on reform in high stakes states (pp. 47-64). Greenwich, CT: Information Age Publishing.

F. Book Reviews

Carlone, H.B. (2006). Review of Science education for everyday life: Evidence-based practice by Glen S. Aikenhead. Science Education, 90(6), 1144-1146.

G. Refereed Conference Proceedings

- Carlone, H. (2019). The STEM teacher leader collaborative: Nurturing STEM equity. Empowering teacher leaders. In J. Settlage & A. Johnston (Eds.), Proceedings of the Science Education at the Crossroads Conference. Montgomery, AL. (Available online here: <https://sciedxroads.org/wp-content/uploads/2019/11/Montgomery-XRoads-Final-Program.pdf>)
- Carlone, H.B. (2014). Out-of-school science as resource for improving in-school science: Possible? Desirable? In J. Settlage & A. Johnston (Eds.), Proceedings of the Science Education at the Crossroads Conference. Portland, OR. (Available online here: <http://www.sciedxroads.org/proceedings.html>)
- Buxton, C., Tonso, K.L., Carlone, H., Johnson, A.C., & Rahm, J. (2014). Reimagining cultural forms, ethnographic methods and researcher responsibilities in studying engineering and science learning: Honoring and building on the work of Margaret Eisenhart. In J.L. Polman, E.A. Kyza, D.K. O'Neill, I. Tabak, W.R. Penuel, A.S. Jurow, K. O'Connor, T. Lee, and L. D'Amico (Eds.). Learning and becoming in practice: The international Conference of the Learning Sciences (ICLS) 2014, Volume 3 (pp. 1332-1341). Boulder, CO: International Society of the Learning Sciences. Available online here: <http://www.isls.org/icls2014/Proceedings.html>
- Hegedus, T.*, Carlone, H.B., & Carter, A.* (2014). Shifts in the cultural production of "smartness" through engineering in elementary classrooms. Proceedings of the annual meeting of the American Society of Engineering Education. Indianapolis, IN. Available online here: <http://www.asee.org/search/proceedings>
- Carlone, H. (2011). A little more clarity amidst a little less chaos: Embarking on my first book project. In J. Settlage, A. Johnston, S. Dotger & R. Ceglie (Eds.), Proceedings of the Science Education at the Crossroads Conference. San Antonio, TX. [Available online at <http://www.sciedxroads.org/proceedings2011.html>].
- Carlone, H. (2009). Disrupting pipeline ideology by embracing hybridity: A plan for an out-of-school science program. In A. Johnston & J. Settlage (Eds.), Proceedings of the Science Education at the Crossroads Conference. Portland, OR: National Science Foundation [Available online at <http://www.sciedxroads.org/proceedings2009.html>].
- Carlone, H., Cook, M., Wong, J., Sandoval, W.A., Calabrese Barton, A., Tan, E., & Brickhouse, N. (2008). Seeing and supporting identity development in science education. In International perspectives in the learning sciences: Creating a learning world. Proceedings of the 8th annual meeting of the International Conference of the Learning Sciences, Volume 3, 214-220. [Available online at <http://www.lulu.com>]

Carlone, H. (2008). If we build it better, will they come? A proposal for doctoral science education. In A. Johnston & J. Settlage (Eds.), *Proceedings of the Science Education at the Crossroads Conference*. Alta, UT. [Available online at <http://www.sciedxroads.org/proceedings2008.html>].

Carlone, H. (2007). Defining my post-tenure self within and against the historically worn grooves of academia. In A. Johnston & J. Settlage (Eds.), *Proceedings of the Science Education at the Crossroads Conference*. Amherst, MA. [Available online at <http://www.sciedxroads.org/proceedings2007.html>].

Carlone, H. (2006). Whither science learning as identity transformation? Theory into practice. In A. Johnston & J. Settlage (Eds.), *Proceedings of the Science Education at the Crossroads Conference*. Ogden, UT. [Available online at <http://www.sciedxroads.org/proceedings2006.html>].

Carlone, H. (2005). Science identity in science education: Possibilities and complexities. In A. Johnston & J. Settlage (Eds.), *Proceedings of the Science Education at the Crossroads Conference*. Storrs, CT. [Available online at <http://www.sciedxroads.org/proceedings2005.html>].

Carlone, H. & Bowen, M. (2003). The fallacy of "authentic" science classrooms: Missing aspects of practicing science communities. In *Proceedings of the 2003 7th International History, Philosophy & Science Teaching Conference*, Winnipeg, Canada.

IV. Presentations

A. Invited Presentations

Carlone, H. (July 2021). Panelist for Smithsonian Science Education Center and Howard University's STEM Education Summit Alumni Workshop: Building Networks and Enhancing Diversity in the K-12 STEM Teaching Workforce.

Carlone, H. (June 2021). Panelist for Elementary Science Learning, Visions of Learning Experiences. Webinar organized by the Michigan Math and Science Leadership Network and the University of Texas Austin Dana Center. Online.

Carlone, H., & Lancaster, M. (May 2021). How instructional design can help support the disruption of inequities in STEM. Duke MAT Noyce Conference, Durham, NC. (online)

- Carlone, H.B. (November, 2020). Studying and designing for diverse youths' STEM identity work. Invited talk for Middle Tennessee State University's Doctoral Seminar Series, Murfreesboro, TN (Online visit)
- Carlone, H.B., Hazari, Z., & Pinkard, N. (October, 2020). Identity development and STEM learning. National webinar panel hosted by TERC, STEM for All Multiplex, and CAISE. Recording here: https://multiplex.videohall.com/month_themes/9
- Carlone, H.B. (September, 2020). Diverse youths' STEM-linked identity work. Invited guest for Dr. Mary Atwater's course ESCI 8210 Multicultural Science Education Seminar, University of Georgia, Athens, GA. (Online visit)
- Carlone, H.B. (June, 2020). The BRIDGES pedagogical framework and STEM profile instrument. Invited presenter for the Intersection of Community Values and Program Evaluations webinar. Webinar recording here: <https://ngcproject.org/the-intersection-of-community-values-and-program-evaluations>
- Carlone, H.B. (January, 2020). Studying and designing for diverse youths' STEM-linked identity work. Invited talk for Stanford University's science education group.
- Carlone, H.B. (December, 2019). The STEM identity profile instrument. Invited researcher and presenter. Research and Practice Collaboratory. From Common Measures to Measures in Common: Documenting STEM Learning in Afterschool Programs Convening. National Academy of Sciences, Washington, DC.
- Carlone, H. B. (April, 2019) Identity as an analytic lens for science education: Critical retrospective and peek at the next horizon, Northern Arizona University Center for Science Teaching and Learning, Flagstaff, AZ.
https://www.youtube.com/watch?v=yaigs4_6KP8&t=308s
- Carlone, H. B., Mercier, A., Ramirez, K., Norman, J. (April, 2019). Engineering for Elementary Students: Exciting and Empowering All Learners. North Carolina A&T State University, Greensboro, NC.
- Carlone, H.B. & Johnson, A. (March, 2018). Identity as analytic lens, redux. Invited presentation at the National Association for Research in Science Teaching, Atlanta, GA.
- Carlone, H.B. (March 2017). Identity. Presentation for a virtual conference on disciplinary-linked identity, sponsored by LRDC (University of Pittsburgh), Lawrence Hall of Science (UC Berkeley), and SRI. This video, part of a [series](#) about identity in informal science, emerged from the conference: <https://www.informalscience.org/biography/heidi-carlone>

- Carlone, H.B. (August, 2017). Identity as analytic lens: A critical retrospective and peek at the next horizon. Invited presentation at the European Science Education Research Association, Dublin, Ireland.
- Carlone, H.B. (July, 2016). An equitable and just science education: Challenging common myths and shifting lenses. Plenary/keynote speaker at the meeting of the International Organization for Science and Technology Education (IOSTE), Braga, Portugal.
- Carlone, H.B. (October, 2015). Anthropological approaches to studying students' identity work in science. Invited talk as part of the Sowder Mathematics and Science Education Research Seminar Series, co-sponsored by the joint PhD program in Mathematics and Science Education, at the University of California San Diego and San Diego State University.
- Carlone, H.B. (November, 2015). Re-thinking equity, identity, and smartness: Lessons learned from ethnographic and longitudinal studies of science. Invited talk, University of Georgia.
- Carlone, H.B. (September, 2015). Working toward an equitable science education. Invited talk, UNCG Board of Trustees Meeting.
- Carlone, H.B. (June, 2015). Lens-shifting for equity in science and engineering education. Invited talk, Museum of Science, Boston.
- Carlone, H.B. (November, 2014). What does it mean to be "smart" and be "me" in a herpetology summer enrichment program? In school science? Invited lecture at Stockholm University, Sweden.
- Carlone, H.B. (November, 2014). The cultural production of smartness in science learning settings. Invited lecture at Malmö University, Sweden.
- Carlone, H.B. (November, 2014). Being "smart" and being "me": Youths' science identity development in a herpetology summer enrichment program versus school science. Invited talk at the North Carolina Herpetological Society Meeting, Raleigh, NC.
- Carlone, H.B. (March, 2014). Going green: Little blue and little yellow give birth to a new way of doing scholarship—scholar activism. Invited presentation for the School of Education Research Conference, The University of North Carolina at Greensboro.
- Invited guest at NARST's Graduate Student Forum: How to be productive in your first years as an assistant professor. March, 2014.

- Carlone, H.B. (September 2013). Studying youths' identity work longitudinally and anthropologically. Keynote presentation for Education Doctoral Program Fall Conference, North Dakota State University, Fargo, ND.
- Carlone, H.B. (November 2012). Youths' identity work in school science: An anthropological lens. Invited lecture for doctoral seminar at Malmö University, Sweden.
- Carlone, H.B., (November 2012). Youths' identity work in school science: An anthropological lens. Invited lecture for the STEG (Science and Technology Education Group) at King's College London.
- Carlone, H.B. (March 2012). Re-imagining our research by using new theoretical frameworks in science education. Invited presentation at the National Association for Research in Science Teaching, Indianapolis, IN.
- Carlone, H.B. (November, 2011). Good science teaching matters: But what is "good"? And, to whom does it matter? Public invited lecture at the Greensboro Public Library, sponsored by UNCG's Child and Family Research Network.
- Carlone, H. (July 2011). Qualitative research design: Knowledgeably answering critics. Invited presentation for the participants at the Sandra K Abell Institute for Doctoral Students, Colorado Springs, CO.
- Carlone, H.B. (April 2011) Invited panelist speaker at Graduate Student Mentoring Session at National Association for Research in Science Teaching, Orlando, FL.
- Carlone, H.B. (April 2011) Invited panelist speaker at New Faculty Mentoring Session at National Association for Research in Science Teaching, Orlando, FL.
- Anderson, A., Carlone, H., Earle, J., Lee, O., & Lynch, S. (March, 2010). Writing a successful NSF DRL proposal: Strategies and tips for the novice and seasoned proposer. Invited presentation/workshop at the annual meeting of the National Association for Research in Science Teaching, Philadelphia, PA.
- Carlone, H.B. (November, 2008). Anthropology of science education: Implications for equity and reform. Invited lecturer at Michigan State University School of Education, East Lansing, MI.
- Carlone, H.B. (October, 2008). Praxising science education: Ideas to think/act/love/hope/work with. Keynote presentation for Science Education at the Crossroads conference, Altah, Utah.
- Carlone, H.B., Kimmel, S., & Tschida, C. (April, 2007). A rural math, science, and technology elementary school tangled up in global networks of practice. Paper presented at the

“Science Education in a Context of Globalization” forum sponsored by Cultural Studies of Science Education and Springer Publishers.

Carlone, H. (September, 2006). Visions of science education. Invited panelist at the second annual Science Education at the Crossroads Conference, Weber State University, Ogden, Utah.

Carlone, H.B. (October, 2003). Student voice in the STEM classroom. Invited plenary session speaker at a national meeting of Project Kaleidoscope, Richmond, VA.

Carlone, H.B. (January 2001). Evaluating the Biological Sciences Curriculum Study Integrated Science Curriculum, Part II. Presentation at the BSCS Integrated Science Teacher Orientation Conference, Colorado Springs, CO.

Carlone, H.B. & Coulson, D. (November, 2000). Evaluating the Biological Sciences Curriculum Study Integrated Science Curriculum, Part I. Presentation at the BSCS Integrated Science District Leadership Conference, Colorado Springs, CO.

B. Presentations at National and International Conferences

Carlone, H., & Blankmann, D. (April 2022). Socioecological care as relational practice: A grounded theory of affectionate knowing. Paper to be presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Zemal-Saul, C., Brown, M.*, & Carlone, H. (April 2022). Elementary teachers as uniquely positioned to facilitate equitable sense-making: Disrupting deficit-based narratives. Paper to be presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Carlone, H., & Mercier, A. (March 2022). The productivity of middle school youths’ non-linear longitudinal identity work. Paper to be presented at the annual meeting of the National Association for Research in Science Teaching, Vancouver, Canada.

Carlone, H. (March 2022). Enhancing science and engineering in preschool through fifth grade: a National Academies consensus study (invited panelist). National Association for Research in Science Teaching, Vancouver, Canada.

Walker, C.**, & Carlone, H. (March 2022). Fifth-grade engineering and language, culture, and identity: Lessons learned by teacher and researcher. Presentation for the annual meeting of the National Association for Research in Science Teaching, Vancouver, Canada. (**teacher collaborator)

Carlone, H. (September 2021). From studying to designing for youths' identity work. Invited presentation for the science education group at the University of Copenhagen (virtual).

Carlone, H., & Blankmann, D.* (September 2021). Fostering ecological care in an environmental STEM camp: Insights from Yin-Yang theory. Virtual presentation for European Science Education Research Association, University of Minho, Braga, Portugal.

Blankmann, D., & Carlone, H. (October 2021). Fostering ecological care at summer camp. Virtual presentation at the North American Environmental Education conference.

Carlone, H., Blankmann, D., & Mercier, A. (April 2020). An analysis of "care" in a place-based STEM enrichment program for middle school youth. Structured poster session at the annual meeting of the American Educational Research Association, San Francisco, CA. Canceled because of COVID-19.

Carlone, H., Blankmann, D., Lovett, M., & Mercier, A. (March 2020, Accepted). Youth as conservationists, altruists, inventors, and investigators: Designing for multi-faceted disciplinary identities. Paper to be presented at the annual meeting of the National Association for Research in Science Teaching, Portland, Oregon. Canceled because of COVID-19.

Zemal-Saul, C., Carlone, H., & Brown, M. (March 2020). Flipping the script: Towards an asset-based approach to elementary science teacher education. Paper to be presented at the annual meeting of the National Association for Research in Science Teaching, Portland, Oregon. Canceled because of COVID-19.

Carlone, H., Mercier, A., & Metzger, S. (April 2019). First-Grade students as epistemic agents in engineering at a high-needs elementary school. Presented at the annual meeting of the American Educational Research Association, Toronto, Canada.

Carlone, H., Mercier, A., & Metzger, S. (April 2019). Epistemic messages to promote epistemic agency in first-grade engineering. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.

Carlone, H. B., Schouweiler, D. J., Mercier, A., Worsley, T., Lancaster, M., Heredia, S.C. (April 2019). Designing for youths' STEM identity work: The STEM Identity Profile Instrument. Poster presented at the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.

Stroupe, D., Carlone, H.B. (April 2019). A good day in the field: Field science disrupting narratives of school science. Paper presented at the National Association for Research in Science Teaching, Baltimore, MD.

- Carlone, H. B., & Iyer, L. (May 2018). Broadening identities for diverse youth in STEM through socioenvironmental problem solving. Poster presented at the annual STELAR Principal's Investigator and Evaluator Meeting, National Science Foundation, Alexandria, VA.
- Carlone, H.B., & Lancaster, M. (March, 2018). Productive friction and "getting along" in an elementary engineering classroom. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
- Huffling, L.D., Benavides, A.W., Matthews, C.E., & Carlone, H. (March, 2018). Adapting curriculum through UDL principles: Herpetological fieldwork with students who are deaf/hard of hearing. National Science Teachers' Association Conference, Atlanta, GA.
- Huffling, L.D., Benavides, A., Carlone, H.B., & Matthews, C.E. (October, 2017) Studying youths' disciplinary identities over time: A new (evolving) model. North American Association of Environmental Education Research Symposium, virtual conference due to Hurricane Marie impacts on Puerto Rico.
- Dierking, L., Carlone, H., Benavides, A., & Matthews, C. (June, 2017). Pathways to STEM identity: Investigations with underserved youth in informal settings. Paper to be presented at the Visitor Studies Association, Boston, MA.
- Lancaster, M., & Carlone, H. (May, 2017). Cultural production of engineering "competence" and meaning-making in the elementary classroom. Paper to be presented at the Canadian Society for the Study of Education, Toronto, Canada.
- Carlone, H.B., Lancaster, M., Mercier, A., & Metzger, S. (April, 2017). The cultural production of "competence" in elementary engineering. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Dierking, L., Carlone, H., Benavides, A., & Matthews, C. (April, 2017). Traces: Emerging short-term outcomes of informal/free-choice STEM experiences among girls of color and their potential long-term influence in identity –building. Paper presented at the National Association for Research in Science Teaching, San Antonio, Texas.
- Benavides, A, Matthews, C.E., Carlone, H.B., & Huffling, L. (October, 2016). Novelty, agency, aesthetic shifts and environmental awakenings in field ecology. Poster presented at the North American Association for Environmental Education, Madison, WI.
- Carlone, H.B., Lancaster, M., Mangrum, J., Hegedus, T., Martin, M., Carter, A. (April 2016). Cultural meanings of engineering competence in a high needs elementary classroom. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.

- Carlone, H.B., Benavides, A., Huffling, L., Matthews, C., Tomasek, T., Ash, A., & Somers, A. (April 2016). Unifying head, heart, and hand through an out-of-school field ecology partnership. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.
- Lancaster, M.R. & Carlone, H.B. (April 2016). Examining teacher epistemic beliefs in elementary engineering education. Poster presented at the annual meeting of the American Educational Research Association, Washington, DC.
- Lancaster, M.R., & Carlone, H.B. (April 2016). A new lens for examining teachers' epistemic beliefs in science and engineering. Roundtable presented at the annual meeting of the American Educational Research Association, Washington, DC.
- Hegedus, T., & Carlone, H. (April 2016). Sparking elementary students' attention to ethical considerations through experiences with engineering design. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
- Carlone, H., Lancaster, M., Mangrum, J., & Hegedus, T. (April 2016). Fifth grade students' meanings of engineering competence. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
- Carlone, H.B., Benavides, A., Hegedus, T., Huffling, L., Matthews, C., & Tomasek, T. (April 2015). Youths' identity work in The HERP Project: Re-thinking cultural relevance, smartness, and boundaries. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.
- Carlone, H.B., Hegedus, T., Martin, M., & Carter, A. (April 2015). Shifting cultural meanings of "smartness" through engineering in high-needs elementary schools. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.
- Carlone, H.B., & Johnson, A. (June 2014). Learning science at the intersections of race, class, and gender: A longitudinal study of girls negotiating what it means to "be scientific". Presentation at the 11th annual meeting of the International Conference of the Learning Sciences, Boulder, CO.
- Hegedus, T., Carlone, H.B., & Carter, A. (June 2014). Shifts in the cultural production of "smartness" through engineering in elementary classrooms. Poster presented at the annual meeting of the American Society of Engineering Education, Indianapolis, Indiana.

- Carlone, H.B. (April 2014). Structure vs. agency: Must structure always win? Paper presented at the Annual meeting of the National Association for Research in Science Teaching, Pittsburgh, PA.
- Carlone, H.B., Huffling, L., Hegedus, T., Tomasek, T., & Matthews, C. (April 2014). Promoting identity boundary work in a summer field ecology enrichment program for diverse youth. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.
- Carlone, H.B., Hegedus, T., Bellas, T., Huffling, L., Tomasek, T., & Matthews, C. (October 2013). Being 'smart'/Being'me': Identities, field ecology, and school science. Presentation at the annual meeting of the North American Association for Environmental Education, Baltimore, MD.
- Tomasek, T., Huffling, L., Carlone, H.B., & Matthews, C. (October 2013). Intersections: Mobile device technology, high school students and field ecology. Presentation at the annual meeting of the North American Association for Environmental Education, Baltimore, MD.
- Carlone, H.B., Huffling, L., Hegedus, T., Tomasek, T., & Matthews, C. (April 2013). Identity boundary work in a summer herpetology enrichment program for diverse youth. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Rio Mar, Puerto Rico.
- Hegedus, T., Huffling, L., Carlone, H., & Matthews, C. (October 2012). Identity-related motivations of visitors at EE events: Snakes sell science! Annual meeting for the North American Association for Environmental Education (NAAEE), Oakland, CA.
- Huffling, L., Carlone, H., Hegedus, T., Tomasek, T., & Matthews, C. (October 2012). "I'm not a snake person": Students' identity boundary work. Annual meeting for the North American Association for Environmental Education (NAAEE), Oakland, CA.
- Carlone, H.B., & Johnson, A. (April, 2012). P/power as an analytic lens: Uses of time and space in two diverse elementary science classrooms. Paper presented at the annual meeting of the American Educational Research Association, Vancouver, Canada.
- Carlone, H.B., Johnson, A., & Sampson, M. (March, 2012). Intersections of race, class, and gender: Longitudinal case studies of girls of color negotiating what it means to "be scientific". Paper presented at the annual meeting of the National Association for Research in Science Teaching, Indianapolis, IN.

- Johnson, A., & Carlone, H.B. (March, 2012). Unpacking "culture" in cultural studies of science education: Cultural difference vs. cultural production. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Indianapolis, IN.
- Carlone, H.B., Kimmel, J., Lowder, C., Rockford, J., & Scott, C. (April, 2011). Exploring the scope and limits of agency in the figured worlds of school science learning: A longitudinal study of students' identities. Paper to be presented at the American Educational Research Association, New Orleans, LA.
- Webb, A., Carlone, H.B., & Taylor, M. (April, 2011). Troubling monolithic views of privilege: Longitudinal case studies of four scientifically talented boys in school science. Paper to be presented at the American Educational Research Association, New Orleans, LA.
- Carlone, H.B., Kimmel, J., Lowder, C., Rockford, J., & Scott, C. (April, 2011). Becoming (less) scientific in the figured worlds of school science learning: A longitudinal study of girls' identities. Paper to be presented at the National Association for Research in Science Teaching, Orlando, FL.
- Rockford, J., & Carlone, H.B. (April, 2011). Silencio en Ciencia: A longitudinal case study of Julio's silencing in school science. Paper to be presented at the National Association for Research in Science Teaching, Orlando, FL.
- Carlone, H.B., Enfield, M., Haun-Frank, J., Johnson, A., & Kimmel, J. (April, 2009). An exegesis of power in two culturally relevant elementary science classrooms: Lessons learned from a comparative ethnography. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Carlone, H.B., Haun-Frank, J., Webb, A., Reavis, S., & Enfield, M. (April, 2009). Cultural models of "science person" in two fourth-grade classrooms: Assessing equity beyond knowledge- and skills-based outcomes. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Garden Grove, CA.
- Haun-Frank, J., Kimmel, S., Carlone, H., & Vaughn, M. (April, 2008). Doing the work of science education reform: Teachers' narratives of hard-won accomplishments. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
- Carlone, H.B., Kimmel, S., & Tschida, C. (April, 2007). The relevant context of science education: An ethnography of a rural math, science, and technology elementary school. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.

Carlone, H.B. (March, 2008). Exploring connections between pedagogy and students' science identity development. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Kimmel, S., Haun-Frank, J., Carlone, H., & Vaughn, M. (March, 2008). Tempered radicals: Elementary teachers' narratives of teaching science within and against prevailing meanings of schooling. Poster session (with paper) presented at the annual meeting of the American Educational Research Association, New York, NY.

Carlone, H.B., Kimmel, S., & Tschida, C. (April, 2006). The relevant context of science education: An ethnography of a rural math, science, and technology elementary school. Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.

Buxton, C.A., Carlone, H.B., & Carlone, D. (April, 2005). Boundary spanners as bridges of student and school discourses in an urban science and math high school. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Carlone, H.B. (April, 2005). Science identity as an analytic lens for science education. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Dallas, TX.

Tomasek, T., & Carlone, H. (April, 2005). Improving elementary science teaching through Japanese lesson study. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Dallas, TX.

Buxton, C.A. & Carlone, H.B. (April, 2004). The role of boundary objects in creating discourses of science in an urban science and math high school. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Vancouver, British Columbia, Canada.

Webb, S., & Carlone, H.B. (April, 2004). Promoting science inquiry in a fifth grade teacher study group using a lesson study framework. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Carlone, H.B. & Bowen, M. (July, 2003). The fallacy of "authentic" science classrooms: Missing aspects of practicing science communities. Paper presented at the 7th International History, Philosophy & Science Teaching Conference, Winnipeg, Canada.

- Carlone, H.B., & Webb, S. (April, 2003). Negotiating meaning amidst the shifting locus of power in a collaborative planning group. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Webb, S., & Carlone, H.B. (April, 2003). Problematizing authentic literacy practices: University and school based educators negotiate meanings of literacy within a collaborative project. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Carlone, H.B., & Webb, S. (March, 2003). Complicating "collaboration" in a professional development project: Competing cultural models and the dynamic nature of power. Paper presented at the annual meeting of the National Association for Research in Science Teaching.
- Webb, S., Carlone, H.B., & Duffy, A. (November, 2002). "This is how we do literacy here": A collaborative planning team negotiates meanings of literacy within a framework of science inquiry. Paper presented at the annual meeting of the National Reading Conference, Miami, FL.
- Carlone, H.B. (April, 2002). Problematizing "best practice" discourse in science education via an analysis of girls' participation in reform-based science. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Carlone, H.B. (April, 2002). Embracing the prescriptive and resisting the "authentic": An examination of tool-based practices in high school physics. Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
- Carlone, H.B. (April, 2001). Invoking micro and macro contexts to understand girls' participation and learning in high school physics. Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.
- Carlone, H.B. (March, 2001). Innovative science within and against a culture of "achievement." Paper presented at the annual meeting of the National Association for Research in Science Teaching, St. Louis, MO.
- Carlone, H.B. (April, 2000). The cultural production of scientist identities in high school physics: Girls' access, participation, and resistance. Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
- Carlone, H.B. (June, 1999). Constructing gender and science in school science: Contesting sociohistorical legacies. Paper presented at the annual meeting of the National Women's Studies Association, Albuquerque, NM.

Carlone, H.B. (April, 1999). Identifying and expanding the meanings of 'scientist' in school science: Implications for the participation of girls. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Carlone, H.B. (March, 1999). Producing, contesting, and being produced by scientific practice: An illustration of practice theory. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.

Brand, C., Carlone, H.B., Rader, C., & Lewis, C. (April, 1998). Prospects and challenges for children creating science models. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Diego, CA.

Carlone, H.B. (April, 1998). Learning to become a scientist: The enculturation of the newcomer into the practice of science. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Diego, CA.

Carlone, H. B., Garcia, C., & Lewis, C. (April, 1998). The science theater/teatro de ciencias project as a design experiment. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Carlone, H.B. (March, 1997). Examining the knowledge and reasoning employed in children's scientific models and explanations. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.

Lewis, C., Rader, C., Brand, C., & Carlone, H.B. (March, 1997). Models children build: Content, logic and educational impact. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.

Robinson, C.D., Carlone, H.B., Rader, C., and Garcia, C.E. (July, 1996). See it! Draw it! Make it move! Learning through modeling: The sTc project. Poster presented at the annual conference of the Cognitive Science Society, San Diego, CA.

C. Select Presentations at Local/Regional Conferences

Carlone, H., Blankmann, D., Ferguson, C., Jackson, M., Mercier, A., & Singleton, K. (November 2019). Kids as investigators, makers, inventors, and conservationists: UNCG BRIDGES Program. Presentation at the Professional Development Institute, North Carolina Science Teachers Association, Winston-Salem, NC.

Mercier, A., Carlone, H., Blankmann, & Kelly, M. (November 2019). Nurturing STEM equity in elementary school: UNCG's STEM Teacher Leader Collaborative. Presentation at the

Professional Development Institute, North Carolina Science Teachers Association, Winston-Salem, NC

Carlone, H.B., Mercier, A., McLaurin, D., Waler, C. (November 2018). Empowering Teachers, Nurturing STEM Equity: The UNCG STEM Teacher Leader Collaborative. Presentation at the annual regional meeting of the National Science Teachers Association, Charlotte, NC.

Carlone, H.B., Lovett, M., Mercier, A., Schouweiler, D., Worsley, T. (November 2018). An integrated STEM approach to exploring stormwater run-off: Youth and teachers as altruists, conservationists, tinkers, and analysts. Presentation at the annual regional meeting of the National Science Teachers Association, Charlotte, NC.

Mercier, A., Carlone, H. B., & Blankmann, D. (October 2018) Supporting STEM in highly impacted schools: The UNCG STEM Teacher Leader Collaborative. Presentation at the Bridging the Gap conference, sponsored by the North Carolina Association for Biomedical Research/Burroughs Wellcome Fund, Raleigh, NC.

Mangrum, J., Justice, S., & Carlone, H. (March 2018). UNCG STEM Teacher Leader Collaborative: Nurturing STEM equity. Empowering teachers. Presentation at the Connecting Communities of Education Stakeholders Conference sponsored by the NCDPI, Raleigh, NC.

Blankmann, D., Carlone, H., Mangrum, J., Marchi, K., Moore, A., Moore, H. (October 2017). Elementary engineering: Ideas from the UNCG STEM Teacher Leader Collaborative. Presentation at the annual Professional Development Institute at the North Carolina Science Teachers Association, Greensboro, NC.

Carlone, H., Mangrum, J., & Walker, C. (October 2017). UNCG STEM Teacher Leader Collaborative: Support for STEM in highly impacted schools. Presentation at the Bridging the Gap conference, Raleigh, NC.

Carlone, H.B., Blankmann, D., Jones, A., Lancaster, M., & Mangrum, J. (November 2016). Kids love to engineer! How do elementary teachers teach engineering design? Presentation at the Professional Development Institute for the North Carolina Science Teachers Association, Greensboro, NC.

Carlone, H.B., Hegedus, T., Boyce, K., & Ferguson, C. (November 2014). Engineering is Elementary: You and your students can engineer! Presentation at the Professional Development Institute for the North Carolina Science Teachers Association, Winston Salem, NC.

- Carlone, H.B. (September 2014). Being “smart” and being “me”: Youths’ identity positioning in field ecology versus school science. Presentation at the annual meeting of the Mid-Atlantic Association for Science Teacher Education (MA-ASTE), Blowing Rock, NC.
- Tomasek, T., Huffling, L., Matthews, C., Allen, M., Ash, M., Carlone, H. (November 2013). Got herps? There’s an app for that! Presentation at the Professional Development Institute for the North Carolina Science Teachers Association, Charlotte, NC.
- Matthews, C., Sametz, L., Huffling, L., Hegedus, T., & Carlone, H. (October 2012). The HERP Project: Animals that slither, slide, run, & hide. Bridging the Gap: Uniting North Carolina K-16 STEM Education, Raleigh, NC.
- Carlone, H., He, Y., & Tan, E. (September 2012). Scientific/literacy practices for English Language Learners. Piedmont Triad Education Consortium (PTEC) Workshop.
- Schwartz, P., & Carlone, H. (November, 2011). Challenge-based learning: Lessons learned from a real-world unit. Presentation at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.
- Pelton, B.C., Carlone, H., & Bellas, T. (November, 2011). Teaching strategies to empower English Language Learners. Presentation at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.
- Carlone, H. (February 2010). Promoting science talk with students. Presented to the New Garden Friends School faculty.
- Carlone, H., Matthews, C., & Tan, E. (November 2010). You, with a graduate degree! UNCG’s graduate programs in science education. Presentation at the annual meeting of the North Carolina Science Teachers Association.
- Carlone, H.B. (November, 2002). Teaching science for all: What is multicultural science education, anyway? Workshop presented (in collaboration with members of PDS team of pre-service teachers) at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.
- Carlone, H.B. (October 2001). Integrating standards-based elementary science with literacy: Inspiring ideas from UNCG. Workshop presented (in collaboration with PDS team of pre-service teachers) at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.

Carlone, H.B. (March 2001). Girls' participation, interest, and resistance in reform-based and traditional high school physics. Paper presented at the annual meeting of the North Carolina Association for Research in Education, Charlotte, NC.

Carlone, H.B. (January 1999). Moving beyond difference-based explanations for the gender problem in science education. Paper presented at the Third Annual University of Colorado Feminist Symposium, Boulder, CO.

Lewis, C., Brand, C., Carlone, H.B., Garcia, C. E., Pulver, P., Rader, C., & Robinson, C. D. (September 1996). Science Theater/Teatro de Ciencias. Presented at the Child's Play Workshop, Boulder, CO.

D. Select Presentations/Workshops for/with University and Community Groups

Gender and science. Invited guest lecture for Enrique Suárez's doctoral seminar at University of Massachusetts, Amherst, October 2020

STEM TLC Webinar Series (with Alison Mercier, Dearing Blankmann, local teachers, and national guests). A responsive professional development series of **20 webinars** during March 2020 after schools shut down due to COVID-19.

The STEM Teacher Leader Collaborative (TLC). Presentation to the Cemala Board, Greensboro, NC, October 2019. (with Dearing Blankmann & Alison Mercier), UNCG

Introductory Summer Institute: STEM TLC, with Alison Mercier, Dearing Blankmann, Rita Jennings, Courtney Ferguson, Daphne McLaurin, Amanda Pickett, Katie Ramirez, Sarah Stallings, UNCG, August 6, 2019-August 8, 2019

Advanced Summer Institute: STEM TLC, with Alison Mercier, Dearing Blankmann, Amanda Pickett), UNCG, July 30-31, 2019

Advanced Summer Institute: STEM TLC, with Alison Mercier, Dearing Blankmann) Moss Street Partnership School, July 22-23, 2019

STEM-ergizing Saturday: STEM TLC, with Alison Mercier, Dearing Blankmann, Rita Jennings, January 26, 2019

Introductory Summer Institute: STEM TLC. (with Alison Mercier, Dearing Blankmann, Rita Jennings, Jennifer Cassidy, Courtney Ferguson, Daphne McLaurin, Amanda Pickett, Sarah Stallings), (August 8-10, 2018)

UNCG STEM Teacher Leader Collaborative: Support for STEM in highly impacted schools. Invited presentation for the Cemala Foundation Board, UNCG, with Mangrum, J., McLaurin, D., & Winchell, S.T., November, 2017.

STEM Teacher Leader Collaborative Leadership Lab. A community charette-style day-long workshop with 50 stakeholders, with Jennifer Mangrum, Dearing Blankmann, Rita Jennings, Heather Moore, Emily Davis, October, 2017

STEM Teacher Leader Collaborative. A presentation for the Rotary Club of Greensboro, August, 2017.

Engineering is Elementary Summer Institute, with Jennifer Mangrum, August 15-18, 2017

Engineering empowers students' STEM identities. A presentation for the Beta chapter of Delta Kappa Gamma, May, 2017.

STEM Teacher Leader Collaborative: Nurturing STEM equity. Empowering teachers. A presentation for the Alpha chapter of Delta Kappa Gamma, January, 2017.

Affordances of elementary engineering: Studies of classroom culture. Invited presentation for the Provost's Faculty First Donor luncheon, UNCG, November, 2017.

UNCG STEM Teacher Leader Collaborative: Nurturing STEM equity. Empowering teachers. Presentation for the UNG STEM TLC Leadership Lab, in collaboration with ASCD & US DOE. (With Mangrum, J., Davis, E., Blankmann, D., Jennings, R., Moore, H., Walker, C., Washington, S.) November, 2017.

UNCG STEM Teacher Leader Collaborative: Introductory Institute, June 2017.

UNCG STEM Teacher Leader Collaborative: Advanced Institute, June 2017.

UNCG STEM Teacher Leader Collaborative Launch at Teach to Lead Summit at US Department of Education, with Jennifer Mangrum, Dearing Blankmann, Heather Moore, and Eliana Berger.

Engineering is Elementary at UNCG: Summer Teacher Institute, with Jennifer Mangrum, August 15-19, 2016.

Engineering is Elementary Seed Team Summit, (Reunion for STEM Teacher Leader Fellows), with Jennifer Mangrum, March 2016

The ethics of (re)presentation. Presentation for the participants of the Sandra K. Abell Doctoral Research Institute, July 2015.

Engineering is Elementary at UNCG: Summer Teacher Institute, June 22-26, 2015.

Peering within the black box of school science: Lessons learned about an inclusive science education. Presentation for the GK-12 participants at UNCG, August, 2014.

Being "smart" and being "me": Diverse youths' identity positioning in a field ecology summer enrichment program. Presentation to The HERP Project National Advisory Board, with Tess Hegedus and Lindsey Varner, May, 2014.

Identity boundary work. Presentation to The HERP Project National Advisory Board, with Lacey Huffling and Terry Tomasek, May 2014.

What does it mean to "be scientific" in the herpetological research experience? Presentation to The HERP Project National Advisory Board, with Tess Hegedus and Lindsey Varner, May, 2014.

What is quality teaching at UNCG? Faculty Teaching and Learning Center, New Faculty Mentoring Series, April, 2014.

Virtual guest lecturer for Dr. Gail Richmond's sociocultural theories class, Michigan State University, February, 2014.

Workshops for the Engineering is Elementary Seed Leadership Team, with Aundrea Carter, Tess Hegedus, and Sage Washington, October 9, 2013 and February 6, 2014.

Putting the "E" in STEM: Introduction to Engineering is Elementary. Piedmont Triad Education Consortium (PTEC) Workshop, November, 2013.

Partnering across Institutions: The easy and the not so easy! (with Lloyd Douglas, Susan Calkins, Chris Rasmussen, & Nick Oberlies), for the Research in STEM Education (RISE) group at UNCG, October, 2013.

What is good science teaching? And to whom does it matter? Guest speaker for the GK-12 group at UNCG, July, 2013.

Summer Institute for Engineering is Elementary (EiE) Seed Leadership Team. UNCG, Greensboro, NC, June 24-27, 2013.

Inquiry. Presented to the New Garden Friends School faculty, January, 2012.

Scientific/literacy practices for English Language Learners, September, 2012, Piedmont Triad Education Consortium (PTEC), UNCG, with Edna Tan and Ye He.

Japanese Lesson Study with Gillespie Elementary School teachers and UNCG interns, November-December 2005.

Introduction to Japanese lesson study. Gillespie Elementary School; Whole-school professional development and multiple grade-level sessions, Fall 2005

Learning to teach inquiry-based science. Whole school professional development for New Vision School of Math, Science, & Technology (Madison, NC), 3-day workshop, August, 2005.

What is lesson study? Whole school professional development at New Vision School of Math, Science & Technology (Madison, NC), August, 2004

Japanese Lesson Study with fifth-grade teachers at New Vision School of Math, Science, & Technology, 17 2-hour sessions, April-November, 2004

Japanese Lesson Study with 1st-5th grade teachers at New Vision School of Math, Science, & Technology, September 4, 2004.

How can we get students to talk science? Whole school professional development for New Vision School of Math, Science, & Technology (Madison, NC), March, 2004.

Japanese Lesson Study with third grade teachers at New Vision School of Math, Science, and Technology, [Terry Tomasek (doctoral student) led these sessions as part of our joint USTEP grant], February-March, 2004.

Japanese Lesson Study with third-grade teachers at New Vision School of Math, Science, & Technology, 10 2-hour sessions, November-December, 2003.

What is inquiry-based science? Whole school professional development for staff at New Vision School of Math, Science, & Technology (Madison, NC), October, 2003

Japanese Lesson Study with 5th grade teachers at Jefferson Elementary School (Winston Salem), 2002-2003.

BLAST: Bringing Literacy and Science Together. Collaborative unit planning and professional development with 2nd grade teachers at Hunter Elementary School, Summer 2002-Fall 2003.

V. Sponsored Projects

A. Externally Funded Grants, Contracts, & Fellowships

National Science Foundation (ITEST)

(9/1/17-8/31/21) (Award #1657194)

Title: Broadening identities for diverse youth in STEM through socioenvironmental problem solving

Principal Investigator: Heidi Carlone

Co-Principal Investigators: Sara Heredia (UNCG) and Lakshmi Iyer (Appalachian State University)

\$1,079,385

Video summaries of the work:

2019: <https://stemforall2019.videohall.com/presentations/1530>

2020: <https://stemforall2020.videohall.com/presentations/1857>

Cemala Foundation (Greensboro, NC)

(5/1/17-5/1/21)

Title: The STEM Teacher Leader Collaborative: Growing capacity for STEM in high-needs elementary schools

Principal Investigator: Heidi Carlone, with Jennifer Mangrum

\$75,000

Summit Rotary Foundation (Greensboro, NC)

(9/2017-9/2019)

Title: The STEM Teacher Leader Collaborative

Principal Investigator: Heidi Carlone, with Jennifer Mangrum

\$7,000

Duke Energy Foundation (Piedmont Triad, NC)

(April 2019-May 2021)

Title: STEM Teacher Leader Collaborative: Empowering Teachers. Nurturing STEM Equity

Principal Investigator: Heidi Carlone

\$37,000

Duke Energy Foundation (Piedmont Triad, NC)

(May 2018-March 2019)

Title: STEM Teacher Leader Collaborative: Empowering Teachers. Nurturing STEM Equity

Principal Investigator: Heidi Carlone, with Jennifer Mangrum

\$30,000

Museum of Science, Boston

(4/2013-5/2017)

Title: Engineering is Elementary Seed Leadership Team: Engineering for Equity and Diversity in High-Needs Schools

Project Director: Heidi Carlone

\$220,000

National Science Foundation (Advancing Informal Science Learning)

(Award #1114558; 6/1/16-1/31/18)

Title: Supplement for *HERPS: Herpetology Education in Rural Places and Spaces*

Principal Investigator: Heidi Carlone

\$72,000

National Science Foundation (Informal Science Education Program)

(Award #1114558; 8/2011-7/2016)

Title: *HERPS: Herpetology Education in Rural Places and Spaces*.

Principal Investigator: Catherine Matthews

Co-Principal Investigators: Andrew Ash; Heidi Carlone, Ann Somers, Terry Tomasek

\$2.7 million

National Science Foundation (CAREER: Early Career Development Program)

(Award #REC 0546078; 8/06-7/11).

Title: *CAREER: A study of pedagogical practices and the development of students' science identities.*

Principal Investigator: Heidi Carlone

\$597,009

American Association of University Women (American Dissertation Fellowship Program)

(1999-2000) \$15K

American Educational Research Association/Spencer Foundation Pre-Dissertation Fellowship

(1998-1999), \$15K

B. Internally Funded Grants

- PI, with Jennifer Mangrum: STEM Teacher Leader Collaborative Leadership Lab. **Impact through Innovation, UNCG School of Education** (September 2017), \$3300
- PI: *Affordances of elementary engineering: Studies of classroom culture. Faculty First Summer Scholarship, UNCG* (5/17-8/17), \$5000.

- Co-PI, with Jennifer Mangrum: STEM Teacher Leader Collaborative. Impact through Innovation starter award. **UNCG School of Education** (11/2016-5/2017), \$7000.
- Co-PI, with Lakshmi Iyer and partners Steve Tate and Ann Somers. BRIDGES: Bridging identities for diverse groups in STEM. **Child Family Research Network** (5/16-8/16), \$5000.
- Co-PI, with Jennifer Mangrum (PI): Sustaining teacher growth and leadership in Engineering practices: Co-planning a one-day summit. **School of Education, USTEP** (10/16-4/17), \$3000.
- Co-PI, with Beverly Faircloth and Edna Tan. *Inventing to Learn: Tinkering, engineering, and making in the SOE Makerspace*. **UNCG School of Education**, (5/14-4/15), \$40,000.
- Co-project director (with Terry Tomasek). **University/School/Teacher Education Partnership (USTEP)**, UNCG (8/1/05-5/1/06). *Improving elementary science education at UNCG's Professional Development Schools in Rockingham County*, \$5000.
- PI: **Thomas Undergraduate Research Scholar Grant**, UNCG, (May, 2005-May, 2006). *An ethnographic study of a math, science, and technology magnet elementary school*, \$2000 (funds an undergraduate research assistant)
- PI: **Undergraduate Research Assistantship Grant**, UNCG, (May, 2004-May, 2005), *Identifying Elementary Students' Out-of-School Science Identities*, \$2000
- PI: **Undergraduate Research Assistantship Grant**, UNCG, (May, 2004-May, 2005), *Identifying Elementary Students' In-School Science Identities*, \$2000
- Project director. **University/School/Teacher Education Partnership (USTEP)**, UNCG (8/1/04-6/1/05). *Improving elementary science education one lesson a time*, \$5000
- Co-Project director (with Terry Tomasek). **University/School/Teacher Education Partnership (USTEP)**, UNCG (8/1/04-6/1/05). *Improving elementary science education one lesson a time: Expanding lesson study opportunities for UNCG's Professional Development Schools*, \$5000
- PI: **Regular Faculty Grant**, UNCG, *Identifying and understanding the development of science identities in reform-based elementary science* (May, 2003- May, 2004), \$5000
- Project director. **University/School/Teacher Education Partnership (USTEP)**, UNCG (8/1/03-6/1/04), *Using collaborative professional development models to integrate standards-based science in the elementary school curriculum*, \$4522.

- PI: **Undergraduate Research Assistantship Grant**, UNCG, (May, 2003-May, 2004), *Identifying and understanding the development of science identities in reform-based elementary science*, \$1500
- PI: **Summer Excellence Grant**, UNCG, *Bringing literacy and science together in the context of a collaborative teacher study group* (June-August, 2003), \$4000
- PI: **Summer Excellence Grant**, UNCG, *Moving beyond the “basics”: Integrating science and literacy in the elementary curriculum* (June-August, 2002), \$4000
- PI: **Summer Excellence Grant**, UNCG, *Integrated science as a means to a more inclusive science* (June – August, 2001), \$4000
- PI: **New Faculty Research Grant**, UNCG, *Integrated science as a means to a more inclusive science* (December, 2000-June, 2001), \$4954
- Recipient, **Brown/Ricketts/Udick Grant**, AAUW Boulder Branch (September, 1999- May, 2000), \$1,000
- Recipient, **Pearl McPherson Spencer Award**, University of Colorado Graduate School (Fall, 1999), \$750
- Recipient, **Beverly Sears Dean’s Small Grant**, University of Colorado Graduate School (Fall, 1998), \$510

C. Advisor for Externally Funded Grants

- Amal Ibourk (Florida State University): CAREER: Developing Elementary Teachers’ Self-Efficacy Toward Justice-Centered Climate Change Teaching. (NSF: 2022-2027)
- Méndez, L.I. (University of North Carolina Greensboro): Bilingualtek: An Integrated Science-Language Instructional Approach for Latino Preschoolers. (NSF: 2021-2024).
- Christine Cunningham (Pennsylvania State University): Youth Engineering Solutions: Engineering Opportunities in Out-of-School Programs for English Learners (YES OS) (2021-2023; NSF #2054341)
- Zahra Hazari (Florida International University, PI): STEPUP: Supporting Teachers to Encourage the Pursuit of Undergraduate Physics (2017-2021; NSF)
- Shakhnoza Kayumova (University of Massachusetts Dartmouth): CAREER: Analyzing the nexus between advantaged social positioning and science identity development among English Language Learners (2017-2021; NSF)
- John Volin, Todd Campbell, David Moss (University of Connecticut): Promoting lifelong STEM learning through a focus on conservation, geospatial technology and community engagement (2016-2021; NSF).

- Carrie Tzou (University of Washington) & Megan Bang (Northwestern University). Learning in places: Gardens as field-based science education (July 2017 - June 2021; NSF).
- Kristy Boyer (Univ of Florida); Eric Wiebe & Collin Lynch (North Carolina State University): FLECKS: Fostering collaborative computer science learning with intelligent virtual companions for upper elementary students (December 2018 - September 2020).
- Karla Eitel (University of Idaho College of Natural Resources): Building STEM identity and career interests in Native American students by using unmanned aerial vehicle (UAV) and remote sensing technologies. (2016-2019).
- Bree Jimenez (Mater Dei Inclusion for all and University of Sydney). Engineering for students with disabilities. (2017-2018).
- Sue Kimmel: E is for Engineering. (2016-2018).
- Angela Calabrese Barton (Michigan State University), Lynn Dierking (Oregon State University), Jim Short (American Museum of Natural History), Emily Green (Community Science Workshop Network), Sue Ellen McCann (Executive Producer, KQED Public Broadcasting), Louise Archer (King's College London), Emily Dawson (King's College London). Youth access & equity research & practice agenda. Science Learning+ grant, funded by the Wellcome Trust, ESRC, & NSF. (2014-2015).
- Bryan Brown, Stanford University, PI, The Percy Julian Project: Exploring STEM school design for African-Americans (NSF Grant). (2012)
- Gail Jones, North Carolina State University, PI, Master science hobbyists: Characteristics, motivations, experiences, and career trajectories (NSF Grant). (2012)
- Advisory Board Member and Assistant External Evaluator, Biological Sciences Curriculum Study: An Integrated Approach (Curriculum development sponsored by the National Science Foundation), (Summer, 2000-Summer, 2001)

VI. Teaching Experience

A. Vanderbilt University/Peabody College Courses Taught:

- EDUC 6030: Teaching and Learning
- SCED 7330/3320: Introduction to Science Literacies
- SCED 3240: Elementary Science Methods

B. UNCG Courses Taught:

- TED 370: Elementary science methods for pre-service teachers
- TED 519: Elementary science methods for MAT students
- TED 461, 465: Supervision of student teachers (elementary, secondary)
- TED 350, 375, 400: Teaching and Learning Seminar I, II, III (accompanying Professional Development School Team leadership)
- TED 651: Teaching Life Sciences in the Elementary School (developed & taught)
- TED 652: Teaching Physical Sciences in the Elementary School (developed & taught)

- TED 632: Teaching practices and curriculum in science education (re-designed & taught)
- TED 657: Nature of science & science education (developed & taught course)
- TED 688: Sociocultural perspectives on mathematics and science education (developed course; doctoral seminar)
- TED 711: Cultural Perspectives on Learning (developed course; doctoral seminar)
- TED 730: Qualitative Research Design (developed course; doctoral course)
- TED 749: Disciplined Inquiry in Teacher Education (introductory doctoral course)
- TED 728: Seminar in Mathematics and Science Education (Focus on frameworks and data analysis)
- TED 759: College Teaching Practicum
- TED 775: Directed Doctoral Study
- TED 776: Becoming a Scholar in Mathematics and Science Education (Focus on scholarly writing)

C. UNCG Course and Program Development:

Developed a concentration in science education for the elementary education Masters of Education that included three new course proposals:

- TED 651: Teaching life sciences in the elementary schools
- TED 652: Teaching physical sciences in the elementary schools
- TED 653: Teaching earth sciences in the elementary schools
- TED 688: Sociocultural perspectives in mathematics and science education
- TED 657: Nature of science, technology, and society
- TED 711: Cultural perspectives on learning
- TED 730: Qualitative Research Design

D. UNCG Independent Studies Taught Since 2007 (for doctoral students):

- TED 692: Discourse studies of a first-grade classroom
- TED 692: Socio-ecological care
- TED 692: Ethnographic studies in science education
- TED 692: Critical theory in the learning sciences
- TED 692: Critical ethnographic studies of out-of-school science
- TED 692: African American Student Engagement in Science
- TED 692: Critical perspectives in science education and environmental learning environments
- TED 692: Qualitative Data Analysis
- TED 692: Critical perspectives on science education reform
- TED 692: Cultural production and science education
- CUI 692: Science education reform and equity
- CUI 692: Narrative Analysis

E. Courses Taught at University of Colorado, Boulder, School of Education

- Elementary Science Methods
- Supervisor, K-12 student teachers

F. Athens Drive High School (Raleigh, NC) [August 1991 – May 1995]

- Anatomy & Physiology
- Biology
- Earth Science
- Physical Science

VII. Professional Service Activities

A. Co-Founder, STEM Teacher Leader Collaborative

- Co-founder of the STEM Teacher Leader Collaborative (2015-present), a network of elementary teachers, administrators, and university faculty and graduate students committed to improving and supporting science and engineering instruction at elementary schools serving mostly minoritized youth and youth who live in poverty (uncgtlc.org)

B. Committee Membership/Leadership for National Organizations

- Member of the National Academy of Engineering Committee “Inclusive, Diverse, Equitable Engineering for All” (2021-present)
- Member of the National Academies of Science, Engineering, and Medicine’s committee on Enhancing Science and Engineering in Prekindergarten through fifth grade (2020-2021)
- Committee of Visitors, National Science Foundation, Division of Human Resource Development (HRD), 2020
- Publications Advisory Committee, National Association for Research in Science Teaching (NARST) (2018-2021)
- Research Committee, NARST, 2016-2018
- Program Committee, Strand 15 (Policy) Co-coordinator, NARST (2014-2016)
- External Policy Relations Committee, NARST (2013-2016)
- Faculty mentor, Sandra K Abell Doctoral Research Institute, sponsored by NARST (2015 & 2011)
- Program Committee, Division C (learning), Section 4 (science) Co-coordinator, American Educational Research Association (AERA), 2007-2008.
- Program Committee, Strand 11 Co-coordinator: Cultural, Social, and Gender Issues, NARST, (2005-2007).
- Publications Advisory Committee, NARST (2009-2011).

- Co-Chair of the Dissertation Award Committee, NARST (2010-2011).
- Equity and Ethics Committee, NARST (2006-2009).
- Early Career Research Award Selection Committee, NARST (2006-2009).
- Research Committee, NARST, (2001-2004)
- Mentor for AERA/Spencer Foundation Summer Institute participants (2000)

C. Committee Member/Leadership for Local/State Organizations

- Board member, North Carolina Science Teachers Association (2018-2019)
- Founder, Elementary Engineering Seed Leadership Team (2012-2015)
- Judge, Guilford County Schools Science Fair, 2016 & 2017

D. Editorial Boards/Guest Editor

- Guest co-editor (with Eileen Carlton Parsons), Special Issue on Culture in the 21st Century, *Journal of Research in Science Teaching*, 2013, v50(1).
- Guest co-editor (with Carol Brandt), Special Issue on Ethnographies of Science Education, *Ethnography & Education*, 2012, v7(2).
- *Journal of Research in Science Teaching* (2014-2017)
- Elementary School Journal Editorial Board (2010-2017)
- Cultural Studies of Science Education Editorial Board (2010)
- Science Education Editorial Board (2005-2010)

E. Reviewing for Journals and National Organizations

- Journal Reviewer: *American Educational Research Journal*, *Anthropology & Education Quarterly*, *Cognition and Instruction*, *Cultural Studies of Science Education*, *Educational Psychology Review*, *Ethnography & Education*, *Elementary School Journal*, *Excellence & Equity in Education*, *International Journal of Science Education*, *Journal of Learning Sciences*, *Journal of Mixed Methods*, *Journal of Research in Science Teaching*, *Linguistics and Education*, *Mind, Culture, and Activity*, *Journal of Women and Minorities in Science and Engineering*, *Science Education*, *School Science and Mathematics*
- Program reviewer, NARST
 - Strand 2 (Classroom contexts and learner characteristics)
 - Strand 3 (Research on Teaching)
 - Strand 6 (Cultural, Social, and Gender Issues)
 - Strand 11 (Cultural, Social, and Gender Issues)
 - Strand 15 (Policy)
 - Pre-conference workshop proposals
- Program Reviewer, American Educational Research Association
 - Division C (Learning and Instruction), Section 4 (Science)
 - Science Teaching and Learning SIG

- Division G (Social Context), Section 1 (Local Contexts of Teaching and Learning)
 - Environmental Education SIG
- Program reviewer, National Science Teachers Association (2002-2004)
 - Proposals for the NARST-sponsored sessions
- Review Panelist, National Science Foundation (2021; 2019)
- External reviewer for RAISE project (part of a national report for the National Research Council) (2008)
- External Assessor for Social Sciences and Humanities Research Council of Canada

F. UNCG University Service

- Advisory Board, Moss Street Partnership School, 2018-2021
- Co-Chair, UNCG Wetlands Education Committee, 2016-2017
- Founding Member, UNCG Wetlands Committee, 2016-2017
- Founding advisory board member: UNCG Research and Instruction in STEM Education (RISE) 2010-2017
- Ashby Dialogue group on Karen Barad's work (2014-2015)
- UNCG Faculty Research Award Committee, 2015
- Chair, Alumni Teaching Excellence Awards Committee, 2012-2013
- Office of Undergraduate Research (OUR) Advisory Board, 2011-2014
- Faculty Mentor, New Faculty Mentoring Program, 2010-2013
- Research Policy Committee, 2011-2012
- Alumni Teaching Excellence Awards Committee Member, 2010-2012
- Faculty facilitator of Freshmen Summer Read Program, 2011
- University Marshal Selection Committee, 2010-2011
- Undergraduate Research Excellence Awards Committee, 2008-2009
- Faculty speaker, SOAR 2009
- Faculty assessor, Undergraduate Research Fair, 2009
- STEM (Science Technology Engineering Mathematics) Working Group: Partnering with College of Arts and Sciences and School of Education faculty (2008)
- Planning committee for the Institute for the Advancement of Mathematics and Science Learning (2007-2008)
- Public Policy Working Group, Institute for the Advancement of Mathematics and Science Learning (2008)
- Search committee member for the Houston Distinguished Professor of Science Education, College of Arts & Sciences (2007 & 2008)
- Science education initiative group (w/ Assoc Provost for Research) (2006)
- Institutional Review Board (2002-2007)
- Faculty representative for Fall Focus (UNCG event), 2001-2002
- O. Max Gardner Award Committee (2001-2003)

G. UNCG School of Education

- Impact through Innovation, Incubator Sessions Group (2017-present)
- Member, Search committee, Library/Information Studies position (2019-2020)
- Member, Search committee, SOE Associate Dean for Research (2018)
- School of Education Faculty Council (Advisory board for Dean), 2016-2017
- Chair, Search committee, SOE Associate Dean for Research (2016-2017)
- Co-coordinator, first annual Science Everywhere Festival for SOE (2015-2016)
- Promotion and Tenure Committee, SOE, 2011-2013
- Council of Program Coordinators, 2011-2017
- Nominations & Elections Committee, 2010-2013
- Coordinator/Organizer of SOE STEM Day for UNCG's School of Education Building Dedication Week, 2011
- Guilford County Schools/UNCG Partnership Committee Member, 2007-2008
- Faculty Phone-a-thon, 2002, 2003, 2006-2010
- Search committee member for School of Education's Director of Research, 2005-2007
- School of Education representative for the Institutional Review Board, 2002-2007
- Scholarship committee member, 2004-2007
- Search committee member for Counseling Education faculty positions, 2004-2005
- North Carolina Teaching Fellows faculty mentor, 2000-2005; 2007
- School of Education representative at Open House recruitment event, 2003
- Executive Council (School of Education) faculty representative, Fall 2001-Spring 2002
- Member of Center for Accountability, Staff Development, and Teacher Quality Advisory Board (2001-2002)
- North Carolina Teaching Fellows recruitment (2001)

H. Peabody College Department of Teaching and Learning

- Search Committee, Director of Field Immersion, 2021-2022
- Learning & Design Program Lead (2021-present)

I. UNCG Department of Teacher Education

- Program coordinator, Elementary science education (2006-present)
- Program coordinator, Science education (2011-2014; 2016-2017)
- Co-chair, Search Committee, Science Education (2015-2016)
- Recruitment task force (2015-2018)
- Budget Committee (2015-2018)
- Awards Committee (2015-2016)
- Merit Review Committee (2014-2015)
- Secondary Teacher Education Program (STEP) Committee Member (2015-2016)

- Elementary Education Committee Member (2000-present)
- Middle Grades Committee Member, 2011
- Faculty mentor, new faculty members (2009-2017)
- Co-Chair, Search Committee, Science Education (2008-2009)
- Institutional Review Board, Department Representative (2002-2006)
- Doctoral task force member (revision of doctoral program) (2003-2004)
- Member, Search Committee, CUI Department Chair (2002-2003)
- Secondary Education Program Committee Member (2000-2001)
- Member, Search Committee, Secondary Program (2000-2001)
- Professional Development School (PDS) evaluation (2000-2001)

VIII. Advising & Supervision

A. Doctoral Level

Chair of Doctoral Committees:

- 2005
 - Kimberly Blackburn-Morrison (Co-Chair)
- 2006
 - Jennifer Warner (Co-chair)
- 2007
 - Amy Trawick (Co-chair)
- 2010
 - Julie Haun-Frank
- 2012
 - Angela Webb
- 2014
 - Tess Hegedus
- 2015
 - Patrick Conetta
 - Cailisha Petty
- 2020
 - Alison Mercier

Doctoral Student Committees (UNCG):

- 2003 Graduates
 - Richard Costner, Anthony Graham
- 2004 Graduate
 - Kathy Adams
- 2005 Graduates
 - Holly Robbins, Kathy Smith-McIlwain, Audrey Lail, Sandy Webb

- 2006 Graduates
 - Karen Cobb Carroll, LaToy Kennedy, Terry Tomasek, Trish Patrick
- 2007 Graduate
 - Kenneth Chandler
- 2008 Graduates
 - Tracy Keck, Judy McDonald, Henry Nicholson, Katie Stein
- 2009 Graduate
 - Lisa Mitchell
- 2010 Graduates
 - Dan Calhoun, Jim Carrier, Christina Tschida
- 2011 Graduates
 - Vanessa Chavis, Sue Kimmel, Xiaozhong Liu, Pat Murphy
- 2012 Graduates
 - Todd Nicolet, Nancy Payne, Cathy Scott, Jessie Store, Mandy Taylor
- 2013 Graduate
 - Tracey Howell
- 2014 Graduates
 - Penny Crooks, Mark Meacham, Allison Ormond
- 2015 Graduates
 - Lacey Huffling, Joy Meyers
- 2016 Graduates
 - Mary Ash, Aerin Benavides
- 2018 Graduates
 - Faith Freeman
- 2020 Graduates
 - Salem Metzger
- 2021 Graduates
 - Kate Chapman (Peabody College, Vanderbilt University)

Doctoral Committees (Outside member):

1. Pei-Ling Hsu (2009, University of Victoria, student of Wolff-Michael Roth)
2. Anna Jobér, Malmö University, Sweden (Opponent, 2012, student of Malin Ideland and Claes Malmberg)
3. Meredith Kier (2013, North Carolina State University, student of Meg Blanchard)
4. Elizabeth Coleman (2014, Loyola University, student of David Ensminger)
5. Per Anderhag, Stockholm University (Opponent, 2014, student of Per-Olof Wickman)
6. Carrie Allen, University of Colorado, Boulder (2016, student of Ben Kirshner and Bill Penuel)
7. Shaun McCann, University of Georgia (2022-present, student of David Jackson)

IX. Leadership Training

- Leadership Coaching: Women's leadership development, Greensboro, NC (2018-2019)

- Faculty Success Program, National Center for Diversity and Development (May 2018-August 2018; Alumni program- Summers 2018, Summer 2020, and Fall 2020)
- Career Development for Women Leaders (CDWL) Program, Wake Forest University/Baptist Medical, 2015-2016 (met once/month for 9 months)