

JAMES MINOGUE

North Carolina State University
Department of Elementary Education
Campus Box 7801 Raleigh, NC 27695
james_minogue@ncsu.edu
919.513.3317

EDUCATION

North Carolina State University
Ph.D. Science Education 1999 - 2005
Investigating the Impact of Touch on Students' Understandings of the Cell
Chairperson: Dr. M. Gail Jones

East Stroudsburg University of Pennsylvania
East Stroudsburg, PA 18301
M.Ed. Science Education 1994 - 1997
Certification in Secondary Education Science

B.S. Dual Degree Biology and Marine Science 1990 - 1994

K-12 TEACHING EXPERIENCE

Durham Public Schools- Durham, NC

- o Lowe's Grove Middle School 2000 - 2003
- o Carrington Middle School 1996 - 2000

St. Mary's County Public Schools- St. Mary's County, MD
Leonardtown High School 1995-1996

HIGHER EDUCATION EXPERIENCE

North Carolina State University
Department of Elementary Education

- Assistant Professor Fall 2007-Spring 2012
- Undergraduate Program Coordinator Fall 2011-Spring 15
- Associate Professor Spring 2012-Present

TELS Department Director of Undergraduate Programs Fall 2015-Present

The College of New Jersey
Department of Early Childhood & Elementary Education
Assistant Professor Fall 2005-Spring 2007

INSTRUCTIONAL SUPERVISION

<i>North Carolina State University</i> Supervisor of Elementary Education Teacher Candidates	Fall 2007- Spring 2008
<i>The College of New Jersey</i> Supervisor of Elementary Education Teacher Candidates	Fall 2005- Spring 2007
<i>Durham Public Schools</i> Mentor of an <i>Initially Licensed Teacher</i> of science	2002-2003

DOCTORAL SUPERVISION

<i>Chair</i>	
Diane Hunter TELS (ELEM-LS)	Fall 2017-Present
Teresa Leavens TELS (ELEM-LS)	Spring 2018-Present
<i>Committee Membership</i>	
<i>Current</i>	
Brandy Bowling, STEM	Fall 2012 - Present
Sonia Calderara, STEM	Fall 2013 - Present
Elena, Vladimirova, TELS (EDP)	Fall 2016-Present
Shana McAlexander STEM	Spring 2018-Present
<i>Past</i>	
John Bedward, Science Education	Completed Spring 2012
Lauren Madden, Science Education	Completed Spring 2011
Marta Klesath, Science Education	Completed Fall 2011
Matthew Peterson, Design	Completed Fall 2011
Iris Wagstaff, Educational Leadership	Completed Spring 2013
Takeisha Ford, Educational Leadership	Completed Spring 2013
Lucy Shores, Curriculum and Instruction	Completed Spring 2013

PUBLICATIONS

- Walkowiak, T. A., **Minogue, J.**, Harrington, A. D., & Edgington, C. (2017). Re-envisioning the school day: Integrating mathematics, science, and reading through students' engagement with practices. *Journal of Interdisciplinary Teacher Leadership*, 1, 7-12.
- Adams, E. L., Carrier, S. J., **Minogue, J.**, Porter, S. R., McEachin, A., Walkowiak, T. A., & Zulli, R. A. (2017). The development and validation of the Instructional Practices Log in Science: a measure of K-5 science instruction. *International Journal of Science Education*, 39, 335–357.
- Minogue, J.**, Borland, D., Russo, M., & Chen, S. T. (2016). Tracing the Development of a Haptically-enhanced Simulation for Teaching Phase Change. *Proceedings of the 2016 Annual Symposium on Computer-Human Interaction in Play* (p. 213-219). ACM, New York, NY, USA.

- Annetta, L., & **Minogue, J.** (Eds.). (2016). *Connecting Science and Engineering Education Practices in Meaningful Ways: Building Bridges*. The Netherlands, Springer.
- Minogue, J.**, & Borland, D. (2016). Investigating students' ideas about buoyancy and the influence of haptic feedback. *Journal of Science Education and Technology*, 25, 187-202.
- Chen, S.T., Borland, D. Russo, M., Grady, R., & **Minogue, J.** (2014). ASPECT sinking and floating: an interactive playable simulation for teaching buoyancy concepts. *Proceedings of CHI PLAY '14 the First ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play* (p. 327-330). ACM, New York, NY, USA.
- Chen, S.T., Borland, D. Russo, M., Grady, R., & **Minogue, J.** (2014). ASPECT: Sinking and floating, haptics for elementary school students. *Proceedings of CHI PLAY '14 the First ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play* (p. 405-406). ACM, New York, NY, USA.
- Annetta, L.A., Lamb, R., **Minogue, J.**, Holmes, S.Y., Folta, E., & Cheng, R. (2014). Safe science classrooms: Teacher training through serious educational games. *Information Sciences*, 264, 61-74.
- Lester, J.C., Spires, H.A., Nietfeld, J.L., **Minogue, J.**, Mott, B.W., Lobene, E.V. (2014) Designing Game-based Learning Environments for Elementary Science Education: A Narrative-Centered Learning Perspective. *Information Sciences*. 264, 4-18.
- Cook, M., Annetta, L., Dickerson, D., & **Minogue, J.** (2011). In-Service teachers' perceptions of online learning environments. *Quarterly Review of Distance Education: Research That Guides Practice*, 12, 73-80.
- Annetta, L., **Minogue, J.**, Cook, M., Shymansky, J., & Thurmond (2011). Rural elementary school teacher attitudes toward varying science teacher professional development activities at a distance. In C.L. Fund & W.Y. Yip (Ed). *Evidence-Based Education*. New York: Nova Science.
- Minogue, J.** (2010). What is the teacher doing? What are the students doing? An application of the Draw-a-Science-Teacher-Test. *Journal of Science Teacher Education*, 21, 767-781.
- Minogue, J.**, Madden, L., Bedward, J., Wiebe, E., & Carter, M. (2010). The cross-case analyses of elementary students' engagement in the strands of science proficiency. *Journal of Science Teacher Education*, 21, 559-587.
- Minogue, J.** Wiebe, E., Madden, L., Bedward, J. & Carter, M. (2010). The intersection of science notebooks, graphics, and inquiry. *Science and Children*, 48(3), 52-55.
- Wiebe, E. N., **Minogue, J.**, Jones, M.G., Cowley, J. & Krebs, D. (2009). Haptic feedback and students' learning about levers: Unraveling the effect of simulated touch. *Computers and Education*, 53, 667-676.

- Minogue, J.**, & Jones, M.G. (2009). Measuring the impact of haptic feedback using the SOLO taxonomy. *International Journal of Science Education*, 31, 1359-1378.
- Annetta, L., **Minogue, J.**, Holmes, S., & Cheng, M.T. (2009). Investigating the effect of video games on high school biology students' learning and engagement. *Computers and Education*, 53, 74-85.
- Annetta, L.A., **Minogue, J.**, Holmes, S., Folta, E., Cheng, M.T., & Klesath, M. (2009). Using case studies as the narrative to game design and development. In D. Gibson and Y.K. Baek (Eds.). *Digital simulations for improving education: learning through artificial teaching environments*. Hershey, PA: IGI Global.
- Cowley, J., Wiebe, E.N., **Minogue, J.**, Jones, M.G., & Krebs, D. (2008). Haptic feedback in the instructional environment and its relationship to visual attention and learning. *Human Factors and Ergonomics Society Annual Meeting Proceedings*, 52 (8), 638-642.
- Minogue, J.** (2008). Getting a "feel" for serious games. In L.A. Annetta (Ed.), *Serious educational games* (pps. 73-81). Rotterdam, The Netherlands: Sense Publishing.
- Minogue, J.** (2008). A lemon of a lesson. *Science and Children*, 45(6), 25-27.
- Jones, M. G., Taylor, A., **Minogue, J.**, Broadwell, B., Wiebe, E., & Carter, G. (2007). Understanding scale: Powers of ten. *The Journal of Science Education and Technology*, 16 (2), 191-202.
- Minogue, J.** & Jones, M.G. (2006). Haptics in education: Exploring an untapped sensory modality. *Review of Educational Research*, 76 (3), 317-348.
- Minogue, J.**, Jones, M.G., Broadwell, B., & Oppewal, T. (2006). Exploring cells from the inside out: New tools for the classroom. *Science Scope*, 29, 28-32.
- Minogue, J.**, Jones., M.G., Broadwell, B., & Oppewal, T. (2006). The impact of haptic augmentation on middle school students' conceptions of the animal cell. *Virtual Reality*, 10, 293-305.
- Minogue, J.** & Guttensberger, T. (2006). Paper towers: Building students' understandings of technological design. *Science Scope*, 30 (6), 18-20.
- Jones, M.G., **Minogue, J.**, Oppewal, T, Cook, M. & Broadwell, B. (2006). Visualizing without vision at the microscale: Students' with visual impairment explore cells with touch. *The Journal of Science Education and Technology*, 15, 345-351.
- Jones, M.G., **Minogue, J.**, Tretter, T., Negishi, A. & Taylor, R. (2006). Haptic augmentation of science instruction: Does touch matter? *Science Education*, 90, 111-123.

Tretter, T. R., Jones, M. G., Andre, T., Negishi, A., & **Minogue, J.** (2006). Conceptual boundaries and distances: Students' and adults' concepts of the scale of scientific phenomena. *Journal of Research in Science Teaching*, 43 (3), 282-319.

Tretter, T.R., Jones, M.G., & **Minogue, J.** (2006). Accuracy of scale conceptions in science: Mental orders of spatial magnitude. *Journal of Research in Science Teaching*, 43 (10), 345-351.

Jones, M.G., Broadwell, B., Falvo, M., **Minogue, J.**, & Oppewal, T. (2005). It's a small world after all. *Science and Children*, 43, 44-46.

Annetta, L.A. & **Minogue, J.** (2004). The Effect teaching experience has on perceived Effectiveness of interactive television as a distance education model for elementary science teachers' professional development: Another digital divide? *Journal of Science Education and Technology*, 13, 485-494.

MANUSCRIPTS IN PROCESS

Minogue, J., Frasca, T., & Walkowiak, T. A. (in preparation). Navigating the first year: Novice elementary teachers' paths through the organizational socialization process. *Teachers and Teaching: theory and practice*.

PRESENTATIONS

Minogue, J., Hunter, D., Borland, D., & Russo, M. (March, 2018). *Upper Elementary Students' Explanations of "Why Ice Melts" and the Influence of Haptic Force-feedback*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Atlanta, GA.

Minogue, J. (January, 2018). *What's a Crosscutting Concept? Cataloging Preservice Elementary School Teachers' Understandings*. Presented at the Association of Science Teacher Education (ASTE), Baltimore, MD.

Adams, E. L., **Minogue, J.**, Carrier, S. J., Walkowiak, T. A. (April 2017). *Utilizing an instructional log to examine novice teachers' science instruction: Profiles of practice*. Presented at the National Association for Research in Science Teaching (NARST), San Antonio, TX.

Adams, E. L., Walkowiak, T. A., Porter, S. R., Carrier, S. J., **Minogue, J.** (March, 2017). *Utilizing instructional profiles to compare graduates' outcomes: A quasi- experimental evaluation of a STEM-focused elementary teacher preparation program*. Presented at the American Association for College of Teacher Education (AACTE), Tampa, FL.

Minogue, J., Borland, D., Russo, M., Chen, S.T., & Davis, T. (April, 2016). *Tracing the Development of a Haptically-Enhanced Science Simulation for Matter and Intermolecular Forces*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Baltimore, MD.

Adams, E. L., Walkowiak, T. A., Carrier, S. J., **Minogue, J.** (February, 2016). *Understanding opportunity to learn in elementary mathematics and science classrooms: The validation of instructional logs*. Presented at the 39th Annual Conference of the Eastern Educational Research Association, Hilton Head, SC.

Minogue, J. (January, 2016). *The Nature of Elementary Pre-service Teachers' Explanations of Buoyancy*. Presented at the Association of Science Teacher Education (ASTE) International Conference, Reno, NV.

Minogue, J., Chen, S.T., Borland, D. Russo, M., & Grady, R. (April, 2015). *Investigating the Influence of Haptic Technology on Upper Elementary Students' Reasoning about Sinking & Floating*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Chicago, IL.

Minogue, J., Chen, S.T., Borland, D. Russo, M., & Grady, R. (January, 2015). *Advancing Science Performance with Emerging Computer Technologies (ASPECT)*. Presented at Association of Science Teacher Education (ASTE) International Conference, Portland, OR.

Greive, E.L., Carrier, S.J., **Minogue, J.**, Walkowiak, T. & Zulli, R.A. (April, 2014). *The development of a science instructional log to evaluate science instructional practices in elementary classrooms*. Presented at American Educational Research Association (AERA) Annual Meeting, Philadelphia, PA.

Minogue, J., Lobene, E., Rowe, J., Culberson, K., Phillips, J., Learnhardt, R., Stalls, M., Mott, B., & Lester, J. (March, 2014). *Future worlds: An interactive museum-based sustainability exhibit*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Pittsburg, PA.

Minogue, J. (January, 2014). *Syllabus sharing: Teaching elementary school science*. Presented at the Association of Science Teacher Education (ASTE) International Conference, San Antonio, TX.

Nietfeld, J.L., **Minogue, J.**, Spires, H.A., & Lester, J. (April, 2013). *Girls and games: Examining the performance and self-Regulation of girls in a science gaming environment*. Presented at American Educational Research Association (AERA) Annual Meeting, San Francisco, CA.

Minogue, J., Rowe, J.P., Kney, A., Lobene, E., Mott, B., & Lester, J. (April, 2013). *Tracing the development of FUTURE WORLDS: An intelligent cyberlearning system for interactive museum-based sustainability modeling*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, San Juan, PR.

Minogue, J. (January, 2013). *Concept cartoons and teacher cognition*. Presented at the Association of Science Teacher Education (ASTE) International Conference, Charleston, SC.

Lester, J., **Minogue, J.**, Nietfeld, J., & Spires, H. (April, 2012). *Tracing the design and testing of a game-based learning environment for upper elementary students*. Presented at American Educational Research Association (AERA) Annual Meeting, Vancouver, B.C., Canada.

Minogue, J., Bedward, J., Wiebe, E., Madden, L., Carter, M., & King, Z. (April, 2012). *Storyboarding and upper elementary students' conceptions of magnetism*. Presented at American Educational Research Association (AERA) Annual Meeting, Vancouver, B.C., Canada.

Craig, S.O., Dickerson, D.L., Hathcock, S.J., Weston J.L., & **Minogue, J.** (April, 2012). *Predicting undergraduate students' beliefs about science: An Exploratory study using the thinking about science survey instrument*. Presented at American Educational Research Association (AERA) Annual Meeting, Vancouver, B.C., Canada.

Minogue, J. & Borland, D. (March, 2012). *Investigating students' ideas about buoyancy and the influence of haptic feedback*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Indianapolis, IN.

Annetta, L.A., Lamb, R., **Minogue, J.**, Cheng, R., Vallett, D., Holmes, S., & Folta, E. (March, 2012). *Immersing preservice science teachers in serious educational games*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Indianapolis, IN.

Minogue, J. & Bedward, J. (January, 2012). *Combating a reasoning thin curriculum: Preservice elementary science teachers attention to student thinking*. Presented at the Association of Science Teacher Education (ASTE) International Conference, Clearwater, FL.

James Minogue, Bradford Mott, John Nietfeld, Hiller Spires, Marc Russo, Robert Taylor, & James Lester. (January, 2012). *Intelligent game-based learning environments for upper elementary science education*. Presented at the Association of Science Teacher Education (ASTE) International Conference, Clearwater, FL.

Minogue, J., Bedward, J., Wiebe, E., Madden, L., Carter, M., & King, Z. (April, 2011). *An exploration of upper elementary students' storyboarded conceptions of magnetism*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Orlando, FL.

Minogue, J., Mott, B., Neitfeld, J., Spires, H., Lester, J., Russo, M., & Rowe, J. (April, 2011). *Crystal Island-Uncharted Discovery: An Intelligent game-based learning environment*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Orlando, FL.

Madden, L., Wiebe, E., Bedward, J., **Minogue, J.**, & Carter, M. (April, 2011). *Teacher identities of three second-grade teachers: A case study from the students' perspective*. Presented at American Educational Research Association (AERA) Annual Meeting, New Orleans, LA.

Annetta, L. & **Minogue, J.** (March, 2011). *Science teacher training through serious educational games*. Presented at Society for Information Technology & Teacher education (SITE) International Conference, Nashville, TN.

Madden, L., Wiebe, E.N., Bedward, J.C., **Minogue, J.**, & Carter, M.C. (January, 2011). *Student perspectives on teacher identity: A Case study of three second grade teachers*. Presented at the Annual Meeting of the Association of Science Teacher Education (ASTE), Minneapolis, MN.

Madden, L., Bedward, J., Wiebe, E., Carter, M., & **Minogue, J.** (November, 2010). *GEES: Online PD tools for enhancing elementary science with graphics*. Presented at the North Carolina Science Teacher Association (NCSTA) meeting, Greensboro, NC.

Bedward, J., Wiebe, E., Madden, L., **Minogue, J.**, & Carter, M. (June, 2010). *Modeling in support of the engineering design process: Experiences in the elementary classroom*. Presented at the ASEE Annual Meeting, Louisville, KY.

Wiebe, E. N., Bedward, J., Carter, M., Madden, L., & **Minogue, J.** (June, 2010). *Abstraction and re-representation in visualizations: Understanding where the learning occurs*. Presented at the ICLS Biannual Meeting. Chicago, IL.

Minogue, J., Mott, B., Neitfeld, J., Spires, H., Lester, J., & Russo, M. (March, 2010). *Tracing the development of Crystal Island: Uncharted Discovery: An intelligent game-based learning environment*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Philadelphia, PA.

Bedward, J., **Minogue, J.**, Wiebe, E., Madden, L., & Carter, M. (March, 2010). *Reasoning about invisible forces: The use of graphics and written text to reveal elementary student sense making*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Philadelphia, PA.

Wiebe, E., **Minogue, J.**, Carter, M., Bedward, J., & Madden, L. (March, 2010). *Administrative symposium: Representational Reasoning in the Teaching and Learning of Science*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Philadelphia, PA.

Madden, L., Wiebe, E., Bedward, J., **Minogue, J.**, & Carter, M. (March, 2010). *Examining elementary science teacher identity through science notebooks: A case study of three exemplar teachers*. Presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Philadelphia, PA.

Minogue, J., Bedward, J., Wiebe, E., Madden, L., & Carter, M. (January, 2010). *Concrete experiences and abstract thought: The importance of student-generated graphics*. Presented at the Association for Science Teacher Educators (ASTE) International Conference, Sacramento, CA.

Minogue, J. (April, 2009). *Language mediated haptic cognition: Exploring the role of grounding terms*. Presented at the National Research in Science Teaching (NARST) International Conference, Garden Grove, CA.

Minogue, J. (April, 2009). *Reflective practices and professional development through Japanese lesson study*. Presented at the National Research in Science Teaching (NARST) International Conference, Garden Grove, CA.

Wiebe, E., Madden, L., Bedward, J., **Minogue, J.** & Carter, M. (April, 2009). *Examining science inquiry practices in the elementary classroom through science notebooks*. Presented at the National Research in Science Teaching (NARST) International Conference, Garden Grove, CA.

Cook, M., Annetta, L., Dickerson, D., & **Minogue, J.** (April, 2009). *Students' perceptions of online learning environments*. Presented at the National Research in Science Teaching (NARST) International Conference, Garden Grove, CA.

Wiebe, E., Bedward, J., Madden, L., Carter, M. & **Minogue, J.** (April, 2009). *Graphic representations in science notebooks: A vehicle for understanding science inquiry in the elementary classroom*. Presented at American Educational Research Association (AERA) Annual Meeting, San Diego, CA.

Minogue, J., Madden, L. P., Bedward, J. C., Wiebe, E. N., & Carter, M. (January, 2009). *The cross-case analyses of elementary students' engagement in the strands of science proficiency*. Presented at the Association for Science Teacher Education (ASTE) International Conference, Hartford, CT.

Minogue, J. & Annetta, L. (January, 2009). *Getting a "feel" for serious games*. Presented at the Association for Science Teacher Education (ASTE) International Conference, Hartford, CT.

Wiebe, E. N., **Minogue, J.**, Bedward, J. C., Madden, L. P., & Carter, M. (October, 2008). *Graphic-enhanced elementary science*. Presented at the National Science Teachers Association (NSTA) Area Conference, Charlotte, NC.

Annetta, L., & **Minogue, J.** (October, 2008). *Engaging fifth grade students through haptically enhanced video games*. Presented at the National Science Teachers Association (NSTA) Area Conference, Charlotte, NC.

Cook, M., Annetta, L.A., Dickerson, D.L., & **Minogue, J.** (October, 2008). *In-service teachers' perceptions of online learning experiences*. Presented at the Annual Meeting of the Association for Science Teacher Education Southeastern (SASTE) Region, Columbia, SC.

Madden, L. P., Wiebe, E. N., Bedward, J. C., **Minogue, J.**, & Carter, M. (October, 2008). *Creating classroom observation protocols for elementary schools using graphically-enhanced science notebooks*. Presented at the Annual Meeting of the Association for Science Teacher Education Southeastern (SASTE) Region, Columbia, SC.

Wiebe, E. N., Madden, L. P., Bedward, J. C., Carter, M., & **Minogue, J.** (June, 2008). *Improving early spatial intelligence through science notebook graphic production: Effective elementary classroom practices*. Presented at the Spatial Intelligence Symposium, Evanston, IL.

Annetta, L.A., Holmes, S. Y., **Minogue, J.**, Cheng, M.T., Sears, M. & Allen, K. (April, 2008). *Learning science through videogames*. Presented at the National Research in Science Teaching (NARST) International Conference, Baltimore, MD.

Wiebe, E.N., Jones, M.G., **Minogue, J.**, Cowley, J., & Krebs, D. (April, 2008). *Unraveling the influence of haptic feedback on students' learning about levers*. Presented at the National Research in Science Teaching (NARST) International Conference, Baltimore, MD.

Annetta, L.A., Bean, S., Talaiver, M., Gibson, D. **Minogue, J.**, Tagliarini, G., Michelson, K. (March 5, 2008). *Creating video games and simulations for science and mathematics: Perspectives from ITEST projects*. Presented at the Society for Information Technology and Teacher Education International Conference (SITE), Las Vegas, NV

Minogue, J. (January, 2008) *What is the teacher Doing? What are the students doing?* Presented at the Association for Science Teacher Education (ASTE) International Conference, St. Louis, MO.

Annetta, L.A., **Minogue, J.**, & Hudnutt, B.A. (September, 2007). *Scientific & mathematical knowledge acquisition: Professional development in interactive learning environments*. Presented at the NASA ModSim World Conference, Virginia Beach, VA.

Minogue, J., Jones, M.G., Broadwell, B., & Oppewal, T. (April, 2007). *Haptic feedback and the structure of observed learning outcomes*. Presented at the National Association for Research in Science Teaching (NARST) International, New Orleans, LA.

Jones, M. G., Taylor, A., **Minogue, J.**, Broadwell, B., Wiebe, E., & Carter, G. (April, 2007). *The efficacy of 'Powers of Ten': Conceptions of size and scale*. Presented at the National Association for Research in Science Teaching (NARST) Annual Conference, New Orleans, LA.

Minogue, J., Jones, M.G. (January, 2007). *The potential impact of haptic technology on science instruction*. Presented at the Association for Science Teacher Education (ASTE) International Conference, Clearwater Beach, FL.

Minogue, J., Jones, M.G., Broadwell, B., & Oppewal, T. (April, 2006). *The impact of haptic feedback on students' understandings of the animal cell*. Presented at the National Association for Research in Science Teaching (NARST) International Conference, San Francisco, CA.

Jones, M.G., **Minogue, J.**, Broadwell, B., Patrick, M., & Oppewal, T. (April, 2006). *Visualizing without vision at the microscale: Students with visual impairment explore cells with touch*. Presented at the National Association for Research in Science Teaching (NARST) International Conference, San Francisco, CA.

Tretter, T., Jones, M.G., & **Minogue, J.** (April, 2006). *Conceptions of spatial scale: Leaping into other worlds*. Presented at the American Educational Research Association (AERA) Annual Meeting, San Francisco, CA.

Tretter, T., Jones, M.G., & **Minogue, J.** (April, 2006). *Navigating across spatial scales in science: Different worlds, unifying concept*. Presented at the National Association for Research in Science Teaching (NARST) International Conference, San Francisco, CA.

Minogue, J., Jones, M.G., Kubasko, D., Tretter, T., & Dotger, S. (April, 2005). *Nanoscience education: Teaching tools for the exploration of this emerging field*. Presented at the National Science Teachers Association (NSTA) conference, Dallas, TX.

Minogue, J. & Jones, M.G. (April, 2005). *Virtual hands-on experiences: A study of haptic feedback devices and science learning*. Presented at the National Association of Research in Science Teaching (NARST) International Conference, Dallas, TX.

Minogue, J. & Jones, M.G. (April, 2005). *Investigating the efficacy of haptic science instruction*. Presented at the American Educational Research Association (AERA) conference, Montreal, Canada.

Tretter, T. R., Jones, M. G., Andre, T., Negishi, A., & **Minogue, J.** (April, 2005). *Conceptual distances and conceptual boundaries: Students' and adults' conceptualizations of spatial scale in science*. Presented at the American Educational Research Association (AERA) Annual Meeting, Montreal, Canada.

Tretter, T. R., Jones, M. G., Andre, T., Negishi, A., & **Minogue, J.** (April, 2005). *Scale of scientific phenomena: Demarcation of distinct spatial scales in experts' and students' cognitive frameworks*. Presented at the National Association for Research in Science Teaching (NARST) International Conference, Dallas, TX.

Minogue, J. & Jones, M.G. (January, 2005). *Do hands-on experiences make a difference? A study of haptic feedback devices and science learning*. Presented at the Association for the Education of Teachers in Science (AETS) International Conference, Colorado Springs, CO.

Minogue, J., Jones, M.G., Dotger, S., Falvo, M., & Kubasko, D. (November, 2004). *It's a small, small world: Teaching about nanotechnology*. Presentation at the North Carolina Science Teachers Association (NCSTA) conference, Greensboro, NC.

Minogue, J. & Jones, M.G. (October, 2004). *Touching cells in a virtual environment: Teaching with haptics*. Presentation at EDTECH conference, NCSU, Raleigh, NC.

Tretter, T., **Minogue, J.** & Jones, M.G. (Spring, 2004). *How small is small? Students' conceptions of scale*. Paper presented at the National Association of Research in Science Teaching (NARST) conference, Vancouver, British Columbia, Canada.

Tretter, T., **Minogue, J.** & Jones, M.G. (Spring, 2004). *Conceptual ecology of scale*. Paper presented at the American Educational Research Association (AERA) conference, San Diego, CA.

Jones, M.G., **Minogue, J.**, Kubasko, D., & Tretter T. (Spring, 2004). *Scale as a unifying theme: Size matters*. Paper presented at the National Science Teachers Association (NSTA) conference, Atlanta, GA.

GRANT ACTIVITIES

External Funding

Co-PI on <i>Multimodal Visitor Analytics: Investigating Naturalistic Engagement with Interactive Tabletop Science Exhibits</i> [NSF-AISL] (1713545) \$1,951,956 James Lester (PI) & Jonathan Rowe (Co-PI)	March, 2017-Present
PI on <i>ASPECT: Advancing Science Performance with Emerging Computer Technologies</i> [NSF-DR K-12] (1316473) \$449,643 Marc Russo & David Borland Co-PIs	Sep. 2013-Aug. 2017
Senior Researcher on <i>PROJECT ATOMS: Accomplished Elementary Teachers of Mathematics and Science</i> [NSF-DR K-12] (1118894) \$3,166,758 Temple Walkowiak PI	Sep. 2011-Present
Co-PI on <i>Investigating An Intelligent Cyberlearning System for Interactive Museum-based Sustainability Modeling</i> [DRL-ISE] (1114655) \$713,386 James Lester PI	Sep. 2011-Aug. 2013
Co-PI on R&D: <i>Developing Science Problem-Solving Skills and Engagement Through Intelligent Game-Based Learning Environments</i> [NSF-DR K12] (0822200) \$2,523,297 James Lester PI	Aug. 2008-Dec. 2012
Co-PI on <i>Multimodal Science: Supporting Elementary Science Education through Graphic-Enhanced Communication</i> [NSF-DR K12] (0733217) \$350,000 Eric Wiebe PI	Spring 2008-2010
Co-PI on <i>STIMULATE: Science Training Immersive Modules for University Learning Around Teacher Education</i> [NSF-CCLI] (0737206) \$ 200,000 Len Annetta PI	Spring 2008-2010

Under Consideration

PERCEPT: Preservice Educators Reimagining Core
Experiences in Physics Teaching [NSF-EHR CORE]

SERVICE ACTIVITIES*Professional Organizations*

<i>Association of Science Teacher Education (ASTE)</i> Member at Large-Awards Committee	Spring 2015-Present
<i>National Association of Research in Science Teaching (NARST)</i> Early Career Awards Committee	Spring 2014-2016
<i>Journal of Science Teacher Education (JSTE)</i> Editorial Review Board Member	Spring 2012-2015
<i>Association of Science Teacher Education (ASTE)</i> Member at Large-Publication Committee	Spring 2011-2014
<i>Journal of Science Education and Technology (JSOT)</i> Editorial Board Member	Summer 2010-Present
<i>Journal of Research in Science Teaching (JRST)</i> Publications Advisory Committee	Spring 2010-2013
<i>International Journal of Science Education (IJSE)</i> Manuscript Review Board	Spring 2009-Present
<i>Computers and Education (CaE)</i> Manuscript Review Board	Fall 2009-Present
<i>Journal of Research in Science Teaching (JRST)</i> Manuscript Review Board	Fall 2008-Present
<i>Journal of Research in Science Teaching (JRST)</i> Outstanding Paper Award Committee	Spring 2007-2010
<i>Journal of Science Education and Technology (JSOT)</i> Manuscript Review Board	Spring 2007-2010
<i>International Journal of Science and Mathematics Education (IJSME)</i> Manuscript Review Board	Fall 2007-Present
<i>National Association of Research in Science Teaching (NARST)</i> <i>Educational Technology; Science Teaching- Primary School Strand</i> International Conference proposal reviewer	Fall 2006-Present

Association of Science Teacher Education (ASTE)
 Educational Technology Thread Coordinator Summer 2006
 International Conference proposal reviewer Fall 2004-Present

North Carolina State University

Member of the University Committee for Undergraduate Education (CUE) Fall 2017-Present

Member of the *University Standing Committee of Evaluation of Teaching* Fall 2012-Spring 2015

Member of the College of Education's *Council of Program Coordinators* Fall 2011-Present

Member of the College of Education's *Committee on Professional Education* Fall 2011-Spring 2015

Member of the College of Education's *Student Grievance Committee* Fall 2011-Spring 2013

Member of the College of Education's *Awards Committee* Fall 2011-Spring 2012

Member of the College of Education's *Faculty Mediation Panel* Fall 2010-Spring 2012

Member of the College of Education's *Research Committee* Fall 2007- Spring 2010

Member of the College of Education's *Peer Teaching Evaluation Committee* Spring 2008

The College of New Jersey

Member of the School of Education's *Travel Committee* Fall 2006- Spring 2007

Member of the collegewide *Information Technology Planning Council* Fall 2005- Spring 2007

Faculty Advsiors for environmental student organization *Water Watch* Spring 2006-Spring 2007

Durham Public School's Science Teacher Leadership Fellows Fall 2003-Spring 2005
 Assisted in the planning & delivery of inservice sessions for practicing middle school science teachers.

Served on Durham Public School's *Steering Committee for Inquiry Based Science Education*

Fall 2000

OTHER RELATED ACTIVITIES

North Carolina State University

MAT in Elementary Education Program Coordinator

Spring 2009-Fall 2010

SensAble Technologies Developer Challenge

Co-recipient of Honorable Mention awarded

at SIGGRAPH 2005 for the *HapticCell* educational software

Spring 2005

North Carolina State University

Graduate Research Assistant on two NSF sponsored grants: *Investigating Viruses with Touch: Nanotechnology and Science Inquiry & Scale and Scaling Across the Content Domains*- responsibilities include research planning and data collection, organization, analysis, and dissemination

Fall 2003-Spring 2005

Participated in the *Center for Inquiry Based Learning (CIBL)* institute at Duke University, Durham, NC

Summer 1999

PROFESSIONAL ORGANIZATIONS

Member, *Association of Science Teacher Education (ASTE)*, 2004-Present

Member, *National Association of Research in Science Teaching (NARST)*, 2002-Present