**Melissa Gail Jones**

**Alumni Distinguished Graduate Professor, Science Education**

**Department of STEM Education**

**North Carolina State University**

326 Poe Hall PO Box 7801 Raleigh, NC 27695

(919) 515-4053 | gail\_jones@ncsu.edu

Academic Background

 Ph.D., Science Education, North Carolina State University, Raleigh, NC, 1983-1987

M.A. in Biology, Appalachian State University, Boone, NC, 1976-1977

B.S. in Biology, Appalachian State University, Boone, NC, 1973-1976

University Experience

North Carolina State University 1977-1980, 1988, 2003-present

**Alumni Distinguished Graduate Professor**, Science Education, 2014- present

**Senior Fellow**, Friday Institute for Educational Innovation, 2011-present

**Associate Department Head**, STEM Education, 2015- 2018

**Pre-college Education Director**, ASSIST Engineering Center, 2012- 2015

**Pre-college Education Director, PowerAmerica Engineering Center**,2015-2017

**Professor, Science Education**, 2003- 2014

**Director of Teacher Education/Program Officer, Visiting Assistant Professor, Department of Mathematics and Science Education**, 1988

**Research Assistant**, 1986-1987

**Research Technician, Genetics Department**, 1979-1980

**Researcher, Department of Entomology**, 1979

**Instructor and Coordinator, Department of Zoology**, 1977-1979

University of North Carolina at Chapel Hill 1988-2014

**Adjunct Professor, Department of Computer Science**, 2003-2014

**Associate Professor, Science Education**, 1993- 2003

**Adjunct Associate Professor, Department of Computer Science**, 1993- 2003

**Carolina Environmental Faculty, Interdisciplinary Program**, 1993- 2003

**Assistant Professor and Middle Grades Program Coordinator, Middle Grades and Science Education**, 1988-1993

University of North Carolina at Wilmington 1993- 2003

**Adjunct Professor, Biology**, 1993- 2003

**Adjunct Associate Professor, Biology**, 1993- 2003

**Appalachian State University**, 1976-77

**Teaching Assistant**, 1976-77

K-12 Teaching Experience

**Biology Teacher, Enloe High School**, 1982-1986

**Science and Mathematics Teacher, West Millbrook Junior High School**, 1980-1982

Museum and Other Experience

**Curriculum Project Director, N.C. Division of Coastal Management**, 1986-1987

**Associate Director, Junior Science and Humanities Symposium**, 1986-1987

**Instructor, N.C. Museum of Natural Sciences**, 1980

**Instructor, Summer programs, N.C. Museum of Natural Sciences**, 1978

Honors, Awards, and Recognition

2021 **National Technology Leadership Initiative (NTLI) Fellowship Award**, Finalist with
R. Hite & G. Childers, ASTE

2020 **Educational Innovation for NC Science Mathematics and Technology Education
Center Partnership Award**

2020 **Outstanding Teacher Award**, NC State University (nominee)

2018 **Jackson Distinguished Service for Outstanding Science Education Leadership**,
NC Science Leadership Association

2017 **Best Paper Award,** American Education Research Association (AERA) Applied Research
on Immersive Environments for Learning

2016 **The Distinguished Service in University/College Science Award,** NC Science
Teachers Association

2016 **Alumni Outstanding Research Award**

2016 **Research Leadership Academy Inductee**

2016 **NC State University Outstanding Graduate Mentor Award**

2016 **Academy of Outstanding Graduate Faculty Mentors**

2016 **National Technology Leadership Initiative (NTLI) Fellowship Award** for Science Education

2015 **Outstanding Science Teacher Educator of the Year Award**, Association for Science Teacher Education

2014 **Alumni Distinguished Graduate Professor Award**

2014 **Outstanding Extension Award**

2014 **Academy of Outstanding Faculty Engaged in Extension Award**

2014 **Alumni Association Outstanding Extension and Outreach Award**

2011 **Friday Fellow for Educational Innovation** (2011-2016)

2010 **Association of Educational Publishers Finalist Award** for Science Curriculum

2006 **Outstanding Paper Award**, *Hands-on Science Education: Multimedia Instruction That is Appealing to Female and Male Students*, Multimedia Applications in Education, Graz Austria; Extreme Science

2005 **Haptic Cell- SensAble Developer Challenge Award Winner**: Honorable Mention

1997 **Outstanding Research Paper**, N.C. Association of Research in Education

1988 **Award for Outstanding Scholarship on Teacher Education**, Association of Colleges and Schools of Education in State Universities and Land-Grant Colleges

1988 **Outstanding Dissertation Award**, Association of Supervision and Curriculum Development

1987 **Outstanding Paper Competition**: Award of Merit, Association of Educators of Teachers of Science

1986 **Outstanding Research Award** (finalist), National Association of Research in Science Teaching

**Grant Activity**

Federally Funded Grants

2021 *Science and Technologies for Phosphorus Sustainability Center* (Co-PI), National Science Foundation, $25,000,000.

2020 *NC Research Triangle Nanotechnology Network* (NC State University Co-PI), National Science Foundation, $1,100,000.

2020 *FAME (Families and Museums Exploring): Transforming Science Capital and Family Habitus*, Spencer Foundation, $999,967 (invited finalist).

2018 *Promoting STEM Interests and Careers through Families and Museums Exploring (FAME)*, National Science Foundation, $103,615.

2018 *EEC RET Site: Atomic Scale Design and Engineering*, National Science Foundation, $600,000.

2016 *NRT-DESE: Data-Enabled Research Traineeships in the Science and Engineering of Atomic Structure* (SEAS), (E. Dickey PI), National Science Foundation, $2,555,633.

2016 *Promoting STEM Interests and Careers through FAME* (Families and Museums Exploring), National Science Foundation, $852,959.

2016 *Power America: Next Generation Electronics Manufacturing Innovation Institute*, US Department of Energy, $249,238.

2015 *Research Triangle Nanotechnology Network*, (J. Jones PI), National Science Foundation, $30,183.

2015 *Power America: Next Generation Electronics Manufacturing Innovation Institute*, US Department of Energy, $43,600.

2014 *Wearable Nanodevices, Linking Health and Environment: RET in Engineering and Computer Science Site* (Co-PI), National Science Foundation, $499,796.

2012 *NERC for Advanced Self-Powered Systems of Sensors and Technologies (ASSIST),* National Science Foundation, $18,500,000*.*

2011 *Master Science Hobbyists: Characteristics, Motivations, Experiences, and Career Trajectories*, National Science Foundation, $286,912.

2011 *NSF CCI: Center for Molecular Spintronics*. Supplement, $7,450.

2010 *FIRE: Conceptualizing Non-Contact Forces: The Efficacy of Visuohaptic Simulations*, National Science Foundation, $399,886.

2010 *Bottom-Up Meets Top-Down: An Integrated Undergraduate Nanotechnology Laboratory*, National Science Foundation, $200,000.

2009 *NSF CCI: Center for Molecular Spintronics,* National Science Foundation, $1,413,493.00.

2006 *Teaching Nanoscale Engineering Across Undergraduate Disciplines*, NUE National Science Foundation, $200,000.

2005 *NIRT: Bio-inspired Actuating Structures*, National Science Foundation, $1,721,234.

2004 *Scale and Scaling Across Science Domains*, National Science Foundation, $700,000.

2003 *NUE: Building Models and Manipulating Molecules-Active Learning for Nanoscience Education*, National Science Foundation, $100,000.

2002 *Global Science Leaders II*, Eisenhower Grants, $30,000.

2002 *Durham Science Leaders*, Eisenhower Grants, $30,000.

2001 *Investigating Viruses with Touch: Nanotechnology and Science Inquiry*, National Science Foundation, $767,320.

2000 *Triangle Science Education Cooperative*, Eisenhower Grants, $120,000.

1998 *Global Science Leaders for the 21st Century*, Eisenhower Grants, $90,000.

1998 *Family Science and Family Math for Hispanic Families*, Eisenhower Grants, $30,000.

1996 *Integrating the ABCs*, Eisenhower Grants, $28,000.

1996 *Operation Primary Physical Science*, Eisenhower Grants, $28,000.

1996 *Operation Primary Physical Science*, National Science Foundation, $40,000.

1995 *Science and Mathematics for Students and their Families*: Family Math and Family Science, Eisenhower Grants, $35,000.

1995 *Tools for Cognition: Middle Grades Mathematics Manipulatives Project*. Eisenhower Grants, $35,000.

1995 *Reforming the Preparation of Elementary Teachers of Science*, Eisenhower Grants, $35,000.

1994 *Conceptual Science II*, Eisenhower Grants, $35,000.

1994 *Science and Mathematics for Students and Their Families: Family Science/Family Math*, Eisenhower Grants, $35,000.

1993 *Conceptual Science*, Eisenhower Grants, $30,000.

1993 *North Carolina Family Science Education Project,* Eisenhower Grants, $30,000.

1992 *N.C. Estuarine Research Reserve Education Project*, $10,000.

1991 *Family Science Literacy Project*, Eisenhower Grants, $25,000.

1991 *Teach STAT*, National Science Foundation, $123,609.

1990 *Getting It Together: Middle Grades Mathematics Manipulatives Project*, Eisenhower Grants, $19,296.

1990 *Hands-On Science For Elementary Teachers*. Eisenhower Grants, $19,086.

1990 *North Carolina Estuarine Research Project*, National Oceanographic and Atmospheric Administration, $19,876.

1990 *Middle Grades Mathematics Manipulatives-Short Project*, Eisenhower Grants, $450.

1990 *Middle Grades Cooperative Mathematics*, Eisenhower Grants, $19,876.

1990 *Elementary Science Project*, Eisenhower Grants, $19,837.

1989 *Estuarine Ecology- Summer '89*, Title II of the Education for Economic Security Act of 1984 (P.L. 98-377), $17,021.

Private/Corporately Funded Grants

2020 NanoDays 2020, Eastman, $1,500.

2019 *NanoDays*, Eastman, $1,000.

2018 *Educating the Next Generation about NanoDays*, Eastman, $1,000.

2017 *Developing Interest and Identity for STEM,* Eastman, $1,000.

2017 *Future Scientists and Engineers: Identity Development and Career Interests*, Biogen Foundation, $6,150.

2016 *NanoDays,* Eastman Chemical Company, $5,000

1994 *Burroughs Wellcome Science Teaching Innovation Grants*, Conceptual Science, Burroughs Wellcome Co., $40,000.

1994 *Burroughs Wellcome Teaching Innovation Grant,* $50,000.

1985 *Technology and the Future*. GTE: Grant Incentives for Teachers, $15,000.

State/Regionally Funded Grants

2021 Nano Innovation Challenge, Triangle Learning Days, $200

2020 A Sense of Awe: A Tool for Enhanced Science Instruction, Catalyst Grants, $5,000.

2019 Next Generation of Scientists, Science Communicators, and Science Educators: Youth Volunteers in Science Centers, Catalyst Grants, $20,000

2019 ZSpace, Vance County Schools, $22,899.

2011 *The Science Scholars Academy II: Developing 21st Century Teacher Scholars*, NC QUEST, $150,000.

2010 *The Science Scholars Academy: Developing 21st Century Teacher Scholars*, NC QUEST, $299,355.

2009 *Nano-Textile Technology* (Co-PI), University of North Carolina, $207,688.

2008 *Trajectory of Science Scholars, Math Science Partnership*, Extended, $400,569.

2007 *Trajectory of Science Scholars, Math Science Partnership*, $237,000.

1997 *Investigation of Students', Teachers', and Professionals' Concepts of Bacteria, Germs, and Viruses*, Small Grants University-Based Research, $5,000.

1992 *Model Clinical Network Program Induction Grant,* $3,750.

1993 *Model Clinical Network Program Induction Grant*, $3,500.

1991 *Model Clinical Network Program Induction Grant*, $3,750.

University/Locally Funded Grants

2020 *Elementary Pre-Service Teachers’ Explorations of Awe in Science Instruction*,
Catalyst, $5,000.

2018 *The Next Generation of Scientists, Science Communicators and Science Educators*,
NC State University, $10,000.

2018 *Microscopic Camera for STEM Instruction*, ETF Instructional Resources for Excellence, $329.

2017 *ZSpace*, ETF Instructional Resources for Excellence, $620.

2016 *Supporting Underserved Students In Science Education Through Graduate Studies for Inservice Teachers,* NC State University Foundation, $24,000.

2014 *Engineering Guides of North Carolina*, Extension, Engagement and Economic Development Seed Grant, $10,000.

2013 *Diversity Award for Research Travel*, $1,000.

2010 *Initiative Implementation Grant: Support for NSF Center of Chemical Innovation*, Center for Molecular Spintronics, Strategic Research Initiative, $50,550.

2006 *Graduate Recruitment Initiative,* $2,000.

1999 *University Research Council*, $2,000.

1997 *Institute for Research in the Social Sciences Faculty Research Award*, University of North Carolina at Chapel Hill, $1,000.

1997 *Nanomanipulator and Atomic Force Microscope*, Chancellor's Technology Grants, $30,000.

1997 *BRIDGES Leadership Scholarship Grant*, $1,250.

1997 *Research Grant*, Horizon Research, $3,270.

1997 *Teaching Science in the Elementary Schools*, Center for Teaching and Learning Minigrant for Course Enhancement, $346.

1997 *Instructional Materials for Learner-Centered Teaching*, Mini-Grant for Teaching Support, Center for Teaching and Learning, $750.

1995 *University Research Council*, $1,500.

1994 *J. Minor Gwynn Research Award*, $1,500.

1992 *Evaluation of An Elementary Science Teacher Leadership Model*, Math/Science Education Network, $6,000.

1984 *Cloning and Embryonic Development*, Wake County Educational Foundation
Mini-Grant, $432.

Publications

Books

Luft, J.A., & Jones, M.G. (Eds.) (Tentative publication date, 2021). *Handbook of Research on Science Teacher Education*. New York: Taylor & Francis.

Hite, R., Childers, G., Ennes, M., & Jones, M. G. (2020). *Engineering in the Living World: Biology Case Studies for Grades 6-12*. Arlington, VA: National Science Teachers Association Press.

Jones, M. G., Corin, E., Ennes, M., Cayton, E., & Childers, G. (2019). *Discovery Engineering in Physical Science: Case Studies for Grades 6–12*.Arlington, VA: National Science Teachers Association Press.

Jones, M. G., Taylor, A., & Falvo, M. (2009). *Extreme Science*. Arlington, VA: National Science Teachers Association Press.

Jones, M. G., Taylor, A., Broadwell, B., & Falvo, M. (2007). *Nanoscale Science*. Arlington,
VA: National Science Teachers Association Press.

Jones, M. G., Jones, B., & Hargrove, T. (2003). *The Unintended Consequences of High-Stakes Testing*. Boulder, CO.: Rowman and Littlefield.

Jones, M.G. (1993). *Sound Ideas.* North Carolina Estuarine Research Reserve Program:
Raleigh, NC

Jones, M.G., Carter, G., Shaw, R., & Hill, S. (1990). *Integrated Science: Book 2*. Durham,
NC: Carolina Academic Press.

Hill, S., Shaw, R., Carter, G., & Jones, M.G. (1990). *Integrated Science: Book 1*. Durham,
NC: Carolina Academic Press.

Jones, M.G. (1989). *Project Estuary.* North Carolina Estuarine Research Reserve Program: Raleigh, N.C.

Miller, G.C., Jones, M.G., & Walters, J. (1987). *Laboratory Manual in General Zoology*. Winston-Salem, NC: Hunter Publishing Company.

Miller, G.C., & Jones, M.G. (1983). *Laboratory Manual in General Zoology*. Winston-Salem, NC: Hunter Publishing Company.

Miller, G.C., Jones, M.G., & Garner, F. M. (1980). *Laboratory Manual in General Zoology*.
Winston-Salem, NC: Hunter Publishing Company.

Book Chapters

Hite, R., Childers, G., & Jones, M. G. (Invited, in press). Active Learning at Home: Using 3D Virtual Reality Viewers to Explore the Human Heart for High School Students. In F. Allaire & J. E. Killham (Eds.), *Teaching and Learning Online: Science for Secondary Grade Levels* (pp. TBD-TBD). Information Age Publishing.

Carrier, S. & Jones, M.G. (in press). Getting Down and Dirty. In S. (S. K.) Jeong, L. A. Bryan, D. J. Tippins, and C. M. Sexton (Eds.) *Science Classroom Cases of Elementary Science Teaching and Learning – Navigating the Challenges and Contemplating Actions in the 21st Century* (pp. 1-3). Springer.

Jones, M. G., Ennes, M. (2021, in press). Night skies and butterflies: Leisure science activities and STEM interests. In J. Diamond & S. Rosenfeld (Eds.) *Amplifying Informal Science Learning*. Routledge.

Jones, M. G., Blonder, R., & Kähkönen, A. (2021). Challenges in Nano Education. In, (Ed.) *21st Century Nanoscience: A Handbook.* (pp. 6-1 - 6-5). New York, NY: Taylor and Francis.

Delgado, C., Jones, M. G., & Parker, D. (2021). Crosscutting Concept: Scale Proportion and Quantity. In, J. Nordine and O. Lee (Eds.), *Crosscutting Concepts: Strengthening Science and Engineering Learning.* Arlington, VA: National Science Teachers Association Press.

Ennes. M., Jones. M. G. (2020). Connecting Underrepresented Families to Their Local Environment. In J. S. Gruber (Ed.), *How Communities Thrive: Twelve Principles for a Healthy Future* (pp. 249-250). New Society Publishers.

Rende, K., Jones, M.G., Ward, R. (2019).Investigating Online Open Forums as Educational Spaces for Natural Hazards Literacy Learning.In Levrini, O. & Tasquier, G. (Eds.), *Electronic Proceedings of the ESERA 2019 Conference. The Beauty and Pleasure of Understanding: Engaging with Contemporary Challenges Through Science Education, Part 4* (co-ed. Haglund, J. & Bruun, J.), (pp. 521-529). Bologna: ALMA MATER STUDIORUM – University of Bologna. 978-88-945874-0-1978-88-945874-0-1

Hite, R., Childers, G., & Jones, M.G. (2019). Hardware Affordances and Challenges to Produce Presence and Learning in K-20 Science Virtual Reality Environments. In A. Zhang & D. Cristol (Eds.), *Handbook of Mobile Teaching and Learning* (2nd ed.) (pp. 1-12). Heidelberg, Germany: Springer Nature. [https://doi.org/10.1007/978-3-642-41981-2\_123-1](https://na01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1007%2F978-3-642-41981-2_123-1&data=02%7C01%7CRebecca.Hite%40ttu.edu%7Cd02bdcc26bda44e1073408d65ad0a930%7C178a51bf8b2049ffb65556245d5c173c%7C0%7C0%7C636796249568516057&sdata=FKfKK1HHOZgEYfco9HDG7214lMlZfEwvQKVVG3iGl3U%3D&reserved=0)

Jones, M. G., & Ennes, M. (2018). High-Stakes Testing. In *Oxford Bibliographies in Education,* A. Hynds (Ed.). New York, NY: Oxford University Press.

Lee, T. & Jones, M. G. (2018). Instructional Representations as Tools to Teach Systems Thinking. In K. Daniel (Ed.), *Towards a Framework for Representational Competence in Science Education*, (pp 133-153). Dordrecht, The Netherlands: Springer Netherlands. <https://www.springer.com/gp/book/9783319899435>

Jones, M. G., Childers, G., Emig, B., Chevrier, J., Stevens, V., & Tan, H. (2016), The Efficacy of Visuohaptic Simulations in Teaching Concepts of Thermal Energy, Pressure and Random Motion. In N. Papadouris, A. Hadjigeorgiou, & C. Constantinou (Eds), *Insights from Research in Science Teaching and Learning* (pp.73-86). Dordrecht, The Netherlands: Springer Netherlands.

Jones, M. G. (2015). Science Kits. In L. Rennie and R. Gunstone (Eds.), *Encyclopedia of Science Education* (pp. 1-2 ). Dordrecht, The Netherlands: Springer Netherlands

Jones, M.G. & Magana, A. (2015). Haptic Technologies to Support Learning. In J.M. Spector (Ed.), *Encyclopedia of Educational Technology,* Sage Publications(pp. 331-332). Thousand Oaks,
CA: Sage.

Blonder, R., Benny, N., & Jones, M. G. (2014). Teaching Self-Efficacy of Science Teachers. In C. Czerniak, R. H. Evans & J. Luft (Eds.), *The Role of Science Teachers' Beliefs in International Classrooms: From Teacher Actions to Student Learning* (pp. 3-15). Rotterdam, The Netherlands: Sense Publishers.

Childers, G. & Jones, G. (2014). Students as Virtual Scientists: A Review of Remote Microscopy Use in Education. In A. Mendez-Vilas (Ed.), *Microscopy: Advances in Scientific Research and Education* (1195-1198). Badajoz, Spain: Formatex Research Center.

Jones, M. G. & Legon, M. (2014). Teacher Attitudes and Beliefs: Reforming Practice. In N. Lederman & S. Abell, (Eds), *Handbook of Research on Science Teaching (pp. 830-847)*. Routledge, NY.

Jones, M. G. (2013). Conceptualizing Size and Scale. In R. Mayes & L. Hatfield (Eds). *Quantitative Reasoning in Mathematics and Science Education, Monograph No. 3* (pp. 147-154). Laramie, Wyoming: University of Wyoming.

Jones, M. G., & Broadwell, B. (2008). Visualizing Without Vision. In J. Gilbert, M. Nakhleh, and M. Reiner (Eds.), *Visualization: Theory and Practice in Science Education (pp.* 283-294). Dordrecht, The Netherlands: Springer Netherlands

Jones, M. G. (2008). Exploring Nanoscale Science With Middle and High School Students. In A. Sweeney and S. Seal (Eds.), *Nanoscale Science and Engineering Education: Issues, Trends, and Future Directions*. Stevenson Ranch, CA: American Scientific Publishers.

Jones, M. G., & Carter, G. (2006). Science Teacher Attitudes and Beliefs. *Handbook of Research on Science Teaching*. S. Abel and N. Lederman (Eds.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Paechter, M., Jones, M. G., Tretter, T., Bokinsky, A., Kubasko, D., Negishi A. & Andre, T. (2006). Hands-On in Science Education: Multimedia Instruction That is Appealing to Female and Male Students. In D. Grabe & L. Zimmermann (Eds.), *Multimedia Applications in Education* (p. 78-85). Graz: FH Joanneum. (Best Paper Award, September, 6th 2006).

Jones, M.G., & Edmunds, J. (2005). Models of Elementary Science Instruction: Roles of Science Resource Teachers. In K. Appleton, (Ed.), *Elementary Science Teacher Education: Contemporary Issues and Practice*. Mahwah, New Jersey: Lawrence Erlbaum in association with AETS.

Taylor, R., Borland, D., Brooks, F., Falvo, M., Guthold, M., Hudson, T., Jeffay, K., Jones, M. G., Marshburn, D., Papadakis, S., Qin, L., Seeger, A., Smith, F., Sonnenwald, D., Superfine, R., Washburn, S., Weigle, C., Whitton, M., Williams, P., Vicci, L., Robnette, W. (2004). Visualization and Natural Control Systems for Microscopy. In C. Johnson and C. Hansen (Eds.). *Visualization Handbook (pp.* 875-900). Burlington, MA: Academic Press.

Jones, M. G., Bokinsky, A., Tretter, T., Negishi, A., Kubasko, D., Superfine, R., Taylor, R. (2003). Atomic Force Microscopy With Touch: Educational Applications. *Science, Technology and Education of Microscopy: An Overview*, Vol. II, (pp. 776-686). A. Mendez-Vilas, (Ed.). Madrid, Spain: Formatex.

Malloy, C., & Jones, M. G. (2001). An Investigation of African-American Students' Mathematical Problem Solving. In J. Sowder & B. Schappelle (Eds*.) Research, Reflection, and Practice* (pp. 91-195). Reston, VA: NCTM.

Superfine, R., Falvo, M., Steele, J., Matthews, G., Guthold, M., Erie, D., Helser, A., Jones, M. G., Taylor, R., Washburn, S. (2000). Touching on the Nanometer Scale: Slip, Roll and Tear. In *Microbeam Analysis 2000*, 165 (pp. 369-370). Institute of Physics Conference Series.

Jones, M. G., & Carter, G. (2000). Grupos Pequenos e Construoes Partilhadas. In J. J. Mintzes, J. H. Wandersee, & J. D. Novak (Eds.), *Ensinando Ciencia Para a Compreensao: Uma Visao Construtivista* (pp. 232-247). Lisbon, Portugal: Platano Edicoes Tecnicas. (Portuguese translation of English edition).

Jones, M.G. (1999). Cooperative Logic: Which School is a ‘True’ Middle School? In S. Totten (Ed.), *Preparing Middle Level Educators: Practicing What We Preach* (pp. 16-20). New York, NY: Falmer.

Jones, M.G. (1999). Adolescent Profiles: Characteristics of Early Adolescence. In S. Totten (Ed.), *Preparing Middle Level Educators: Practicing What We Preach* (pp. 249-252). New York, NY: Falmer.

Jones, M.G. (1999). Cultural Queries: Exploring Gender and Multicultural Issues. In S. Totten (Ed.), *Preparing Middle Level Educators: Practicing What We Preach* (pp. 245-248). New York, NY: Falmer.

Jones, M.G., & Carter, G. (1997). Small Groups and Shared Constructions. In J. Mintzes, J. Wandersee, & J. Novak, (Eds.), *Teaching Science for Understanding: A Human Constructivist View* (pp. 261-278). Educational Psychology Series, San Diego, CA: Academic Press.

Jones, M.G. (1996). The Constructivist Leader. In J. Rhoton & P. Bowers (Eds.), *Issues in Science Education* (pp. 140-148). Arlington, VA: National Science Teachers Association.

Jones, M.G. (1995). Gender Equity for the Twenty-First Century. In B. Day (Ed.), *Education for the Twenty-First Century: Key Issues: Leadership, Legislation, and Learning* (pp. 425-440). Austin, TX: The Delta Kappa Gamma Society International.

Refereed Publications

Gardner, G., Jones, M.G., Moore, M., Patel, E., & Ramos, M. (under review). *Discipline-Specific Scale Conceptions and Reasoning*.

Rende, K., Fromson, K., Jones, M.G., Ennes, M. (in press). The Privilege of Low Pay: Informal Educators’ Perspectives on Workforce Equity and Diversity. *Journal of Museum Education*.

Jones, M. G., Chesnutt, K., Ennes, M., Macher, D., & Paechter, M. (under review). *Measuring Science Capital, Science Attitudes, and Science Experiences in Elementary and Middle School Students*.

Refvem, E., Jones, M. G., Rende, K., Carrier, S., & Ennes, M. (2021). The Next Generation of Science Educators: Museum Volunteers. *Journal of Science Teacher Education.* <https://doi.org/10.1080/1046560X.2021.1929713>

Ennes, M. & Jones, M. G. (2021). Building a Science Community: Family Science Programs. *Science Scope*, 44(4). <https://www.nsta.org/science-scope/science-scope-marchapril-2021/building-science-community>

Ennes, M., Lawson, D., Stevenson, K., Peterson, N., & Jones, M. G. (2021). It’s About Time: Perceived Barriers to In-Service Teacher Climate Change Professional Development. *Environmental Education Research, DOI:* 10.1080/13504622.2021.1909708.

Jones, M. G., Chesnutt, K., Ennes, M., Mulvey, K.L., & Cayton, E. (2021). Factors Predicting Future Science Task Value. *Journal of Research in Science Teaching, 58*(7), 937-955.

Hite, R., Childers, G., Jones, M. G., & Corin, E., & Pereyra, M. (2021). Describing the Experiences of Students With ADHD Learning Science Content With Emerging Technologies. *Journal of Science Education for Students With Disabilities*, 24(1),12.

Rende, K., Jones, M.G., Ward, R. (in press).Investigating Online Open Forums as Educational Spaces for Natural Hazards Literacy Learning*. Electronic Proceedings of the ESERA 2019 Conference. Research, Practice and Collaboration in Science Education*. Bologna, Italy: University of Bologna.

Jones, M.G., Lee, T., Carrier, S.J., Madden, L., Cayton, E., Chesnutt, K., Ennes, M., Huff, P., & Phillips, L., (2020). White Lab Coats and Elementary Students’ Science Self-Concept and Science Self-Efficacy. *Science Educator*, *28*(1), 1-7.

Jones, M. G. & Ennes, M. (in press). Family Science Clubs: Building Capacity, Science Interests, and Career Aspirations. *Science and Children*.

Ennes, M., Jones, M. G., Chesnutt, K., Cayton, E., Childers, G. M. (under review). Building Science Expectancy Value and Experiences Though Family Museum Programming.

Rende, K., Jones, M.G., Refvem. E. Carrier, S., Ennes, M. (submitted).Accelerating High School Students’ STEM Career Trajectories Through Informal Science Volunteer Programs. *Cultural Studies in Science Education*.

Hite, R., Jones, M. G., Childers, G., Ennes, M., Chesnutt, K., Pereyra, M., & Cayton, E. (submitted). The Utility of 3D, Haptic-Enabled, Virtual Reality for Learning Complex Biological Systems: Students’ Knowledge of the Human Heart.

Jones, M. G., Ennes, M., Weedfall, D., Chesnutt, K., Cayton, E., (2020). The Development and Validation of a Measure of Science Capital, Habitus and Future Science Interests. *Research in Science Education*. 1-17. DOI: 10.1007/s11165-020-09916-y

Jones, M. G., Childers, G., & Stanley, R. (2020). Science Instruction in STEM and Non-STEM High Schools. *Electronic Journal for Research in Science and Mathematics Education, 24*(4), 69-90.

Ennes, M., Jones, M. G., Chesnutt, K., (2020). Evaluation of Educator Self-Efficacy in Informal Science Centers. *Journal of Museum Education*, 45(3), 327-339.

Ennes, M., Jones, M. G., Childers, G., Chesnutt, K., & Cayton, E. (under review). Hidden Science Capital: Parent and Youth Perceptions of Family Science Capital.

Carrier, S.J., Jones, M.G., Ennes, M., Madden, L., Lee, T., Cayton, E., Chesnutt, K., Huff, P., Phillips, L., & Bellino, M. (2020). Stereotypes of Scientists: Seeds of Progress and Recommendations for Elementary Teachers. *Science Educator*, 27(2), 1-7.

Ertl, B., Luttenberger, S., R Lazarides, R., Jones, M. G., Paechter, M. (2019). Gendered Paths into STEM. Disparities Between Females and Males in STEM Over the Life-Span. *Frontiers in Psychology, Educational Psychology*, *10*, 2758.

Jones, M. G., Lee, T., Chesnutt, K., Carrier, S., Ennes, M., Cayton, E., Madden, L., & Huff, P. (2019). Enclothed Cognition: Putting Lab Coats to the Test. *International Journal of Science Education, 42*(14), 1962-1976.

Jones, M. G., Childers, G., Corin, E., Chesnutt, K., & Andre, T. (2019). Free Choice Learning and STEM Career Choice. *International Journal of Science Education, Part B, 9*(1), 29-39.

Hite, R., Jones, M.G., Childers, G., Chesnutt, K., Corin, E. N., & Pereyra, M.  (2019)*.*Pre-Service and In-Service Science Teachers’ Technological Acceptance of 3D, Haptic-Enabled Virtual Reality Instructional Technology*.  Electronic Journal of Science Education, 23*(1).

Chesnutt, K., Jones, M. G., Hite, R., Cayton, E., Ennes, M., Corin, E. (2018). Next generation Crosscutting Themes: Factors That Contribute to Students’ Understandings of Size and Scale. *Journal of Research in Science Teaching, 55(6),* 876-900.

Chesnutt, K., Gail Jones, M., Corin, E. N., Hite, R., Childers, G., Perez, M. P., & Ennes, M. (2019). Crosscutting Concepts and Achievement: Is a Sense of Size and Scale Related to Achievement in Science and Mathematics? *Journal of Research in Science Teaching*, *56*(3), 241-371.

Hite, R., Jones, M. G., Andre, T., Childers, G., and Corin, E. (2019). Female and Minority Experiences in an Astronomy-Based Science Hobby. *Cultural Studies in Science Education*, *14*(4), 937-962.

Hite, R., Jones, M. G. (2019). Investigating Potential Relationships Between Adolescents’ Cognitive Development and Perceptions of Presence in 3D, Haptic-Enabled, Virtual Reality Science Instruction. *Journal of Science Education and Technology 28*(3), 265-284*.*

Jones, M. G., Childers, G., Andre, T., Corin, E. N., & Hite, R. (2018). Citizen Scientists and Non-Citizen Scientist Hobbyists: Motivation, Benefits, and Influences. *International Journal of Science Education, Part B,* *8*(4), 287-306.

Lee, T., & Jones, M. G. (2018). Elementary Teachers’ Selection and Use of Visual Models. *Journal of Science Education and Technology, 27*(1), 1-29.

Corin, E., Jones, M. G., Andre, T., Childers, G., & Stevens, V. (submitted). Comparison of the Influences, Interests, Motivations and Participation of Male and Female STEM Hobbyists in Young Adulthood, Middle Adulthood, and Older Adulthood. Paper submitted for review.

Ennes, M., Kubasko, D, & Jones, M.G. (2017). Inquiry into Action: Ecosystems and Animals. *Science Scope, 41*(3), 28-40.

Corin, E., Jones, M. G., Andre, T., & Childers, G., (2017). Characteristics of Lifelong Science Learners: An Investigation of STEM Hobbyists. *International Journal of Science Education, Part B, 8*(1), 53-75.

Magana, A., Sanchez, K., Shaikh, U., Jones, M. G., Tan, H., Guyaquil, A., & Benes, B. (2017). Exploring Multimedia Principles for Supporting Conceptual Learning of Electricity and Magnetism with Visuohaptic Simulations. *Computers in Education*, *8*(2), 8-23.

Lee, T.,Jones, M.G., & Chesnutt, K. (2017). Teaching Systems Thinking in the Context of the Water Cycle. *Research In Science Education,* 1-36*.*

Madden, L., & Jones, M. G., & Childers, G. (2017). Teacher education: Modes of communication within synchronous and asynchronous communication platforms. *Journal of Classroom Interactions, 52*(2) 16-30.

Childers, G., & Jones, M. G. (2017). Learning From a Distance: High School Students’ Perceptions of Virtual Presence, Motivation, and Science Identity During a Remote Microscopy Investigation. *International Journal of Science Education, 39*(3), 257-273.

Gardner, G., Jones, M. G., Albe, V., Blonder, R., Laherto, A., & Paechter, M. (2017). Factors Influencing Postsecondary STEM Students’ Views of the Public Communication of an Emergent Technology: A Cross-National Study from Five Universities. *Research in Science Education, 47*, 1011-1029.

Delgado, C., Jones, G., You, H. S., & Halberda, J. (2017). Scale and Evolutionarily-Based Approximate Number System: An Exploratory Study. *International Journal of Science Education, 39*(8), 1008-1024.

Jones, M. G., Hite, R., Childers, G., Corin, E., Pereyra, M., & Chesnutt, K., (2016). Perceptions of Presence in 3-D, Haptic-Enabled Virtual Reality Instruction. *International Journal of Education and Information Technologies, 16*, 73- 81.

Hite, R.**,** Jones, M. G., & Jur, J. S.  (2016). Engineering Imagination with Ideation*.* *Journal of Interdisciplinary Teacher Leadership, 1(*1)*.*

Jones, M. G., Corin, E., Andre, T., Childers, G., & Stevens, V. (2017). Factors Contributing to Lifelong Science Learning: Amateur Astronomers and Birders. *Journal of Research in Science Teaching, 54*(3), 412-433.

Forrester, J., & Jones, M. G. (2015). The Tears and Trophies of Science Competitions. *Science Scope, 38*(8), 6,8-9.

Jones, M. G., Hite, R., Childers, G., Corin, E., Pereyra, M., Chesnutt, K., & Goodale, T.  (2015). Teachers’ and Students’ Perceptions of Presence in Virtual Reality Instruction. Paper presented at the World Scientific and Engineering Academy and Society: 11th International Conference on Engineering Education, University of Salerno, Salerno, 27-29 June.  Salerno, Italy: WSEA.

Childers, G., Watson, K., Jones, G., Williamson, K., & Hoette, V. (2015). Touching the Stars: Making Astronomy Accessible for Students With Visual Impairments. *Science Scope 38*(9), 20-26.

Corin, E. N., Jones, M. G., Andre, T., Childers, G. M., & Stevens, V. (2015). Science Hobbyists: Active Users of the Science-Learning Ecosystem. *International Journal of Science Education, Part B*, *7*(2), 161-180.

Jones, M. G. (2015). Precollege Nanotechnology Education: A Different Kind of Thinking. *Nanotechnology Review, 4*(1), 117-127.

Lancaster, M., & Jones, M. G. (2015). Science Meets Engineering: Applying the Design Process to Monitor Leatherback Turtle Hatchlings. *Science Scope, 38*(9), 53-62.

Childers, G. & Jones, M. G. (2015). Students as Virtual Scientists: An Exploration of Students’ and Teachers’ Perceived Realness of a Remote Electron Microscopy Investigation. *International Journal of Science of Education*, *137*(15), 2433-2452.

Jones, G., Childers, G., Emig, B., Chevier, J., Tan, H., Stevens, V., & List, J. (2014). The Efficacy of Haptic Simulations to Teach Students with Visual Impairments about Temperature and Pressure. *Journal of Visual Impairment and Blindness, 108*(1), 55-61*.*

Gardner, G.E., & Jones, M.G. (2014). Exploring Pre-Service Teachers' Perceptions of the Risks of Emergent Technologies: Implications for Teaching and Learning. *Journal of Nano Education, 6*, 39-49.

Madden, L., Jones, M., G., & Blanchard, M. (2013). Shared Photonarratives in an Online Master’s Course: Reflection, Context and Community. *Contemporary Issues in Technology and Teacher* *Education, 13*(1), 41-60.

Jones, M.G., Paechter, M., Gardner, G., Yen, I., Taylor, A., & Tretter, T. (2013). Teachers’ Concepts of Spatial Scale. An International Comparison Between Austrian, Taiwanese, and the United States. *International Journal of Science Education, 35*(14), 2462-2482.

Jones, M. G., Gardner, G., Robertson, L., & Robert, S. (2013). Science Professional Learning Communities: Beyond a Singular View of Teacher Development. *International Journal of Science Education, 35*(10), 1756-1774.

Zhu, Y. Tracy,J., Dong, D., Jiang, X., Jones, M.G., & Childers, G. (2013). Teaching a Multidisciplinary Nanotechnology Laboratory Course to Undergraduate Students. *Journal of Nano Education, 5(1),* 1-10.

Tretter, T. R., Jones, M. G., & Falvo, M. R., (2013). Nanoscience for All: Strategies for Teaching Nanoscience to Undergraduate Freshmen Science and Non-Science Majors. *Journal of Nano Education, 5*(1), 1-9.

Robertson, L. & Jones, M.G. (2013). Chinese and US Middle School Science Teachers’ Autonomy, Motivation, and Instructional Practices. *International Journal of Science Education, 35*(9), 1454-1489. doi:10.1166/jne.2013.1031

Jones, M.G., Blonder, R., Gardner, G., Albe, V., Falvo, M., Chevrier, J. (2013). Nanotechnology and Nanoscale Science: Educational Challenges Educating the Next Generation. *International Journal of Science Education, 35*(9), 1490-1512.

Jones, M. G., Gardner, G., Lee, T., Poland, K., & Robert, S. (2013). The Impact of Microbiology Instruction on Students’ Perceptions of the Risks of Microbial Illness. *International Journal of Science Education, Part B: Communication and Public Engagement, 3*(3), 199-213.

Jones, M. G., Childers, G., Stevens, V., & Whitley, B. (2012). Citizen Scientists: Investigating Science in the Community. *The Science Teacher, 79*(9), 54-57.

Taylor, A., & Jones, M. G. (2012). Students’ and Teachers’ Application of Surface Area to Volume Relationships. *Research in Science Education, 41*(3), 357-368.

Jones, M. G., Forrester, J., Taylor, A., & Gardner, G. (2012). Accuracy of Measurement Estimation: Context, Units, and Logical Thinking. *School Science and Mathematics, 112*(3), 171-178.

Jones, M. G., Forrester, J. H., Robertson, L. E., Gardner, G. E., & Taylor, A. R. (2012). Students’ Accuracy of Measurement Estimation in Students with Visual Impairments. *The Journal of Visual Impairment and Blindness, 106*(6),339-350*.*

Jones, M. G., Robertson, L., Gardner, G., Dotger, S., & Blanchard, M. (2012). Differential Use of Elementary Science Kits: One Size Does Not Fit All. *International Journal of Science Education, 34*(15), 2371-2391.

Gardner, G. E. & Jones, M. G. (2011). Perspectives and Practices: Biology Graduate Teaching Assistants' Framing of a Controversial Socioscientific Issue. *International Journal of Science Education. 33*(8), 1031-1054.

Gardner, G., & Jones, M. G. (2011). Pedagogical Preparation of the Science Graduate Teaching Assistant: Challenges and Implications. *Science Educator, 20*(2), 31-41.

Gardner, G., & Jones, M. G. (2011). Science Instructors’ Perceptions of the Risks of Biotechnology: Implications for Science Instruction. *Research in Science Education, 41*(5), 711-738.

Jones, M. G., Taylor, A., & Forrester, J. (2011). Developing a Scientist: A Retrospective Look. *International Journal of Science Education, 33*(12), 1653-1673.

Jones, M.G., Krebs, D., & Banks, A. (2011). We Scream for Nano Ice Cream. *Science Activities, 48(4)*, 107-110.

Jones, M. G., Gardner, G., Taylor, A., Wiebe, E., & Forrester, J. (2011). Conceptualizing Magnification and Scale: The Roles of Spatial Visualization and Logical Thinking. *Research in Science Education, 41*(3), 357-368.

Tretter, T., Jones, M. G., & Falvo, M. (2010). Impact of Introductory Nanoscience Course on College Freshmen’s Conceptions of Spatial Scale. *Journal of Nano Education, 2,* 53-66.

Gardner, G., Jones, M. G., Taylor, A., & Forrester, J. (2010). Students’ Risk Perceptions of Nanotechnology Applications: Implications for Science Education. *International Journal of Science Education, 32*(14), 1951-1969.

Gardner, G., Jones, M. G., & Ferzli, M. (2009). Popular Media in the Biology Classroom: Viewing Popular Science Skeptically. *The American Biology Teacher, 71*(6), 351- 354.

Gardner, G., & Jones, M. G. (2009). Bacteria Buster: Testing Antibiotic Properties of Silver Nanoparticles. *The American Biology Teacher, 71*(4), 231-234.

Gardner, G., Jones, M. G., & Falvo, M. (2009). ‘New Science’ and Societal Issues: Considering the Ethics of Nanosensors. *The Science Teacher, 76*(7), 49-53.

Robertson, L., & Jones, M. G. (2009). Biological Clocks and Circadian Rhythms. *Science Scope, 32*, 6, 41-47

Jones, M. G., & Taylor, A. (2009). Developing a Sense of Scale: Looking Backward. *Journal of Research in Science Teaching, 46*(4), 460-475.

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.

Jones, M. G., Taylor, A., & Broadwell, B. (2009). Concepts of Scale Held by Students with Visual Impairment. *Journal of Research in Science Teaching, 46*(5), 506-519.

Jones, M. G., Taylor, A., & Broadwell, B. (2009). Estimating Linear Size and Scale: Body Rulers. *International* *Journal of Science Education, 31* (11), 1495- 1509.

Taylor, A., Jones, M.G., Broadwell, B., & Oppewal, T. (2008). Creativity, Inquiry, or Accountability? Scientists' and Teachers' Perceptions of Science Education. *Science Education, 92*(6), 1058-1075.

Taylor, A., & Jones, M. G. (2008). Proportional Reasoning Ability and Concepts of Scale: Surface Area to Volume Relationships in Science. *International Journal of Science Education, 31*(9), 1231-1247.

Minogue, J., & Jones, M. G. (2008). Measuring the Impact of Haptic Feedback Using the SOLO Taxonomy. *International Journal of Science Education, 31*, 1359-1378.

Jones, M. G. & Rua, M. (2008). Conceptual Representations of Flu and Microbial Illness Held By Students, Teachers, and Medical Professionals. *School Science and Mathematics, 108*(6), 263-278.

Jones, M. G., Tretter, T., Taylor, A., & Oppewal, T., (2008). Experienced and Novice Teachers’ Concepts of Spatial Scale. *International Journal of Science Education, 30*(3), 409-429.

Kubasko, D., Jones, M. G., Tretter, T. & Andre, T. (2008). Is it Live or is it Memorex? Students’ Synchronous and Asynchronous Communication with Scientists. *International Journal of Science Education, 30*(4), 495- 514.

Taylor, A., Jones, M. G., & Pearl, T. (2008). Bumpy, Shaky, Sticky: Nanoscale Science and the Curriculum. *Science Scope, 31*, 28-35.

Jones, M. G., Tretter, T., Paechter, M., Kubasko, D., Andre, T., Negishi, A., Bokinsky, A. (2007). Differences in African American and European American Students’ Engagement with Nanotechnology Experiences: Perceptual Position or Assessment Artifact? *Journal of Research in Science Teaching, 44*, (6), 787-789.

Jones, M. G., Taylor, A., Minogue, J., Broadwell, B., Wiebe, E., & Carter, G. (2007). Understanding Scale: Powers of Ten. *Journal of Science Education and Technology Education*, *16*(2), 191-202.

Minogue, J., Jones, M. G., Broadwell, B., & Oppewal, T. (2006). The Impact of Haptic Augmentation on Middle School Students’ Conceptions of the Animal Cell. *Journal of Virtual Reality, 10*(3-4), 293-305.

Minogue, J., Jones, M. G., and Broadwell, J. (2006). Exploring Cells From Inside Out: New Tools for the Classroom. *Science Scope, 29*(6), 28-32.

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, *Journal of Science Education and Technology, 15*, 1573-1839.

Falvo, M., Jones, M. G., Broadwell, B. (2006). Self-Assembly – How Nature Builds. *Science Teacher, 73*(9), 54-57.

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, 83,* 282-319.

Jones, G., & Rua, M. (2006). Conceptions of Germs: Expert to Novice Understandings of Microorganisms. *Electronic Journal of Science Education, 10*(3) [Online].

Tretter, T. R., Jones, M. G., & Minogue, J. (2006). Accuracy of Scale Conceptions in Science: Mental Maneuverings Across Many Orders of Spatial Magnitude. *Journal of Research in Science Teaching, 43*(10), 1061-1085.

Minogue, J. and Jones, M. G. (2005). Haptics in Education: Exploring an Untapped Sensory Modality. *Review of Educational Research*, *76*(3), 217-348.

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.

Jones, M. G., Broadwell, B., Falvo, M., Minogue, J., & Oppewal, T. (2005). It’s a Small World After All: Exploring Nanotechnology in Our Clothes. *Science and Children, 43*(2), 44-46.

Jones, M., Bokinsky, A., Tretter, T., & Negishi, A. (2005). A Comparison of Learning With Haptic and Visual Modalities. *Haptics-e The Electronic Journal of Haptics Research, 3*(5). Available: http://albion.ee.washington.edu/he/ojs/viewarticle.php?id=44.

Hardin, B., Jones, M. G., Figueras, O. (2005). More Than Clocks and Calendars: The Construction of Timekeepers by Eleven Kindergarten Children in Mexico and the United States. *Journal of Research in Childhood Education, 19,(*3), 223- 224.

Jones, M. G., Andre, T., Kubasko, D., Bokinsky, A., Tretter, T., Negishi, A., Taylor, R., Superfine, R. (2004). Remote Atomic Force Microscopy of Microscopic Organisms: Technological Innovations for Hands-On Science With Middle and High School Students. *Science Education, 88*, 55-71.

Painter, J., Jones, M. G., Kubasko, D., Tretter, T., Negishi, A., Andre, T. (2006). Pulling Back The Curtain: Scientists in the Classroom. *School Science and Mathematics, 106*(4), 181-190.

Tretter, T., & Jones, M. G. (2003). Relationships Between Inquiry-Based Teaching and Physical Science Standardized Test Scores. *School Science and Mathematics, 103*(7), 345-350.

Moyer, P. & Jones, M.G. (2003). Controlling Choice: Teachers, Students, and Manipulatives in Mathematics Classrooms. *School Science and Mathematics, 104*, 16-31.

Jones, M. G., Hargrove, T., & Jones, B. (2003). The Failed Metaphors of Teaching. *The School Administrator*, *60*(11), 26-28.

Carter, G., Jones, M.G., & Rua, M. (2003). The Effects of Partners’ Ability on the Achievement and Conceptual Organization of High Achieving Fifth Grade Students. *Science Education, 87*(1), 94-111.

Tretter, T., & Jones, M.G. (2003). A Sense of Scale. *Science Teacher,* *70* (1), 22-25.

Jones, M.G., Andre, T., Superfine, R., Taylor, R. (2003). Learning at the Nanoscale: The Impact of Students’ Use of Remote Microscopy on Concepts of Viruses, Scale, and Microscopy. *Journal of Research in Science Teaching, 40*, (3), 303-322.

Jones, M. G., & Brader-Araje, L. (2002). The Impact of Constructivism on Education: Language, Discourse, and Meaning. *American Communication Studies, 5*, 1-10.

Andre, T., Jones, M. G., Superfine, R., & Taylor, R. (2001). Andre, T., Jones, M. G., Superfine, R., & Taylor, R. (2001). Helping Teachers and Students Use Advanced Technology in Teaching High School Science: A Preliminary Feasibility Study of the Use of a WWW-Controlled Atomic Force Microscope in High School Science. *Technology and Teacher Education Annual, 3*, 2510-2515.

Jones, M. G., Brader-Araje, L., Carboni, L., Carter, G., Rua, M., Banilower, E., & Hatch, H. (2000). Tool Time: Gender and Students’ Use of Tools, Control, and Authority. *Journal of Research in Science Teaching, 37*(8), 760-783.

Jones, M. G., Carter, G., & Rua, M. (2000). Exploring the Development of Conceptual Ecologies: Communities of Concepts Related to Convection and Heat. *Journal of Research in Science Teaching, 37*, 139-159.

Jones, M.G., Howe, A., Rua, M. (2000). Gender Differences in Students' Experiences, Interests, and Attitudes Toward Science and Scientists. *Science Education, 84*, 180-192.

Jones, M.G., Rua, M., Carter, G. (1999). Children's Concepts: Tools for Transforming Science Teachers' Knowledge. *Science Education, 83*, 545-557.

Jones, M.G., Superfine, R., Taylor, R. (1999). Virtual Viruses. *Science Teacher, 66*(70), 48-50.

Galassi, J., Brader-Araje, L., Brooks, L., Dennison, P., Jones, M.G., Mebane, D., Richer, M., White, K., Vesilind, L. (1999). Emerging Results From a Middle School PDS: The McDougle-UNC Collaborative Inquiry Partnership Groups. *Peabody Journal of Education, 74*, 236-253.

Jones, M. G. (1999). Middle Schools: A Community of Many Voices. *Middle School Journal, 31*(2), 42-48.

Jones, M.G., Rua, M., & Carter, G. (1998). Science Teachers' Conceptual Growth Within Vygotsky's Zone of Proximal Development. *Journal of Research in Science Teaching, 35*(9), 967-985.

Vesilind, E. & Jones, M. G. (1998). Gardens or Graveyards: Science Reform and School Culture. *Journal of Research in Science Teaching, 35*(7), 757-775.

Malloy, C., & Jones, M. G. (1998). An Investigation of African American Students' Mathematical Problem Solving. *Journal of Research in Mathematics Education, 29*(8), 143-163.

Jones, M.G. (1996). Family Science: A Celebration of Diversity. *Science and Children, 34* (2), 31-33.Vesilind, E. & Jones, M.G. (1996). Hands-On: Science Education Reform. *Journal of Teacher Education*, *47*(5), 375-385.Jones, M.G. (1996). North Carolina's Wild Ponies. *The Journal, 4*(1), 36-40.

Meece, J., & Jones, M.G. (1996). Gender Differences in Motivation and Strategy Use in Science: Are Girls Rote Learners? *Journal of Research in Science Teaching, 33*(4), 393-406.

Jones, M.G. (1996). North Carolina's Estuaries: Rich Sources for Interdisciplinary Studies. *The League Journal, 17*, 2-6.

Jones, M. G., & Vesilind, E. (1996). Putting Practice into Theory: Changes in the Organization of Preservice Teachers' Pedagogical Knowledge. *American Educational Research Journal, 33*(1), 91-117.

Jones, M. G., & Vesilind, E. (1995). Preservice Teachers' Development of a Cognitive Framework for Class Management. *Teaching and Teacher Education, 11*(4), 313-330.

Jones, M. G. & Carter, G. (1995). Weather Folklore: Fact or Fiction. *Science and Children,
33*(1), 19-20.

Meece, J., & Jones, M.G. (1995). Girls in Mathematics and Science: Constructivism as a Feminist Perspective. *The High School Journal, 79*(6), 242-248.

Jones, M.G. (1994). Constructing Knowledge of Science Concepts. *The Journal, III*, 13-16.

Carter, G., & Jones, M.G. (1994). The Relationship Between Ability-Paired Interactions and the Development of Fifth Graders' Concepts of Balance. *Journal of Research in Science Teaching, 31*, 847-856.

Carter, G., & Jones, M.G. (1994). The Case of the Disappearing Peanuts. *Science Activities,
30*(4), 8-10.

Jones, M.G. (1994). Fragile Areas Along the Sea: National Estuarine Research Reserve System. *Wetland Journal, 6*, 4-5.

Markham, K., Mintzes, J., & Jones, M. G. (1994). The Concept Map as a Research and Evaluation Tool: Further Evidence of Validity. *Journal of Research in Science Teachin*g*, 31*(1), 91-101.

Jones, M. G., & Gerig, T. (1994). Silent Students: Characteristics, Achievement and Teacher Expectations. *Elementary School Journal, 95*, 169-182.

Jones, M. G., & Carter, G. (1994). Verbal and Non-Verbal Behavior of Ability-Grouped Dyads. *Journal of Research in Science Teaching, 31*(6), 603-619.

Jones, M.G., & Vesilind, E. (1994). Changes in Student Teachers' Interactions With Pupils. *Journal of Classroom Interactions, 28*(1), 24-28.

Jones, M. G. (1994). Assessment Potpourri. *Science and Children, 32*(2), 14-17.

Jones, M. G. (1994). Assessment Takes Wing. Reprinted from the *Science Scope* in *Tool Kit*, published by the Laboratory Program on Science and Mathematics Assessment. Northwest Regional Educational Laboratory.

Jones, M. G. (1994). Performance-Based Assessment for Middle School Science Programs. *Middle School Journal*, *25*(4), 35-38.

Jones, M. G. (1994). Tides of Time. Reprinted in *Project Wet Curriculum and Activity Guide*.

Jones, M.G., & Gerig, T. (1993). Ability Grouping and Classroom Interactions. *Journal of Classroom Interactions*, *29*, 27-34.

Jones, M.G., De Lucia, S. & Davis, J. (1993). From Junior High to Middle School: How Science Instruction is Affected. *NASSP Bulletin, 77*(556), 89-96.

Jones, M.G. & Carter, G. (1993). Families+ Math + Science = Formula for Success. *The Journal of the North Carolina League of Middle Level Schools, 14*, 11- 13.

Jones, M.G. (1993). Bioluminescence: A Glow in the Dark. *Science Teacher, 60*(1), 19-21.

Jones, M.G. & Moore, E. (1993). Teacher Education Through Partnership: A Clinical-Collaborative Program. *North Carolina Journal of Teacher Education, VI* (1), 42-53.

Jones, M. G. (1992). Assessment Takes Wing. *Science Scope, 15*(6), 19-20.

Jones, M.G. (1991). Biological Clocks. *Science Teacher, 58*(3), 16-20.

Jones, M. G. (1991). Biological Clocks. Reprinted from *Science Teacher* in the *Social Issues Resources Series*.

Jones, M. G. (1991). Gender Issues in Teacher Education. Reprinted from *Journal of Teacher Education* in F. Schultz (Ed.) *Annual Editions: Education 91/92*, 141-146.

Jones, M.G. (1991). Creating a Cooperative Middle School Through Cooperative Learning. *The League Journal, 12* (1), 21-23.

Jones, M.G. (1990). Action Zone Theory and Target Students in Science Classrooms. *Journal of Research in Science Teaching, 27*(7), 651-660.

Jones, M.G. (1990). Gender Differences in Science Competitions. *Science Education, 75*(2), 159-167.

Jones, M.G., & Wheatley, J. (1990). Gender Differences in Teacher-Student Interactions in Science Classrooms. *Journal of Research in Science Teaching, 27*(9), 861-874.

Spence, L., Armstrong, N., & Jones, M.G. (1990). Top Priorities in Estuarine Education Concepts. *Current: The Journal of Marine Education, 10*(1), 28-30.

Jones, M. G. (1990). Cooperative Learning: Developmentally Appropriate for Middle Level Students. *Middle School Journal, 22*(1), 12-16.

Jones, M. G. (1990). North Carolina Estuarine Research Reserves. *Current: The Journal of Marine Education, 10*(1), 7-10.

Jones, M.G. (1990). Estuaries in Your Biology Program. *Current: The Journal of Marine Education, 10*(1), 35-37.

Jones, M.G., & Wheatley, J. (1989). Gender Influences in Classroom Displays and Student-Teacher Behavior. *Science Education, 73*(5), 525-545.

Jones, M. G. (1989). Gender Issues in Teacher Education. *Journal of Teacher Education, 40*(1), 33-38.

Jones, M.G. (1989). Gender Bias in Classroom Interactions. *Contemporary Education, 60*(4), 218-222.

Jones, M.G. (1989). Biological Literacy. *American Biology Teacher, 51*(8), 480-481.

Jones, M.G. (1988). The Art of the Science Fair. *Science Scope, 12*(2), 10-11.

Jones, M.G., & Wheatley, J. (1987). Factors Influencing the Entry of Women in Science and Related Fields. *Science Education, 72*(2), 127-142.

Dissertation

Jones, M.G. (1987). *Gender Differences in Student-Teacher Interactions in Physical Science and Chemistry Classes.* North Carolina State University: Raleigh.

Other Scholarly Publications

Hite, R., Childers, G., Ennes, M. & Jones, M. G. , M. (2020). Quit Bugging Me: Controlling Mosquitoes to Stem Malaria Infection. *NSTA Reports, 31*(7), 17. (Reprinted from *Discovery Engineering in Biology*).

Ennes, M. & Jones, M. G. (2018). Lab Coats Help Students See Themselves as Future Scientists. *The Conversation.* Retrieved from: <https://theconversation.com/lab-coats-help-students-see-themselves-as-future-scientists-96333>

Jones, M.G., Taylor, A., & Falvo, M. (2010). Peak into NSTA press: What is scale. *NSTA Reports, 21*(7), 28-29. (Reprinted from *Extreme Science*).

Jones, M.G., Taylor, A., & Falvo, M. (2009). Oops I Did It Again. *NSTA Reports*, 21(2), 24. (Reprinted from *Extreme Science*.)

Jones, M. G. (2007) Nanoscale Education. *ASTC Dimensions*.

Jones, M. G., Falvo, M., Taylor, A., & Broadwell, B. (2007). Build a Virus. *The Science Reflector, 36*(2), <http://www.ncsta.org/reflector/archives/summer07/activity.html>.

Hargrove, T., Jones, M. G., Jones, B., Hardin, B., Chapman, L., & Davis, M. (2000). Unintended Consequences for High-Stakes Testing in North Carolina: Teacher Perceptions. *ERS Spectrum, 18*(4), 21-25.

Jones, M. G., Jones, D., Hardin, B., Chapman, L., Yarbrough, T., & Davis, M. (1999, November). The Impact of High-Stakes Testing on Teachers and Students. *Phi Delta Kappan, 81*(3),199-203.

Jeffay, K., Smith, F., Taylor, R., Bishop, G., Anderson, J., Superfine, R., & Jones, M. G. (1997). *Design Principles for Distributed, Interactive, Virtual Environments*.

Vesilind, E., & Jones, M. G. (1993). Through a Sideways Door: A Resource Model of Teacher Change. (Monograph) Chapel Hill, NC, UNC. *Mathematics and Science Education Network*.

Jones, M. G. (1991). Create an Invertebrate. Reprinted from *Project Estuary* in P. Keener & C. Camp, *Sea Things... Objectively, A Marine Education Activities Booklet, Grade 3* (pp. 24-26). South Carolina Sea Grant Publication.

Jones, M. G. (1991). Endangered, Threatened, Rare, or Extinct? Reprinted from *Project Estuary* in P. Keener & C. Camp, *Sea Things... Objectively, A Marine Education Activities Booklet, Grade 3*. (pp.44-48). South Carolina Sea Grant Publication.

Jones, M. G. (1991). The Tides of Time. Reprinted from *Project Estuary* in P. Keener & C. Camp, *Sea Things... Objectively, A Marine Education Activities Booklet, Grade 3*. (pp 27-35). South Carolina Sea Grant Publication.

Jones, M. G. (1991). The Tides of Time. Reprinted from P*roject Estuary* in B. Slattery, *WOW! The Wonders of Wetlands*. St. Michaels, Maryland: Environmental Concern Incorporated.

Jones, M.G. (1991). *Oceans Alive*. Chapel Hill, N.C.: Environmental Media Corporation.

Jones, M.G. (1991). *Seahouse*. Chapel Hill, N.C.: Environmental Media Corporation.

Jones, M.G. (1990). Fish Forms. Masthead, Mid-Atlantic Marine Education Association Newsletter, 10(2), 9-10.

Wheatley, J., Spence, L., & Jones, G. (1985). Studies I: Characteristics of Successful Student/Teacher Interaction in Marine Science Projects. Current: The Journal of Marine Education, 6(2), 20-21.

Wheatley, J., Spence, L., & Jones, G. (1985). Studies II: Some Characteristics of World of Water Student Winners. Current: The Journal of Marine Education, 6(2), 21.

Proceedings

Rende, K., Jones, M. G., & Ward, R. (2020). Investigating Online Open Forums as Educational Spaces for Hazards Literacy Learning. *Electronic Proceedings of the ESERA 2019 Conference.*

Jones, M. G., Childers, G., Andre, T., Corin, E., & Hite, R. (2016). Citizen Scientists and Science Hobbyists: Educating the Life-Long Learner. In J. Lavonen, K. Juuti, J. Lampiselkä, A. Uitto & K. Hahl (Eds.), *Electronic Proceedings of the ESERA 2015 Conference. Science Education Research: Engaging Learners for a Sustainable Future,* Part 8, (pp. 150-159). Helsinki, Finland: University of Helsinki. ISBN 978-951-51-1541-6

Jones, M. G., Hite, R., Childers, G., Corin, E., Pereyra, M., Chesnutt, K., & Goodale, T.  (2015). Teachers’ and Students’ Perceptions of Presence in Virtual Reality Instruction. *Proceedings of the 11th International Conference on Engineering Education*, University of Salerno, Salerno, 27-29 June (pp. 15-22).  Salerno, Italy: WSEA.

Jones, M. G., Andre, T., Childers, G., Corin, E., & Hite, R. (2014). Where Are the Women and Minority Fossil Collectors? A Study of the Development and Characteristics of Science Hobbyists. *The Paleontological Society Special Publications*, 13, 106-107*.*

Sanchez, K., Magana, A.J., Sederberg, D., Richards, G., Jones, M.G., & Tan, H. (2013). Investigating the Impact of Visuohaptic Simulations for Conceptual Understanding in Electricity and Magnetism. *Proceedings of the 120th ASEE Annual Conference & Exposition.* Atlanta, GA. June 23-26, 2013.

Taylor, A. & Jones, M. G. (2010). Applying Science Concepts: Factors That Influence Students’ Understandings of Surface Area to Volume. Paper in *Proceedings for the National Association of Research in Science Teaching*, Philadelphia, PA., March, 2010.

Jones, M. G., Taylor, A., Minogue, J., Broadwell, B., Wiebe, E., Carter, G. (April 15-18, 2007). The Efficacy of 'Powers of Ten': Concepts of Size and Scale. *Proceedings of the National Association of Research in Science Teaching Annual Conference*, New Orleans, LA. (P-125-201-200-237).

Taylor, A., Jones, M., Broadwell, B., & Oppewal, T.(April 15-18, 2007). Coordinating Science Learning: Navigating Tensions Between Scientists and Science Educators. *Proceedings of the National Association of Research in Science Teaching Annual Conference*, New Orleans, LA. (P-154-504-503-540).

Minogue, J., Jones, M. G., Oppewal, T., & Broadwell, B., (2006). The Impact of Haptic Feedback on Students' Understandings of the Animal Cell. *Proceedings of the National Association of Research In Science Teaching Annual Meeting*, San Francisco, CA.

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. *Proceedings of the National Association of Research In Science Teaching Annual Meeting*, San Francisco, CA.

Tretter, T., Jones, M. G., Minogue, J. (2006). Navigating Across Spatial Scales in Science: Different Worlds, Unifying Concept. *Proceedings of the National Association of Research In Science Teaching Annual Meeting*, San Francisco, CA.

Jones, M. G., Bokinsky, A., Andre, T., Kubasko, D., Negishi, A., Taylor, R., and Superfine, R. (2002). NanoManipulator Applications in Education: The Impact of Haptic Experiences on Students’ Attitudes and Concepts. *Proceedings of the IEEE Computer Science Haptics 2002 Symposium*, (pp. 295-298). Orlando, FL: IEEE Computer Society.

Superfine, R., Jones, M.G., & Taylor, R. (2000). Touching Viruses in a Networked Microscopy Outreach Project. *Proceedings of the Conference on K-12 Outreach from University Science Departments* (pp. 151-153). Raleigh, NC: North Carolina State University.

Jones, M.G., Brader-Araje, L., Carboni, L., Carter, G., & Rua, M. (1999). Paradoxes of Progress: The Intersection of Science Tools, Exploration, and Competition. *Proceedings of the Gender and Science Education (GASE) Colloquium*, (pp. 36-49). Boston, Mass.

Jones, M. G., Brader-Araje, L., Carboni, L., Carter, G., Rua, M. (1999). Paradoxes of Progress: The Intersection of Science Tools, Exploration, and Competition. In G. H. Hildebrand (Ed.), *Gazing into the Future: Proceedings of the Gender and Science Education (GASE) Colloquium*. Boston, The University of Melbourne, Parkville, Vic., Chapter 11.

Brader-Araje, L. & Jones, M.G. (1998). Tools of Gender: Conversation Space and Control During Dyad Interaction. *Proceedings of the Women's Studies Graduate Research Conference*, Durham, NC: Duke University.

Jones, M.G., & Vesilind, E. (1993). Changes in the Structure of Pedagogical Knowledge in Preservice Teachers. *Proceedings of the Third International Seminar on Misconceptions and Educational Strategies in Science and Mathematics*. Cornell College, Ithaca, New York.

Jones, M.G. (1991). Competitive Science: Gender Differences in the Physical and Biological Sciences. In L. Rennie, L. Parker, & G. Hildebrand (Eds.), *Proceedings of the Sixth International GASAT Conference* (pp. 261-269). Victoria, Australia: Key Centre.

Presentations

National and International Presentations

Rende, K., Fromson, K., & Jones, M. G. (2021, July). *Unpacking Privilege: Museum Educators’ Perspectives on Workforce Equity and Diversity*. Paper presented at the Visitor Studies Association virtual conference.

Ennes, M.,Lawson, D., Stevenson, K., Peterson, M. N., Jones, M. G. (2021, August). *It’s Time: Why Teachers Do Not Attend Climate Change Professional Development Opportunities*. Paper at the European Science Education Research Association virtual conference.

Rende, K., Jones, M.G., Nieuwsma, J., Carrier, S., Delgado, C., Grifenhagen, J., Gordon, K., Refvem, E., & Huff, P. (2021, August). *Evoking Awe: Incorporating Epistemic Emotions in Science Instruction.* [Paper presentation]. European Science Education Research Association. Braga, Portugal.

Refvem, E., Jones, M.G., Carrier, S., Lee, T., Taylor, A., Nieuwsma, J., Rende, K. (2021, August 30-September 3). *Formative Experiences That Influence Science Teacher Career Aspirations* [Paper presentation]. European Science Education Research Association (ESERA) Conference, Braga, Portugal.

Jones, M. G., Hite, R., Ennes, M.,Childers, G., Corin, E., Cayton, E. (2021, April). (*Re)discover Your Passion for Science and Engineering: Physical and Life Science Case Studies*. Presentation at the National Science Teaching Association virtual conference.

Refvem, E., Jones, M.G., Rende, K., Nieuwsma, J., Carrier, S., Ennes, M. (2021, April 9-12). *Nurturing Science Teaching Career Aspirations in a Museum Volunteer Program*. Paper presented at the American Educational Research Association (AERA) Annual Meeting, Orlando, FL.

Carrier, S.J., Jones, M.G., Nieuwsma, J, Rende, K., Refvem, E. (2021, January). *Teachers’ Feelings of Awe: An Examination of the Role of Awe in Science Instruction and Student Learning*. Association of Science Teacher Education (ASTE) virtual conference.

Hite, R., Childers, G., & Jones, M. G. (2021, January). *Describing the Affordances of Emerging Technologies for Diverse Learners.* Association of Science Teacher Education (ASTE) virtual conference.

Luft, J. & Jones, M. G. (2021, January). *Handbook of Research on Science Teacher Education*. Association of Science Teacher Education (ASTE) virtual conference.

Ennes, M., Jones, M. G., Childers, G., Chesnutt, K., & Cayton E. (2021, April). *Who Has a Ruler? Parent and Youth Perceptions of Family Science Capital*. National Association for Research in Science Teaching virtual conference.

Ennes, M.,Jones, M. G., Cayton, E., Childers, G., Chesnutt, K. (2021, April). *Building Science Capital and Science Habitus with Family Programming*. American Educational Research Association virtual conference.

Rende, K., Jones, M.G., Refvem, E., Carrier, S., Nieuwsma, J. (2021, April). *Selecting for Success: A Review of Application-based Informal Science Programs for High Schoolers*. American Educational Research Association Conference. Orlando, FL.

Rende, K., Jones, M.G., Refvem, E., Carrier, S., Ennes, M. (2021, April). "*A Leg Up": Accelerating High School Students' Career Trajectories Through Informal STEM Programs*. National Association for Research in Science Teaching Conference. Orlando, FL.

Hite, R.,Childers, G., & Jones M. G. (2021, April). *Describing Perceptions of Presence Among Students With ADHD in Using Emerging Technologies for Science Learning.* National Association for Research in Science Teaching Conference. Orlando, FL.

Nieuwsma & Jones M. G., Rende, K., Refvem, E., Carrier, S., Grifenhagen, J., Delgado, C., Huff, P. (2021, April). *Evoking Meaning and Connection: Using Awe to Teach Science.* National Association for Research in Science Teaching Conference. Orlando, FL.

Luft, J., Jones, M.G., Feldman, A., Manz, E., Stroupe, D., & Koomen, M., (2021, April). *Handbook of Research on Science Teacher Education*. National Association for Research in Science Teaching Conference. Orlando, FL.

Jones, M. G., Ennes, M., Chesnutt, K., Cayton, E., & Childers, G. (2021, April). *Factors Contributing to Career Aspirations: Access to Science Resources and People*. National Association for Research in Science Teaching Conference. Orlando, FL.

Hite, R.,Childers, G., & Jones M. G. (2020, October). *Affordances of 3D VR Technologies in Teaching Science to Neurodivergent Learners: A Case Study of Five Middle Grade Students With ADD/ADHD.* A research paper presentation for the 1st International conference on Science and Technology Education. Porto, Portugal & virtual.

Hite, R., Childers, G., & Jones M. G. (accepted, 2020). *3D VR Technologies Affordances to Support Science Learning for Neurodivergent Learners*. Paper Presentation for the Southeastern Association for Science Teacher Education (SASTE) Conference. Virtual.

Hite, R., Childers, G., & Jones M. G. (Submitted, 2020). Describing the Affordances of Emerging Technologies for Diverse Learners: An Embedded Case Study of Science Learning With 3D, Haptic, VR Among Students with ADHD. Research paper presentation for the Association for Science Teacher Education (ASTE) International Conference. Salt Lake, UT.

Ennes, M., Jones, M. G., Chesnutt, K., Cayton, E., Childers, G. (2020, April accepted). Identifying Hidden Capital: Parent and Youth Perceptions of Family Science Capital. American Educational Research Association. San Francisco, CA. (Presentation cancelled due to COVID-19)

Ennes, M., Jones, M. G., Cayton, E., Chesnutt, K., Huff, P. (2020, March accepted). Building the Cultural Wealth of Parents to Support Science Career Aspirations of Youth. Presentation at the National Association for Research in Science Teaching. Portland, OR. (Virtual presentation posting due to COVID-19)

Rende, K., Jones, M.G., Refvem, E., Ennes, M., Huff, P. (2020, April). The Next Generation of Science Educators: A Backdoor Approach to Nurturing Career Aspirations. Paper presented at American Educational Research Association. San Francisco, CA. (Presentation cancelled due to COVID-19)

Jones, M. (2020, Apr 17 - 21) International Journal of Science Education [Invited Roundtable]. AERA Annual Meeting San Francisco, CA. (Conference Canceled due to COVID-19)

Rende, K., Jones, M.G., Refvem, E., Ennes, M., Huff, P. (2020, March accepted). A New Generation of Science Educators and Communicators: Unexpected Career Aspirations in Museum Program Participants. Paper presented at the National Association for Research in Science Teaching. Portland, OR. (Virtual meeting due to COVID-19)

Hite, R., Childers, G., Ennes., Jones, M. G. (2020, April) NSTA Press Session: Discovery Engineering in Biology: Case Studies for Grades 6–12. National Science Teaching Association. Boston, MA. (Canceled meeting due to COVID-19)

Stanley, R. & Jones, M. G. (2019, October). Comparing Science Programs in STEM and Non-STEM Schools. Paper presented at the National STEM Education Research Summit. Raleigh, NC.

Ennes, M., Jones, M. G., Baird, E. (2019, September). More Than the Child: The Impacts of Museum STEM Programs on the Family. Association of Science-Technology Centers. Toronto, Canada.

Jones, M. G. (2019, September). STEM Outcomes and Implications for Computing and Technology.

Invited presentation at The National Academies Board on Science Education Committee on the Role of Authentic STEM Learning Experiences in Developing Interest and Competencies for Technology and Computing. Washington, DC.

Ennes, M., Jones, M. G., Cayton, E., Chesnutt, K., Huff, P., & Baird, E. (2019, August). *Building Science Capital and Habitus of Youth Through Family STEM Programming*. Paper presented at the European Science Education Research Association. Bologna, Italy.

Rende, K., & Jones, M. G. (2019, August). *Building Science Capital and Habitus of Youth Through Family STEM Programming*. Paper presented at the European Science Education Research Association. Bologna, Italy.

Van Driel, J., & Jones, M. G. (2019, August). *Getting Published in Research Journals: IJSE. (2019, August). Building Science Capital and Habitus of Youth Through Family STEM Programming*. Invited presentation at the European Science Education Research Association. Bologna, Italy.

Lee, T., Jones, M.G., Chesnutt, K., Carrier, S., Madden, L., Cayton, E., & Ennes, M. (2019, August). *What You Wear Can Make a Difference in Elementary Students’ Perceptions of STEM Careers*. Paper presented at the European Science Education Research Association. Bologna, Italy.

Cayton, E. & Jones, M. G. (2019, August). *Funding for Instructional Materials in Secondary Science Classrooms*. Paper presented at the European Science Education Research Association. Bologna, Italy.

Jones, M. G., Ennes, M., Chesnutt, K., Cayton, E., Weedfall, D., Refvem, E., Rende, K., & Huff, P. (2019, August). *Putting Science Capital to the Test: Validation of an Assessment of Career Aspiration Factors*. Paper presented at the European Science Education Research Association. Bologna, Italy.

Jones, M. G., Hite, R., Childers, G., Ennes, M., Cayton, E. (2019, April). *Integrate Engineering into the Science Classroom Using Case Studies.* Workshop presented at the National Science Teachers Association. St. Louis, MO.

Jones, M. G., Ennes, M., Cayton, E. (2019, April). *“I Want to Help My Daughter in Science:” Families and Science Aspirations*. Workshop presented at the National Science Teachers Association. St. Louis, MO.

Ennes, M., Jones, M. G., Chesnutt, K., Childers, G., Cayton, E. (2019, April). *National Assessment of the Science Self-Efficacy, Career Aspirations, Science Capital, and Family Habitus of Youth*. Paper at North American Research of Science Teaching. Baltimore, MD.

Stanley, R. & Jones, M. G. (2019, April). *Comparing Science Instruction and STEM Integration in STEM and Non-STEM High Schools*. Paper at North American Research of Science Teaching. Baltimore, MD.

Gray, R., Abd El-Khalick, F., Zeidler, D., Southerland, S., Settlage, J., Jones, M.G., Gouvea, J., Milne, C., Siry, C., Yoon, S., Crippen, K., Campbell, T., Verma, V., Kelly, G., King, D., Johnson, C., Avraamidou, L., McComas, W., Nehm, R. & Richmond, G. (2019, April). *How to Get Your Research Published in Science Education Journals*. Paper at National Association of Research in Science Teaching. Baltimore, MD.

Cayton, E. & Jones, M. G. (2019, April). *Instructional Funding for Science Instruction: A Social Justice Issue*. Paper presented at the American Educational Research Association. Toronto, Canada.

Ennes, M., Jones, M. G. (2019, April). *Beyond the Child: The Impacts of Family STEM Programs on Siblings and Parents.* In Evidence-Based Narratives From Emerging Scholars: Connecting STEM Learning Across Spaces and Agents to Promote Equity. Paper presented at the American Educational Research Association. Toronto, Canada.

Cayton, E., Jones, M. G., Ennes, M. (2018, January). *The Effects of Inadequate Funding on Science Instruction.* Paper presented at the Association of Science Teacher Education. Savannah, GA.

Ennes, M., Jones, G., Cayton, E., Phillips, L., Huff, P., Chesnutt, K., Lee, T.,Carrier, S., & Ward, R. (2019, January). *Changing Stereotypes: Lab Coats and Science Self-Concept*. Paper presented at the Association for Science Teacher Education. Savannah, GA.

Jones, M. G., Ennes, M., Lee, T., Carrier, S., Madden, L., Cayton, E., Chesnutt, K., Huff, P., Phillips, L., (2019, April). *The Effect of White Lab Coats on Elementary Students’ Science Self-Concept.* Paper presented at the American Educational Research Association. Toronto, CA.

Ennes, M., Jones, G., Cayton, E., Phillips, L., Huff, P., Chesnutt, K., Lee, T.,Carrier, S., & Ward, R. (2018, November). *Feeling Like a Real Scientist: Creating Tomorrow’s Scientists*. Paper presented at the National Science Teachers Association. Charlotte, NC.

Englehardt, H., Jones, M. G., Ennes, M., Henderson,m T., Weems, J., Thomson, H., Pratt, M., Kathleen, C., (2018, October) *Building Science Capital and Engaging New Audiences in STEM Experience*. Paper presented at the Association of Science-Technology Centers. Hartfold, CT.

Jones, M. G. (2018, May). *Promoting STEM Interests and Careers.* Presentation at the ITEST NSF PI meeting. Alexandria, VA.

Lee, T., Jones, M. G., Glass, B. (2018, April). *Elementary Teachers’ Selection and Use of Visual Models*. Paper presented at AERA. New York, NY.

Jones, M.G., & Treagust, D. (2018, April). *IJSE: Journal Talks by Editors*. Session presented at AERA. New York, NY.

Jones, M. G. (2018, March). *Integrating Technology in Science: Testing Assumptions About Teaching and Learning*. Invited Keynote Presentation, Technology in STEM Conference. Weizmann Institute, Israel.

Ennes, M., Jones, M. G., Chesnutt, K., Cayton, E., Huff, P., Phillips, L., (2018, March) *Science Capital and Identity: Factors Influencing STEM Interests*. Paper presented at the National Association of Research in Science Teaching. Atlanta, GA.

Jones, M. G., Lee, T., Cayton, E., Madden, L., Carrier, S., Chesnutt, K., Ennes, M., Huff, P., Phillips, L., Bellino, M. (2018, March). *Science Identity, Enclothed Cognition and Self Efficacy: Kids in White Lab Coats*. Paper presented at the National Association of Research in Science Teaching. Atlanta, GA.

Jones, M. G., Lee, T., Chesnutt, K., Carrier, S., Madden, L., Ennes, M., Bellino, M., Cayton, E., Phillips, L., Huff, P., (2018, March). *Enclothed Cognition: The Effects of Lab Coats on Students' Science Identities and Career Aspirations*. Paper presented at the National Association of Research in Science Teaching. Atlanta, GA.

Lee, T.,Jones, M.G., & Glass, B. (2018). *The Selection and Use of Visual Models for Teaching Systems Science*. Paper accepted at the National Association of Research of Science Teaching. Atlanta, GA.

Hite, R., Jones, M. G., Childers, G., Ennes, M., Cayton, E. (2018, March). *Cracking the Case II: Integrating Biology and Engineering in (More) Case Studies*. Workshop presented at the National Science Teachers Association. Atlanta, GA.

Jones, M. G. (2017, October). *Visualizing Without Vision: Teaching Science to Students with Visual Impairment*. Invited presentation, Visualization and Students with Special Needs Conference. Norrkoping, Sweden.

Cayton. E, Jones, M. G., Chesnutt, K., Ennes, M., Huff, P., (2017, August). *Students' Interest in Engineering Careers*. Paper presented at the European Science Education Research Association. Dublin, Ireland.

Chesnutt, K., Jones, M. G., Cayton, E., Ennes, M., Hite, R., Huff, P., Pereya Perez, M., (2017, August). *Scientific Measurement Tools: Understanding Access and Implications for Learning About Size and Scale*. European Science Education Research Association. Dublin, Ireland.

Ennes, M., Jones, M. G., Cayton, E., Chesnutt, K., Huff, P., (2017, August). *Education in Informal Science Centers: Educators’ Perceived Levels of Self-Efficacy*. Paper presented at the European Science Education Research Association. Dublin, Ireland.

Hite, R., Jones, M. G., Childers, G., Ennes, M., Chesnutt, K., Pereyra Perez, M., Cayton, E., (2017, August). *Cognitive Development and Adolescents' Perceptions of Presence in 3D, Haptic, Virtual Reality*. Paper presented at the European Science Education Research Association. Dublin, Ireland.

Jones, M. G., Childers, G., Chesnutt, K., Corin, E., Andre, T., Cayton, E., (2017, August). *Choosing a Science Career: Free Choice Science Learning, Self-Efficacy, Identity, and Motivation*. Paper presented at the European Science Education Research Association. Dublin, Ireland.

Cayton, E., & Jones, M. G. (2017, June). *Social Cognitive Career Factors and Students’ Interest in Electronics and Engineering.* Paper presented at the American Society Engineering Education Annual Meeting. Columbus, OH.

Dayerizadeh, A., Carpenter, P. P., Walsh, S., Jones, M.G., Cayton, E.**,** & Huff, P.  (2017, June). *Wide Band Gap Academy—Education and Workforce Development for the 21st Century Power Electronics and Power Systems Industries*. Paper presented at 2017 ASEE Annual Conference & Exposition. Columbus, OH.

Jones, M. G. & Baird, E. (2017, June). *Promoting STEM Interests and Careers Through Families and Museums Exploring*. Stelar Itest PI and evaluator Summit: Building the Foundational Skills of the Future Science and Engineering Workforce. Washington, DC.

Corin E., Jones, M. G., Andre, T., & Childers, G. (2017, April). *Free-Choice STEM Learning: American Adults’ Influences, Choices, and Motivations Compared by Age and Gender*. American Educational Research Association. San Antonio, TX.

Ennes, M., Jones, M. G., Chesnutt, K., & Englehardt, H. (2017, April,). *Educator Self-Efficacy in Informal Science Centers*. American Educational Research Association. San Antonio, TX.

Childers, G., Jones, M. G., Chesnutt, K., Corin, E. & Andre, T. (2017, April,). *STEM Career Choices and Science Leisure-Learning Interests*. National Association of Research in Science Teaching. San Antonio, TX.

Corin, E., Jones, M. G., Andre, T., & Childers, G. (2017, April,). *Gender and Age Cohort Differences in Motivations, Participation Choices in Free Choice STEM-Learning Activities*. National Association of Research in Science Teaching. San Antonio, TX.

Ennes, M., Jones, M. G., Chesnutt, K., & Englehardt, H. (2017, April). *Perceived Levels of Self-Efficacy in Informal Science Educators*. National Association of Research in Science Teaching. San Antonio, TX.

Hite, R., Jones, M. G., Childers, G., Ennes, M., Chesnutt, K., Pereyra, M., & Cayton, E. (2017, April). *Relating Cognitive Development to Perceptions of Virtual Presence in 3-D, Haptic-Enabled, Virtual Reality Science Instruction*. Paper presentation for the National Association for Research in Science Teaching (NARST) Conference. San Antonio, TX.

 Hite, R., Jones, M. G., Childers, G., Ennes, M., Chesnutt, K., Pereyra, M., & Cayton, E. (2017, April). *Classifying Learning Activities in 3-D, Haptic-Enabled, Virtual Reality Science Instruction Through Students’ Questioning*. Poster presentation for the American Educational Research Association (AERA) Conference. San Antonio, TX.

 Hite, R., Jones, M. G., Childers, G., Ennes, M., Chesnutt, K., Pereyra, M., & Cayton, E. (2017, April). *Cognitive Development and Virtual Presence in 3-D, Haptic-Enabled, Virtual Reality Science Instruction*. Paper presentation for the American Educational Research Association (AERA) Conference. San Antonio, TX.

Jones, M. G., Cayton, E., Chesnutt, K., Ennes, M., & Hite, R. (2017, April). *Electrifying Ideas for Teaching Energy*. Workshop presented at the National Science Teachers Conference. Los Angeles, CA.

Hite, R., Jones, M. G., Ennes, M., Chesnutt, K., Cayton, E., & Childers, G. (2017, April). *Cracking the Case: Integrating Biology and Engineering in Case Studies*. Workshop presented at the National Science Teachers Conference. Los Angeles, CA.

Chesnutt, K., Jones, M. G., Cayton E., Ennes, M., & Hite, R. (2017, April). *Packing Your Scale Backpack: Research-Based Science Resources for Learning About Size and Scale*. Workshop presented at the National Science Teachers Conference. Los Angeles, CA.

Lee, T., Jones, M.G., & Glass, B. (2017). *Science Teachers’ Selection and Use of Visual Models*. Paper presented at the Hawaii International Conference of Education. Honolulu, HI.

Lee, T.,Jones, M.G., Chesnutt, K., & Glass, B. (2017). *Teachers' Selection of Visual Models for Teaching Systems Thinking*. Paper accepted at the Association for Science Teacher Education. Des Moines, IA.

Hite, R., Jones, M. G., Childers, G., Ennes, M., Chesnutt, K., Pereyra, M., Cayton, E., & Stanley, R. (2017, January). *The Utility of 3-D, Haptic-Enabled, Virtual Reality for Learning Complex Biological Systems: Students’ Understanding of the Human Heart.* Research paper presented for the Association for Science Teacher Education (ASTE) National Conference. Des Moines, IA.

Jones, M. G., Hite, R., Sounder, A. (2017, January). *Virtual Reality STEAM Changes Student Outcomes*. Paper presented at the Future of Education Technology Conference. Orlando, FL.

Girard, R., Lytle, E., Hollard, J., & Jones, M. G. (2017, February). *Immerse Students in STEAM Using Virtual Reality*. Paper presented at the TCEA Convention. Austin, TX.

Hite, R., Jones, M. G., & Childers, G., (2016, October).  *A Proposed Research Agenda for 3-D, Haptic-Enabled, Virtual Reality Technology in 6-12 Science Instruction.* Paper presentation for the South West Chapter of the Association for Science Teacher Education (ASTE) Regional Conference. Tyler, TX.

Ennes, M., Jones, M. G., Burns, K., Covel, J., Johnson, D., Lannoye-Hall, C. (2016, September). *Improving Educator Self-Efficacy in Teaching Science Concepts*. Paper presented at Association of Zoos and Aquariums Annual Conference. San Diego, CA.

Pereyra, M., & Jones M. (2016, September). Presentation at the Latin American and Caribbean Open Science Forum, CILAC 2016. Montevideo, Uruguay.

Gardner, G. E., Jones, M. G., & Ramos, M. (2016, July). *Cognition at the Extremes: Undergraduate Biology Students’ Concepts of Extreme Spatial Scales*. Paper presented at the annual meeting of the Society for the Advancement of Biology Education Research (SABER). Minneapolis, MN.

Hite, R., Jones, M. G., & Childers, G. (2016, April). *Students’ and Teachers’ Perceptions of Presence and Preferences for 3-Dimensional, Haptic-Enabled, Virtual Reality Science Instruction*. Paper presented at the National Association of Research in Science Teaching. Baltimore, MD.

Hite, R., Jones, M. G., Andre, T., Childers, G., & Corin, E. (2016, April). *An Exploration of Racial and Ethnic Participation in Science-Based Hobbies*. Paper presented at the National Association of Research in Science Teaching. Baltimore, MD.

Jones, M. G., Childers, G., Andre, T., Corin, E., & Hite, R. (2016, April). *Citizen Scientists’ and Science Hobbyists’ Science Capital: Factors Influencing Development and Engagement for Lifelong Learning*. Paper presented at the National Association of Research in Science Teaching. Baltimore, MD.

Lee, T., Jones, M. G., Glass, B., Chesnutt, K. (2016, April). *Teaching Water Cycle With a Systems Thinking Approach*. Paper presented at the National Association of Research in Science Teaching. Baltimore, MD.

Aksit, O., Chesnutt, K., Glimcher, S., Jones, M. G. (2016, April). *Exploring the Cross-Disciplinary Collaborations* *Between Engineers and Educators at Engineering Research Centers.* Paper presented at the National Association of Research in Science Teaching meeting. Baltimore, MD.

Childers, G. & Jones, G. (2016, April). *Remote Learning Environment Model: Constructs Influencing Students’ Perceptions of Remote Microscopy Investigations*. Paper presented at the National Association of Research in Science Teaching meeting. Baltimore, MD.

Corin, E., Jones, M. G., Andre, T., & Childers, G. (2016, April). *Members of 10 STEM Hobby Groups:* *A Comparison Study.* Paper presented at the National Association of Research in Science Teaching. Baltimore, MD.

Jones, M. G., Childers, G., Andre, T., Corin, E., & Hite, R. (2016, April). *Lifelong Learners and Science Capital: Motivation, Development, and Engagement of Citizen Scientists and Science Hobbyists*. Paper presented at the American Educational Research Association. Washington, D.C.

Corin, E., Jones, M. G., Andre, T., & Childers, G. (2016, April). *A Recipe for Lifelong Learning:* *A Closer Look at 10 Groups of STEM Hobbyists*. Paper presented at the American Educational Research Association. Washington, D.C.

Gardner, G., Jones, M. G., & Paechter, M. (2016, April). *Communicating Science to the Public: Undergraduate Science Students’ Perceptions About an Emergent Technology*. Paper presented at the American Educational Research Association. Washington, D.C.

Chesnutt, K., Aksit, O., Glimcher, S., Jones, M. G. (2016, April). *Epistemological Beliefs, Education Outreach and* *Collaborations Between Engineers and Educators.* Paper presented at the American Educational Research Association. Washington, D.C.

Lee, T., Jones, M. G., Glass, B., Chesnutt, K. (2016, April). *The Application of Systems Thinking in Teaching About the Water Cycle.* Paper presented at the American Educational Research Association. Washington, D.C.

Gardner, G., Jones, M.G., & Ramous-Frkuska, M. (2016, April). *Undergraduate Biology Students’ Conceptions of Extreme Spatial Scales*. Paper presented at the National Science Teachers Association, Nashville, TN.

Jones, M. G. & Andre, T. (2016). *Master Science Hobbyists*. Poster presented at the NSF AISL PI meeting. Washington, DC.

Lee, T. & Jones, G. (2016, January). *Teaching Systems in the Context of the Water Cycle.* Paper presentation at the Association for Science Teacher Education International Conference. Reno, NV.

Childers, G. & Jones, G. (2016, January). *A Model of Remote Learning Environments: Exploring High School Students’ Perceptions of Virtual Presence, Motivation, and Science Identity During a Remote Microscopy Investigation*. The Association for Science Teacher Education International Conference. Reno, NV.

Gardner, G. E.,Jones, M. G., & Ramos, M. (2016, April).  *Undergraduate Biology Students’ Conceptions of Extreme Spatial Scales*. Paper presented at the annual meeting of the Society for College Science Teachers (SCST). Nashville, TN.

Hite, R., Jones, M. G., Childers, G., Chesnutt, K., Corin, E., & Pereyra, M. (2016, January). *Teachers’ Pedagogical Perceptions of Novel 3-D, Haptic-Enabled Virtual Reality Technology*. Paper presented at the international meeting of the Association for Science Teacher Education. Reno, NV.

Jones, M. G., Childers, G., Andre, T., Corin, E., & Hite, R. (2015, September). *Citizen Scientists and Science Hobbyists: Educating the Life-Long Learner*. Paper presented at the European Science Education Association. Helsinki, Finland.

White, I. & Jones, M. G. (2015, August). *Publishing in Science Education Journals*. Workshop presented at the European Science Education Association. Helsinki, Finland.

Jones, M. G., Hite, R., Childers, G., Corin, E., Pereyra, M., Chesnutt, K., & Goodale, T.  (June, 2015). *Teachers’ and Students’ Perceptions of Presence in Virtual Reality Instruction.* Invited paper presented at the World Scientific and Engineering Academy and Society: 11th International Conference on Engineering Education. Salerno, Italy.

Corin, E. N., Jones, M. G., Andre, T., Childers, G. M., Hite, R. (2015, April). *Science Hobbyists as Learners and Educators: Participation in the STEM Learning Ecosystem.* Paper presentation at American Education Research Association Conference. Chicago, IL.

Corin, E. N., Jones, M. G., Andre, T., Childers, G. M., Hite, R. (2015, April) *Where Do They Fit? Astronomy and Birding Hobbyists in the STEM Learning Ecosystem.* Paper Presentation at the National Association for Research in Science Teaching Conference. Chicago, IL.

Hite, R., Jones, M. G., Andre, T., Corin, E. N., Childers, G. M. (2015, April) *Minority Engagement in Science Hobbies: Discussion of Social Barriers, Motivation Influencing Science Self-Efficacy and Identity.* Paper presented at the National Association for Research in Science Teaching Conference. Chicago, IL.

Childers, G. & Jones, G. (2015, April). *Is it real? Students' and Teachers' Perceived Perceptions of Virtual Presence During a Remote Microscopy Investigation*. Paper presented at the National Association for Research in Science Teaching. Chicago, IL.

Childers, G. & Jones, M. G. (2015, January). *An Exploration of Students' and teachers' Perceived Realness of a Remote Electron Microscopy Investigation.* Paper presented at the 2015 meeting of the Association of Science Teacher Educators. Portland, OR.

Jones, M. G., Andre, T., Childers, G., Corin, E. & Hite, R. (2015, January). *The Intersection of Formal and Informal Science Education: Development, Motivations, and Contributions of Amateur Astronomers and Birder Hobbyists*. Paper presented at the 2015 meeting of the Association of Science Teacher Educators. Portland, OR.

Lee, T. & Jones, M. G. (2015, January). *An  Exploration  of  Systems  Thinking Among Elementary Pre-Service Teachers: Selection and Use of Multiple Pictorial Representations for a Proposed Lesson on the Water Cycle*. Paper presented at the 2015 meeting of the Association of Science Teacher Educators. Portland, OR.

Corin, E. N., Jones, M. G., Childers, G. M., Hite, R. (2014, October). *Childlike Wonder: Using Science Hobbies and Hobbyists to Facilitate a Lifetime Engagement with Science*. Paper presented at the National Science Teachers Association Area Conference. Richmond, VA.

Jones, M. G., Taylor, A. R., Corin, E. N., Hite, R., Childers, G. M., Walz. J. (2014, October). *Breathtaking Science: Exploring the Hidden and Unexpected Worlds at the Nanoscale*. Paper presented at the 2014 National Science Teachers Association Area Conference. Richmond, VA.

Jones, M. G. (2014, February). *Where Are the Women and Minority Fossil Collectors?* Invited presentation, North American Paleontological Convention. Gainesville, FL.

Jones, G., Andre, T., Childers, G., & Corin, E. (2014, April). *Science Hobbyists: A New Generation of Community-Based Educators*. Paper presented at the American Educational Research Association. Philadelphia, PA.

Madden, L., Jones, G., & Childers, G. (2014, April). *New Pedagogical Tools- New Interaction Patterns: Science Teacher Interactions in Distance Education for Professional Development*. Paper presented at the American Educational Research Association. Philadelphia, PA.

Jones, G., Taylor, A., Childers, G., Corin, E., & Hite, R. (2014, April). *Geometry of Life*. Workshop presented at the National Science Teacher Association. Boston, MA.

Childers, G., Jones, G., Corin, E., & Hite, H. (2014, April). *Exploring the Unseen World: Nano-Structures and Nano-Inspired Innovations*. Workshop for Bilingual Educators. Portland State University. Portland, OR.

Andre, T., Jones, G., Childers, G., Corin, E. (2014, April). *Astronomy and Birding Hobbyists’ Development, Motivations, and Informal Science Education*. Paper presented at the Iowa Academy of Education, University of Iowa. Cedar Falls, IA.

Gardner, G. & Jones, M. G. (2014, March). *Teachers’ Perceptions of Pacing Guides as a Tool to Teach Science*. Paper presented at the National Association for Research in Science Teaching. Pittsburgh, PA.

Jones, G., Andre, T., Childers, G., & Corin, E. (2014, March). *Teaching Outside the Box: Science Hobbyists’ Role in Science Education*. Paper presented at the National Association for Research in Science Teaching. Pittsburgh, PA.

Jones, G., Paechter, M., Laherto, A., Albe, V., Gardner, G., & Childers, G. (2014, March). *Risks of Nanotechnology: An International Study of the Perceptions of Engineering and Science Students*. Paper presented at the National Association for Research in Science Teaching. Pittsburgh, PA.

Madden, L., Jones, G., & Childers, G. (2014, March). *Speak, Chat, or Write: Differential Interactions in Science Teacher Professional Development with Distance Education Tools*. Paper presented at the National Association for Research in Science Teaching, Pittsburgh. PA.

Jones, M. G., Andre, A., Childers, G., & Corin, E. (2014, January). *The Forgotten Tribe: Science Hobbyists as Teachers*. Paper presented at the Association for Science Teacher Education International Conference. San Antonio, TX.

Madden, L., & Jones, M. G., & Childers, G. (2014, January). *Science Teacher Graduate Education: Modes of Communication Within Synchronous and Asynchronous Communication Platforms*.
Paper presented at the Association for Science Teacher Education International Conference.
San Antonio, TX.

Hoette, V., Kron, R., Meredith, K., Russell, R., Watson, K., Heatherly, S., Wiliamson, K., Reichart, D., Haislip, J., Gurton, S., Hurst, A., Jones, G., Childers, G., Colby, J., Lehman, E., Phalen, L. (2014, January). *Skynet Junior Scholars: Sharing the Universe with Blind/Low Vision Youth.* Paper presented at the American Astronomical Society Conference. Washington, D.C.

Corin, E. N., Jones, M. G., Andre, T., Childers, G. M. (2013, January) *Astronomy Hobbyists: Factors that Influenced Career Choices*. Paper presented at the Association for Science Teacher Education International Conference. Charleston, SC.

Jones, G., Taylor, A., Childers, G., Corin, E., & Hite, R. (2013, November). *Geometry of Life.* Workshop presented at the National Science Teacher Association. Charlotte, NC.

Jones, G., Taylor, A., Childers, G., Corin, E., & Hite, R. (2013, November). *Sensors in Your Belly Button*. Workshop presented at the National Science Teacher Association. Charlotte, NC.

Andre, T., Jones, M. G., Childers, G. M., Corin, E. N. (2013, October). *Science Hobbyists' Development, Motivations, and Contributions to Informal Science Education: Design and Preliminary Qualitative Analysis.* Paper presented at the Northeastern Educational Research Association. Rocky Hill. CT.

Jones, G., Childers, G., Emig, B., Chevrier, J., Stevens, V., & Tan, H. (September, 2013). *Learning in a Virtual World: Teaching Concepts of Heat, Pressure and Random Motion*. Paper presented at the European Science Education Research Association. Nicosia, Cypress.

Jones, M. G., Childers, G., Emig, B., Chevrier, J., Stevens, V., & Tan, H. (2013, April). *Learning in a Virtual World: Teaching Concepts of Heat, Pressure and Random Motion*. Paper presented at the National Association for Research in Science Teaching (NARST) 2013 International Conference. Puerto Rico.

Childers, G., Jones, M. G., Emig, B., Chevrier, J., Stevens, V., & Tan, H. (2013, April). *Haptic Worlds: New Learning Environments for Teaching Students with Visual Impairments About Particulate Matter*. Paper presented at the National Association for Research in Science Teaching (NARST) 2013 International Conference. Puerto Rico.

Madden, L., & Jones, M. G., (2013, April). *Photonarratives in an Online Master’s Course: A Viable Way to Enhance Teacher Reflection and Build Community*. Paper presented at the National Association for Research in Science Teaching (NARST) 2013 International Conference. Puerto Rico.

Delgado, C., Jones, M. G., You, H. S., Robertson, L., & Halberda, J. (2013, April). *Size and Scale Tasks and Their Relation to Evolutionarily-Based and Culturally-Based Knowledge*. Paper presented at the National Association for Research in Science Teaching (NARST) 2013 International Conference. Puerto Rico.

Corin, E., & Jones, M. G. (2013, January). *Astronomy Hobbyists: Factors That Influenced Career Selection*. Paper presented at the Association of Science Teacher Education conference. Charleston, SC.

Childers, G, Jones, M. G., Emig, B., Stevens, V., & List, J. (2013, January). *The Efficacy of Haptic Simulations to Teach Students with Visual Impairment About Temperature and Pressure*. Paper presented at the Association of Science Teacher Education conference. Charleston, SC.

Jones, M., Childers, G., Emig, B., Chevrier, J., Stevens, V., & Tan, H. (2013, January). *The Efficacy of Haptic Simulations in Teaching Concepts of Heat, Pressure and Random Motion*. Paper presented at the Association of Science Teacher Education conference. Charleston, SC.

Jones, M.G., & Andre, T. (2012, March). *Master Science Hobbyists and Citizen Scientists: Characteristics, Motivations, Experiences, and Career Trajectories*. Paper presented at the National Science Foundation meeting of ISE.

Jones, M. G., Gardner, G., & Lee, T. (2012, March). *Microbiology Instruction: Students’ Perceptions of Risks Related to Microbial Illness*. Paper presented at the National Association of Research in Science Teaching meeting. Indianapolis, IN.

Madden, L., & Jones, M.G., (2012, March). *Photonarratives in an Online Master’s Course: A Viable Way to Enhance Teacher Reflection and Build Community*? Paper presented at the National Association of Research in Science Teaching meeting. Indianapolis, IN.

Zhu, Y., Tracy, J., Dong, J., Xianoning, J., & Jones, M. G. (2012, March). *NUE: Bottom-Up Meets Top-Down: An Integrated Undergraduate Nanotechnology Laboratory at NC State University*. Paper presented at the NUE National Science Foundation conference. Arlington, VA.

Madden, L., Jones, M. G., & Blanchard, M. (2012, April). *Photonarratives in an Online Master’s Course*. Paper presented at the SITE conference. Austin, TX.

Jones, M. G., Taylor, A., Childers, G., & Falvo, M. (2012, March). *Sticky, Shaky, Bumpy: Nanoscale Science*. Workshop presented at the National Science Teachers Association. Indianapolis, IN.

Jones, M. G. (2012, November). *Nanotechnology Education*. Presentation at the Nanotechnology Informal Science Education Network (NISENET) meeting. Boston, MA.

Jones, M. G. (2012, October). *Four Views of Visualization in Science and Education*. Invited presentation at the IEEE SCIVIZ Conference. Seattle, WA.

Jones, M. G. (2012, May). *Quantitative Reasoning: Conceptualizing Size and Scale*. Invited paper presented at the International STEM Research Symposium: Quantitative Reasoning in Mathematics and Science Education. Savannah, GA.

Tan, H., Bennett, D., Bertoline, G., Chevrier, J. & Jones, M. G. (2011, September). *The Role of Visuohaptic Simulations in Conceptualizing Non-Contact Electrostatic Forces*. Paper presented at the European Science Education Association annual meeting. Lyon, France.

Jones, M.G., Paechter, M., Yen, C., Gardner, G., Taylor, A., Tretter, T. (2011, September). *US, Austrian, and Taiwanese Teachers’ Concepts of Spatial Scale*. Paper presented at the European Science Education Association annual meeting. Lyon, France.

Jones, M.G. (2011, September). *Scale: A Big Idea of Science*. Invited presentation. Universite’ de Grenoble. Grenoble, France.

Paechter, M. & Jones, M. G. (2011, September). *Promoting Female and Male Students’ Interests in Science by Hands-On Experiences*. Paper presented at the EARLI conference. Exeter, UK.

Madden, L. & Jones, M. G. (2011, October). *Photonarratives*. Paper presented at the New Jersey Science Teachers Convention.

Zhu, Y., Tracy, J.B., Dong, J., Jiang, X.N. & Jones, M. G. (2011, November). *NUE: Bottom-Up Meets Top-Down - An Integrated Undergraduate Nanotechnology Laboratory*. Paper presented at the ASME International Mechanical Engineering Congress and Exposition. Denver, CO.

Jones. M. G. (2011, June). *Atoms to Elephants: Implications of Size and Scale for Nanotechnology*. Keynote address STEM Innovation4 Conference. MathScience Innovation Center. Richmond, VA.

Jones. M. G. (2011, June). *Sticky, Shaky, Bumpy: The Nano World*. Workshop given at the STEM Innovation4 Conference. MathScience Innovation Center. Richmond, VA.

Forrester, J., Jones, M. G., & Gardner, G. (2011, April). *The Influence of Participation in a Competitive Science Event on Subsequent Academic Major Choice*. Paper presented at the American Educational Research Association Annual Meeting. New Orleans, LA.

Jones, M.G., Paechter, M., Gardner, G., Yen, C., Taylor, A., Tretter, T. (2011, April). *Concepts of Spatial Scale: An International Comparison*. Paper presented at the American Educational Research Association Annual Meeting. New Orleans, LA.

Grant, G., Jones, M. G., Robert, S. (2011, April). *Understanding Pre-Service Teachers’ Frameworks for Perceiving the Risks of New Technologies*. Paper presented at the annual meeting of the National Association for Research in Science Teaching. Orlando, FL.

Jones, M.G., Paechter, M., Gardner, G., Yen, C., Taylor, A., Tretter, T. (2011, April). *Metric or English Spatial Scales? An International Comparison of Teachers’ Concepts*. Paper presented at the annual meeting of the National Association for Research in Science Teaching. Orlando, FL.

Robert, S., Jones, M. G. & Robertson, L. (2011, April). *Teachers’ Perspectives of Professional Learning Communities in Schools*. Paper presented at the annual meeting of the National Association for Research in Science Teaching. Orlando, FL.

Robertson, L., & Jones, M. G. (2011, April). *Autonomy and Self-Determination Theory in Different Contexts: A Comparison of Middle School Science Teachers’ Motivation and Instruction in China and the United States*. Paper presented at the annual meeting of the National Association for Research in Science Teaching. Orlando, FL.

Forrester, J., Jones, M. G., & Gardner, G. (2011, April). *Competitive Science Events and Academic Major Choice*. Paper presented at the annual meeting of the National Association for Research in Science Teaching. Orlando, FL.

Jones, M. G. (2010, November). *Visualizing Spatial Scale*. Invited presentation to the Nanotechnology Informal Science Education Network. San Francisco, CA.

Gardner, G. E., & Jones, M. G. (2010, November). *Biology Instructors' Perceptions of the Human Health and Environmental Risks from Biotechnology*. Paper presented at the annual meeting of the National Association of Biology Teachers (NABT) Biology Research Symposium. Minneapolis, MN.

Paechter, M. & Jones, M.G. (2010, September). *Promoting Female and Male Students’ Interest in Science by Hands-on Experiences*. In Proceedings of the PREDIL Networking Conference and Workshop (pp. 25-27). Ruzemborok: Catholic University, Ružomberok, Slovakia.

Jones, M.G., Paechter, M., Gardner, G., Yen, I., Taylor, A., & Tretter, T. (2010, July). *Teachers‘ Concepts of Spatial Scale. An Intercultural Comparison Between Austrian, Taiwanese, and the United States*. Paper presented at the International Society of the Learning Sciences annual meeting. Chicago, IL.

Jones, M. G., Gardner, G., Taylor, A., Wiebe, E., Forrester, J. (2010, May). *Conceptualizing Magnification and Scale: The Roles of Spatial Visualization and Logical Thinking*. Paper presented at the annual meeting of the American Educational Research Association. Denver, CO.

Taylor, A. & Jones, M. G. (2010, May). *Fish Gills to Feathers: Factors that Influence Students’ Understandings of Surface Area to Volume*. Paper presented at the annual meeting of the American Educational Research Association. Denver, CO.

Gardner, G., & Jones, M.G. (2010, May). *Science Instructors’ Views on the Risks of Biotechnology*. Paper presented at the annual meeting of the American Educational Research Association. Denver, CO.

Robertson, L., Jones, M. G., Gardner, G., Dotger, S. (2010, March). *Elementary Science Kits: Differential Use for Instruction and Assessment*. Paper presented at the annual meeting of the National Association of Research in Science Teaching. Philadelphia, PA.

Gardner, G. & Jones, M.G. (2010, March). *Biotechnology and Risk: Perceptions of Science Instructors*. Paper presented at the annual meeting of the National Association of Research in Science Teaching. Philadelphia, PA.

Taylor, A. & Jones, M. G. (2010, March). *Applying Science Concepts: Factors That Influence Students’ Understandings of Surface Area to Volume*. Paper presented at the annual meeting of the National Association of Research in Science Teaching. Philadelphia, PA.

Penny, S., & Jones, M.G. (2010, March). *One Person Can Change a Village: The Differential Impact of Nutrition Education on Non-US Born Students and Their Families*. Paper presented at the annual meeting of the National Association of Research in Science Teaching. Philadelphia, PA.

Jones, M. G. & Taylor, A. (2010, March). *Scale, Magnification and Zooming: Logical Thinking and Spatial Visualization*. Paper presented at the annual meeting of the National Association of Research in Science Teaching. Philadelphia, PA.

Jones, M.G., Taylor, A., Robertson, L., Gardner, G., Thurmond, B., Robert, S. (2010, March). *Extreme Science: Scales from Nano to Galactic*. Paper presented at the National Science Teachers Association. Philadelphia, PA.

Robertson, L., Gardner, G. E., Jones, M. G., & Dotger, S. (2010, March). *Exploring the Pros and Cons of an Elementary Science Kit Program*. Paper presented at the annual meeting of the National Science Teachers Association (NSTA). Philadelphia, PA.

Gardner, G. E., & Jones, M. G. (2009, December). Risk and education: *Perceptions and Practices of Science Educators*. Poster symposium presented at the annual meeting of the Society of Risk Analysis (SRA). Baltimore, MD.

Jones, M. G., Blanchard, M., & Falvo, M. (2009, November). *Extreme Science: Scales from Nano to Galactic*. Paper presented at the regional meeting of the National Science Teachers Association. Ft. Lauderdale, FL.

Gardner, G. E., & Jones, M. G. (2009, November). *Graduate Teaching Assistants on Science Technology and Society: Graduate Teaching Assistants’ Perspectives and Practices*. Paper presented at the annual meeting of the National Association of Biology Teachers (NABT). Denver, CO.

Gardner, G. E., & Jones, M. G. (2009, October). *Science Graduate Teaching Assistants’ Pedagogical Preparation: Perspectives and Practices*. Paper presented at the annual meeting of the Southeastern Association of Science Teacher Education (SASTE). Kennesaw, GA.

Jones, M. G., Taylor, A. R., Gardner, G. E., Forrester, J., & Robertson, L. (2009, August). *Concepts of Surface Area to Volume and Magnification: The Roles of Logical Thinking and Spatial Visualization*. Paper presented at the annual meeting of the European Science Education Research Association (ESERA). Istanbul, Turkey.

Jones, M.G. (April, 2009). *The Role of Haptics- Learning Through Touch*. Invited Presentation. Hasselblad Seminar: Understanding the roles of Molecules- From Physics to Life. Lisebergbyn Karralund, Sweden..

Jones, M.G. (April, 2009). *Understanding the Roles of Molecules- From Physics to Life*. Invited Presentation. Nanoscience Education. Hasselblad Seminar. Lisebergbyn Karralund, Sweden.

Jones, M. G., & Gardner, G. (2009, May). *Nanoscience for Educators*. Invited workshop presented at the Nanotechnology Today, Tomorrow and Future Lecture Series, sponsored by the Institute for Advanced Learning and Research. Danville, VA.

Gardner, G., Jones, M. G., Taylor, A., Forrester, J., Krebs, D., & Robertson, L. (2008, April). *Risk Perception and the Knowledge Deficit Model: Nanotechnology Undergraduate Education*. Paper presented at the annual meeting of the National Association for Research in Science Teaching. Garden Grove, CA.

Robertson, L., Jones, M. G., Gardner, G., Dotger, S., & Krebs, D. L. (2009, April) *Elementary Science Kits: Classroom Practices, Instructional Strategies, and Assessment Types*. Poster presented at the annual meeting of the American Educational Research Association (AERA). San Diego, CA.

Forrester, J., Jones, M. G., Taylor, A., & Gardner, G. (2009, April). *Linear Estimation: Contexts and Spatial Abilities*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Garden Grove, CA.

Tretter, T, Jones, M. G., & Wolf, J. (2009, April). *Durability of Conceptions of Big Ideas in Nanoscience*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Garden Grove, CA.

Jones, M. G., & Taylor, A. (2009, April). *Reflections of Scientists and Engineers: Developing a Sense of Scale*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Garden Grove, CA.

Taylor, A., & Jones, M. G. (2009, April). *Students’ and Teachers’ Concepts of Surface Area to Volume in Science Contexts: Factors that Influence the Understandings of the Concept of Scale* . Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Garden Grove, CA.

Jones, M.G., & Taylor, A. (2009, April). *Developing a Sense of Scale: Looking Backward*. Paper presented at AERA. San Diego, CA.

Taylor, A., & Jones, M. G. (2009, April). *Factors That Influence Students’ and Teachers’ Understandings of Surface Area to Volume in Science Contexts*. Paper presented at AERA. San Diego, CA.

Gardner, G., Jones, M. G., Taylor, A., Forrester, J., Krebs, D., & Robertson, L. (2009, April). *Risk Perception and the Knowledge Deficit Model: Nanotechnology Undergraduate Education*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Garden Grove, CA.

Cowley, J., Wiebe, E. N., Minogue, J., Jones, M. G., & Krebs, D. (2008, September). *Haptic Feedback in the Instructional Environment and its Relationship to Visual Attention and Learning*. Presented at the Human Factors and Ergonomic Society Annual Meeting. New York, NY.

Jones, M. G., Forrester, J., Krebs, D., Gardner, G., Robertson, L., Falvo, M., Taylor, A. (2008, October). *Extreme Science: Size and Scale*. Paper presented at the National Science Teachers’ Association Regional Conference. Charlotte, NC.

Gardner, G., Jones, M. G., Taylor, A., Forrester, J., Krebs, D., & Robertson, L. (2008, October). *Risky Business: Students’ Perceptions of the Risks and Benefits of Nanotechnology Applications*. Paper presented at the National Science Teachers’ Association Regional Conference. Charlotte, NC.

Gardner, G., & Jones, M. G. (2008, October). *What They Say and How They Say It: Media Framing of Controversial Biology Issues*. Paper presented at the annual meeting of the National Association of Biology Teachers. Memphis, TN.

Jones, M.G., & Taylor, A. (2008, October). *Developing a Sense of Scale: Looking Backward*. Paper presented at the Mid-Atlantic Association of Science Teacher Education Annual Meeting, Lake Lure, NC.

Forrester, J., Jones, M. G., Taylor, A., & Gardner, G. (2008, October). *Accuracy of Linear Estimation: Contexts and Spatial Abilities*. Paper presented at the Mid-Atlantic Association of Science Teacher Education Annual Meeting. Lake Lure, NC.

Jones, M. G., Taylor, A. (2008, March). *Understanding Scale: Teachers’ Trajectory of Knowledge*. Paper presented at the American Educational Research Association Annual Meeting. New York, NY.

Taylor, A., and Jones, M. G. (2008, March). *Students’ Understanding of Surface Area-to-Volume Relationships*. Paper presented at the American Educational Research Association Annual Meeting. New York, NY.

Forrester, J., Jones, M. G., Taylor, A., Broadwell, B., & Oppewal, T. (2008, March). *Experiences, Relationships, and Identity Formation: Factors Influencing a Scientist’s Career Choice*. Paper presented at the American Educational Research Association Annual Meeting. New York, NY.

Tretter, T., Jones, M.G., & Wolf, J. (2008, March). *Instructional Impact on High School Physics Students’ Nanoscience Conceptions*. Paper presented at the American Educational Research Association Annual Meeting. New York, NY.

Jones, M.G., Taylor, A., Forrester, J., Falvo, M., Krebs, D., Robertson, L., & Gardner, G. (2008, March). *Monsters to Mice: Size and Scale Across the Sciences*. Workshop presented at the National Science Teachers Association Annual Meeting. Boston, MA.

Tretter, T. & Jones, M. G. (2008, April). *Nanoscience Instruction in Physics*. Paper presented at the National Association of Research in Science Teaching Annual International Conference. Baltimore, MD.

Taylor, A., & Jones, M. G. (2008, April). *Crossroads of Science and Mathematics: The Intersection of Scale and Proportional Reasoning*. Paper presented at the National Association of Research in Science Teaching Annual International Conference. Baltimore, MD.

Jones, M. G., Tretter, T., Taylor, A., Oppewal, T. (2008, April). *Novice and Experienced Teachers’ Concepts of Scale*. Paper presented at the National Association of Research in Science Teaching Annual International Conference. Baltimore, MD.

Forrester, J., Jones, M. G., Taylor, A., Broadwell, B., & Oppewal, T. (2008, April). *Growing a Scientist: Scientists Experiences, Relationships and Identity Formation*. Paper presented at the National Association of Research in Science Teaching Annual International Conference. Baltimore, MD.

Wiebe, E., Jones, M.G., Minogue, J., Cowley, J., & Krebs, D. (2008, April). *Unraveling the Influence of Haptic Feedback on Students’ Learning About Levers*. Paper presented at the National Association of Research in Science Teaching Annual International Conference. Baltimore, MD.

Jones, M. G., Falvo, M., & Taylor, A. (2008, January). *Nanoscience and the Future*. International web seminar presented by the National Science Teachers Association.

Jones, M. G., Falvo, M., & Taylor, A. (2008, January). *Nanoscale Science*. International web seminar presented by the National Science Teachers Association.

Jones, M. G., Tretter, T., Taylor, A., & Oppewal, T. (2007, December). *Novice and Experienced Teachers’ Concepts of Size and Scale: Accuracy, Boundaries, and Experiences*. Paper presented at the Hawaii International Conference on Education. Honolulu, HI.

Jones, M.G., Falvo, M., & Taylor, A. (2007, January). *Nanoscale Science: Characteristics*. Global Web seminar presented for the National Science Teachers Association. Arlington, VA.

Jones, M.G., Falvo, M., & Taylor, A. (2007, January). *Nanoscale Science.* Privacy and the Environment. Global Web seminar presented fort the National Science Teachers Association. Arlington, VA.

Jones, M.G., Falvo, M., & Taylor, A. (2007, January). *Innovations in Nanoscale Science*. Podcast presented for the National Science Teachers Association. Arlington, VA.

Jones, M.G., Falvo, M., & Taylor, A. (2007, November). *Nanoscale Science*. Symposium presented at the National Science Teachers Association Regional Conference. Birmingham, AL.

Jones, M. G. (2007). *Designing and Implementing NanoDays*. Invited presentation made to the Nanotechnology Informal Science Education Net. San Francisco, CA.

Jones, M. G. (2007, June). *Understanding Science at the Nanoscale*: *Conceptual Boundaries, Anchors, and Holes.* Invited presentation, Gordon Conference: Educational Research and Practice. Lewiston, ME.

Jones, M. G., Taylor, A., Minogue, J., Broadwell, B., Wiebe, E., Carter, G. (2007, April). *The Efficacy of 'Powers of Ten:’ Concepts of Size and Scale*. Paper presented at the National Association of Research in Science Teaching. New Orleans, LA.

Minogue, J., Jones, M.G., Oppewal, T., & Broadwell, B. (2007, April). *Haptic Feedback and the Structure of Observed Learning Outcomes*. Paper presented at the National Association of Research in Science Teaching. New Orleans, LA.

Taylor, A., Jones, M. G., Broadwell, B., Oppewal, T. (2007, April). *Coordinating Science Learning: Navigating Tensions Between Scientists and Science Education*. Paper presented at the National Association of Research in Science Teaching. New Orleans, LA.

Jones, M. G. (2007, April). *Visually Impaired Students’ Rationales of Scale and Scaling.* Paper presented at the National Association of Research in Science Teaching. New Orleans, LA.

Jones, M. G. (2007, April). *Inclusionary Science Teaching: Visualizing Science Phenomena*. Invited paper presented at the National Association of Research in Science Teaching. New Orleans, LA.

Tretter, T., & Jones, M. G. (2007, April). *Nanoscience Course Impact on Conceptions of Scale*. Paper presented at the National Association of Research in Science Teaching. New Orleans, LA.

Jones, M. G., Falvo, M., Taylor, A., & Kubasko, D. (2007, March). *Science at the Smallest of Scales*. Paper presented at the National Science Teachers Association. St. Louis, MO.

Jones, M. G., Taylor, A., Minogue, J., Broadwell, B., Wiebe, E., & Carter, G. (2007, January). *Understanding Scale: Powers of Ten*. Paper presented at the Association of Science Teacher Education. Clearwater, FL.

Minogue, J., & Jones, M. G. (2007, January*). The (Potential) Role of Haptic Technology in Science Education*. Paper presented at the Association of Science Teacher Education. Clearwater, FL.

Tretter, T., Jones, M.G., & Falvo, M. (2006, April). *Nanoscience Course Impact on Conceptions of Spatial Scale.* Presented at the American Educational Research Association. Chicago, IL.

Jones, M. G., Taylor, A., Minogue, J., Dotger, S., Broadwell, B., Oppewal, T., & Kubasko, D. (2006, April). *Nanobots, Self-Cleaning Toilets, and Stink-Free Socks: Nanotechnology and Nanoscale Science*. Workshop presented at the National Science Teachers Association. Anaheim, CA.

Tretter, T., & Jones, M. G. (2006, April). *Conceptions of Spatial Scale: Leaping Into Other Worlds*. Paper presented at the American Educational Research Association. San Francisco, CA.

Tretter, T., Jones, M. G., Minogue, J. (2006, April). *Navigating Across Spatial Scales in Science: Different Worlds, Unifying Concept*. Paper presented at the National Association of Research in Science Teaching (NARST) Conference. San Francisco, CA.

Jones, M. G., Minogue, J., Broadwell, B., & Oppewal, T. (April, 2006). *The Impact of Haptic Feedback on Students’ Understandings of the Animal Cell*. Paper presented at the National Association of Research in Science Teaching (NARST) Conference. San Francisco, CA.

Jones, M. G., Minogue, J., Broadwell, B., Patrick, M., & Oppewal, T. (2006, April). *Visualizing Without Vision at the Microscale: Students with Visual Impairment Explore Cells with Touch*. Paper presented at the National Association of Research in Science Teaching (NARST) Conference. San Francisco, CA.

Dotger, S., Jones, M. G., & Broadwell, B., (2006, January). *Using Kits to Revitalize Elementary Science: An On-Going Analysis of Teachers’ Conceptions*. Paper presented at the Association of Science Teacher Education.

Jones, M. G. (2005, October). *Nanotechnology Education: Exploring New Possibilities for Women and Minorities*. Invited presentation at James Madison University.

Jones, M. G. (2005, July).*“I See It Better When I Feel It:” Haptics and Visualization at the Nano and Microscales.* Invited presentation given to the Gordon Conference- Visualization in Science Education. Queens College, Oxford, United Kingdom.

Jones, M.G. (2005, June). *Case Studies in Teacher Action Research*. Invited presentation given to the International Conference on Action Research and Professional Development in Science. Taipai University, Taiwan.

Jones, M.G. & Minogue, J. (2005, January). *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) Conference. Colorado Springs, CO.

Minogue, J., Jones, M.G., Kubasko, D., Tretter, T., Dotger, S., & Oppewal, T. (2005, April). *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., Tretter, T. (2005, April). *Virtual Hands-On Experiences: A Study of Haptic Feedback Devices and Science Learning*. Presented at the National Association of Research in Science Teaching (NARST) Conference. Dallas, TX.

Minogue, J., Jones. M.G., Tretter, T., Negishi, A., & Taylor, R. (2005, April). *Investigating the Efficacy of Haptic Science Instruction.* Presented at the American Educational Research Association (AERA) conference. Montreal, Canada.

Jones, M. G., Tretter, R., Paechter, M., Kubasko, D., Bokinsky, A., Andre, T., & Negishi, A. (2005, April). *Spectator or Participant? African-American Students’ Writing About Science*. Paper presented at the American Educational Research Association Annual Meeting.

Tretter, T., Jones, M.G., Andre, T., Negishi, A., & Minogue, J. (2005, April). *Conceptual Distances and Conceptual Boundaries: Students’ and Adults’ Conceptualizations of Spatial Scale in Science*. Paper presented at the American Educational Research Association Annual Meeting.

Painter, J., Jones, M.G., Tretter, T., & Kubasko, D. (2005, April). *Pulling Back the Curtain: Revealing and Changing Students’ Perceptions of Scientists*. Paper presented at the National Association of Research in Science Teaching Meeting. Dallas, TX.

Tretter, T., Jones, M.G., Andre, T., Negishi, A., & Minogue, J. (2005, April). *Scale of Scientific Phenomena: Demarcation of Distinct Spatial Scales in Experts’ and Students’ Cognitive Frameworks*. Paper presented at the National Association of Research in Science Teaching Meeting. Dallas, TX.

Jones, M. G., Tretter, T., Paechter, M., Kubasko, D., & Andre, T. (2005, April). *Differences in African-American and Euro-American Students’ Perceptions of Science Instruction*. Paper presented at the National Association of Research in Science Teaching Meeting. Dallas, TX.

Dotger, S., & Jones, M.G. (2005, April). “*The Mis-Match Between Goals and Results: Looking at the Nature of Science Through the Reflective Judgement Model*. Paper presented at the National Association of Research in Science Teaching Meeting. Dallas, TX.

Jones, M. G., (2005, January). *Future Directions in Equity Research- Defining the Science Education Matrix*. Paper Presented at the Association for the Education of Teachers In Science Annual Meeting. Colorado Springs, CO.

Tretter, T., Jones, M. G., Andre, T., Kubasko, D., Bokinsky, A., Negishi, A., Taylor, R., & Superfine, R. (2004, April). *Conceptual Ecology of Scale*. Paper presented at the American Educational Research Association Annual Meeting. San Diego, CA.

Jones, M. G., Tretter, T., Bokinsky, A., Negishi, A. (2004, April). *Touch and Vision: Haptic Feedback and 3-Dimensional Learning*. Paper presented at the American Educational Research Association Annual Meeting. San Diego, CA.

Jones, M. G., Tretter, T., Bokinsky, A., Negishi, A., Taylor, R., & Superfine, R. (2004, April). *Seeing or Feeling? Haptic Perception and 3-Dimensional Conceptualizations*. Paper presented at the National Association of Research in Science Teaching Annual Meeting. Vancouver, Canada.

Kubasko, D., Jones, M. G., Tretter, T., Andre, T. (2004, April). *Talking Science with Scientists: Students Synchronous Versus Asynchronous Communication*. Paper presented at the National Association of Research in Science Teaching Annual Meeting. Vancouver, Canada.

Tretter, T., Jones, M. G., Andre, T., Kubasko, D. (2004, April). *How Small is small? Students’ Conceptions of Scale*. Paper presented at the National Association of Research in Science Teaching Annual Meeting. Vancouver, Canada.

Tretter, T., Jones, M. G., Negishi, A., & Minogue, J. (2004, April). *Scale as a Unifying Theme in Science—Size Matters*. Paper presented at the National Science Teachers Association Annual Meeting. Atlanta, GA.

Jones, M. G., & Tretter, T. R. (2003, October). *Investigating Viruses with Touch: Nanotechnology and Science Inquiry.* Poster presented at NSF Division Research, Evaluation, and Communication Meeting for PIs and Contractors. Arlington, VA.

Jones, M. G. (2003). *Nanotechnology and Science Education*. Invited Seminar, Purdue University.

Jones, M. G., Tretter, T. R., Negishi, A., Taylor, R., Superfine, R., Andre, T., Kubasko, D., & Bokinsky, A. (2003, April) *Putting Hands-On Science to the Test: Students’ Haptic Experiences with Microbes.* Paper presented at the American Educational Researchers Association Annual Meeting. Chicago, IL.

Jones, M. G., Andre, T., Negishi, A., Tretter, T. R., Kubasko, D., Bokinsky, A., Taylor, R., & Superfine, R. (2003, March) *Hands-On science: The Impact of Haptic Experiences on Attitudes and Concepts.* Paper presented at the National Association for Research in Science Teaching Annual Meeting. Philadelphia, PA.

Hardin, B., & Jones, M. G. (2002, November). *Bearers of Time: The Construction of Temporal Identity by Kindergarten Children in Mexico and the United States*. Paper presented at the Conference of the National Association for the Education of Young Children. New York, NY.

Jones, M. G. & Helser, A. (2002, October). *Reaching Into Microspace/Using the Nanomanipulator in an Educational Setting*. Invited Paper presented to the National Research Center for Micro- and Nanotechnology, Technical University of Denmark. Copenhagen, Denmark.

Jones, M.G., Bokinsky, A., & Helser, A. (2002, October). *Using Nanotechnology to Investigate Viruses*. Invited presentation given to Swedish students, Malmo Museum of Science and Technology. Malmo, Sweden.

Jones, M. G., Andre, T., Kubasko, D., Bokinsky, A., Negishi, A., Taylor, R., and Superfine, R. (2002, April). *Touching viruses: The Impact of Haptic Experiences on Students’ Attitudes and Concepts.* Paper presented at the National Association of Research in Science Teaching Annual Meeting. New Orleans, LA.

Jones, M. G., Andre, T., Kubasko, D., Bokinsky, A., Negishi, A., Taylor, R., and Superfine, R. (2002, April). *Touching the Unseen*. Paper presented at the American Educational Research Association Annual Meeting. New Orleans, LA.

Jones, M. G., Bokinsky, A., Andre, T., Kubasko, D., Negishi, A., Taylor, R., and Superfine, R. (2002, March). *NanoManipulator Applications in Education: The Impact of Haptic Experiences on Students’ Attitudes and Concepts*. Paper presented at IEEE Computer Science Haptics Symposium. Orlando, FL.

Jones, M. G., Andre, T., Kubasko, D., Taylor, R., and Superfine, R. (2002, January). *Virtual Hands-On Experiences: The Use of Haptics in Students’ Investigations of Viruses*. Paper presented at the Association of Educators of Teachers of Science Conference. Charlotte, NC.

Jones, M.G., and Bokinsky, A. (October 2001). *Investigating Viruses with Touch*. Paper presented at the Research on Learning Technologies and Technology Supported Education, NSF-DFG. Tubengen, Germany.

Jones, M. G., Andre, T., Superfine, R., and Taylor, R. (2001, March). *The Intersection of Scientists, Nanotechnology, Touch, and Gender: Students' Use of Nanotechnology to Investigate Virus Structure*. Paper presented at the National Association of Research in Science Teaching Conference. St. Louis, MO.

Jones, M. G., Andre, T., Superfine, R., and Taylor, R. (2001, April). *Students and Scientists Investigating Viruses with Touch*. Paper presented at the American Educational Research Association Conference. Seattle, WA.

Jones, M. G., Andre, T., Superfine, R., and Taylor, R. (2001, January). *Touching Viruses Across Space: Nanotechnology Outreach and Science Inquiry*. Paper presented at the Association of Educators of Teachers of Science Conference. Costa Mesa, CA.

Jones, M. G., Andre, T., Superfine, R., and Taylor, R. (2001, March). *Helping Teachers and Students Use Advanced Technology in Teaching High School Science: A Preliminary Feasibility Study of the Use of a WWW-Controlled Atomic Force Microscope in High School Science*. Paper presented at the SITE Conference. Orlando, FL.

Jones, M. G. (2000, September). *Tests and the Impact on How and What Teachers Teach*. Invited presentation for the Hechinger Institute on Education and the Media and Johnson Foundation Conference. Racine, WI.

Jones, M. G., (2000, April). “*Running with Scissors: The Impact of High-Stakes Testing on Science Instruction*.” Paper presented at the American Educational Research Association Annual Meeting. New Orleans, LA.

Jones, M.G., (2000, April). *Now You See it, Now You Don’t: The Impact of High-Stakes Testing on Science Instruction*.” Paper presented at the National Association of Research in Science Teaching Annual Meeting. New Orleans, LA.

Jones, M.G., Palmatier, B., Demmick, L., and Pedde, P. (1999, October). *Showcase of Global Marine and Aquatic Investigations*. Paper presented at the National Marine Educators Conference. Charleston, SC.

Jones, M.G., Palmatier, B., Demmick, L., and Pedde, P. (2000, March) *Teaching Science with Inquiry*. Presentation made at the National Science Teachers Association. Orlando, FL.

Jones, M. G., Brader-Araje, L., Carboni, L., & Rua, M. (1999, April). *Coloring Outside the Lines: Science Tool Use, Control, Authority, and Gender*. Paper presented at the American Educational Research Association Annual Meeting. Montreal, Canada.

Jones, M.G., Carter, G., & Rua, M. (1999, April). *Concept Mapping, Interviews, Diagrams, Observations, and Card Sorting: Which Window Into the Mind?* Paper presented at the National Association of Research in Science Teaching Annual Meeting. Boston, MA.

Jones, M.G., Brader-Araje, L., Carboni, L., Carter, G., & Rua, M. (1999, March). *Coloring Outside the Lines: The Intersection of Science Tools, Exploration and Competition*. Paper presented at the National Association of Research in Science Teaching Annual Meeting. Boston, MA.

Rua, M., & Jones, M.G. (1999, April). *Pieces of the Story: Students', Teachers', and Medical Professionals' Beliefs About Bacteria and Viruses.* Paper presented at the American Educational Research Association Annual Meeting. Montreal, Canada.

Jones, M.G., Brader-Araje, L., Carboni, L., Carter, G., & Rua, M. (1999, April). *Paradoxes of Progress: The Intersection of Science Tools, Exploration, and Competition*. Paper presented at the Gender in Science Education Conference. Boston, MA.

Jones, M.G.(1999, January). *Bringing the Outdoors In: Integrating Environmental Education in Teacher Education*. Paper presented at the American Educational Research Association Annual Meeting. Austin, TX.

Jones, M.G., Rua, M., & Carter, G. (1998, April). *The Effects of Partners’ Ability on the Achievement and Conceptual Organization of High-Achieving Fifth-Grade Students.* Paper presented at the American Educational Research Association Annual Meeting. San Diego, CA.

Rua, M., & Jones, M.G. (1998, April). *Fifth-Grade Students and Teachers' Understandings of Bacteria and Viruses.* Paper presented at the American Educational Research Association Annual Meeting. San Diego, CA.

Jones, M.G., Rua, M., & Carter, G. (1998, April). *The Effects of Partners’ Ability on the Achievement and Conceptual Organization of High-Achieving Fifth-Grade Students*. Paper presented at the National Association of Research in Science Teaching Annual Meeting. San Diego, CA.

Rua, M., & Jones, M.G. (1998, April). *Fifth-Grade Students and Teachers' Understandings of Bacteria and Viruses.* Paper presented at the National Association of Research in Science Teaching Annual Meeting. San Diego, CA.

Vesilind, E., & Jones, M.G. (1997, March). *Jello in the Trenches: A Readers’ Theater About Metaphor and Professional Growth in Student Teachers' Stories.* Paper presented at the National Council of Teachers of English Conference. Charlotte, NC.

Jones, M.G., Carter, G., & Rua, M. (1997, March). *Science Teachers' Conceptual Growth Within Vygotsky's Zone of Proximal Development*. Paper presented at the National Association of Research in Science Teaching Annual Meeting. Chicago, IL.

Jones, M.G., Carter, G., & Rua, M. (1997, March). *Science Teachers' Conceptual Growth Within Vygotsky's Zone of Proximal Development*. Paper presented at the American Educational Research Association. Chicago, IL.

Rua, M., & Jones, M.G. (1997, March). *Students' and Teachers' Mental Models of Germs and Illness*. Paper presented at the National Association of Research in Science Teaching. Chicago, IL.

Jones, M. G. (1997, March). *Implications of Feminism for Curriculum and Instruction.* Paper presented at the AERA Professors of Curriculum Conference. Chicago, IL.

Jones, M.G. (1997, March). *Walkin' the Talk in the 90's: Exemplary Studies of Gender Education.* Paper presented at the American Educational Research Association. Chicago, IL.

Vesilind, E., & Jones, M.G. (1997, March). *Jello in the Trenches: A Readers’ Theater About Metaphor and Professional Growth in Student Teachers' Stories.* Paper presented at the American Educational Research Association. Chicago, IL.

Jones, M.G,(1996, December). *Engaging Families in Exploring Science*. Paper presented at the Global Summit on Science and Science Education. San Francisco, CA.

Jones, M.G,. & Rua, M. (1996, November). *Family Science.* Paper presented at the National Science Teachers Association Regional Conference. Atlanta, GA.

Jones, M.G,. & Rua, M. (1996, March). *Wet, Wild, and Wacky Water Activities*. Paper presented at the National Science Teachers Association. St. Louis, MO.

Jones, M.G., & Vesilind, E. (1996, April). *Situated Science: Defining Science in the Context of Reform*. National Association of Research in Science Teaching. St. Louis, MO.

Jones, M.G., & Vesilind, E. (1996, April). *Situated Science: Defining Science in the Context of Reform*. American Educational Research Association, NY.

Rua, M., Jones, M.G., & Carter, G. (1996, April). *Teachers' Conceptual Growth Within Vygotsky's Zone of Proximal Development*. National Association of Research in Science Teaching. St. Louis, MO.

Jones, M.G., & Vesilind, E. (1995, April). *Through a Sideways Door: A Resource Model of Science Teacher Change*. Paper presented at the National Association of Research in Science Teaching Annual Meeting. San Francisco, CA.

Jones, M.G. & Carter, G. (1995, April). *The Effects of Ability-Paired Interactions on Concept Attainment*. Paper presented at the American Educational Research Association Annual Meeting. San Francisco, CA.

Jones, M. G., Carter, G. (1994, March). *Verbal and Non-Verbal Behavior of Ability-Grouped Dyads*. National Association for Research in Science Teaching. Anaheim, CA.

Jones, M. G. (1994, March). *Sound Ideas: Strategies for Teaching Estuarine and Marine Science*. National Science Teachers Association. Anaheim, CA.

Jones, M. G., & Vesilind, E. (1994, April). *Changes in the Structure of Pedagogical Knowledge of Middle School Preservice Teachers*. Paper presented at the 1994 American Educational Research Association Annual Meeting. New Orleans, LA.

Jones, M.G. (1993, November). *Get Your Feet Wet: Head for the Marsh*. Paper presented at the National Middle School Conference. Portland, OR.

Jones, M.G., & Vesilind, E. (1993, August). *Changes in the Structure of Pedagogical Knowledge in Mathematics and Science Preservice Teachers*. Paper presented at the Third International Seminar on Misconceptions and Educational Strategies in Science and Mathematics. Ithaca, NY.

Carter, C., & Jones, M. G. (1993, April). *The Relationship Between Ability-Paired Interactions and the Development of Fifth Graders' Concepts of Balance*. Paper Presented at the National Association for Research in Science Teaching Annual Conference. Atlanta, GA

Jones, M.G., Markham, K., Mintzes, J. (1993, April). *The Structure and Use of Biological Knowledge in Novice and Experienced Students: Mammals III*. Paper presented at the National Association for Research in Science Teaching Annual Meeting. Atlanta, GA.

Jones, M. G. (1993, January). *Changes in Preservice Science Teachers' Concepts of Effective Teaching*. Paper presented at the National Meeting of the Association for the Education of Teachers in Science. Charleston, SC.

Jones, M. G. (1992, December). *Family Science*. Paper presented at the National Science Teachers Area Convention. Charlotte, NC.

Jones, M.G. (1992, March). *Cooperative Learning: Developmentally Appropriate for Adolescents*. Paper presented at the National Middle School South Region Conference. Nashville, TN.

Jones, M.G. (1992, March). *Cooperative Learning Strategies: Ideas and Techniques*.” Paper presented at the National Middle School South Region Conference. Nashville, TN.

Jones, M.G. (1992, March). *Cooperative Problem-Solving for the Middle Level Classroom*. Paper presented at the National Middle School South Region Conference. Nashville, TN.

Jones, M. G. (1992, November). *Family Science: A Model for Parent Participation in Middle-Level Schools*. Paper presented at the National Middle School Association Annual Conference. San Antonio, TX.

Jones, M.G. (1992, March). *On the Road to Expert Science Teaching: Student Teacher-Pupil Interactions*. Paper presented at the National Association of Research in Science Teaching Annual Meeting. Cambridge, MA.

Jones, M.G. (1992, March). *By the Edge of the Sea: Marine and Aquatic Activities*. Paper presented at the National Science Teachers Conference. Boston, MA.

Jones, M.G. (1991, December *Cooperative Problem-Solving for the Middle Level Classroom*, Paper presented at the National Middle School Conference. Louisville, KY.

Jones, M.G. (1991, July). *Competitive Science: Gender Differences in the Physical and Biological Sciences.* Paper presented at the Sixth International GASAT Conference. Victoria, Australia.

Jones, M.G. (1991, April). *The Impact of Transition From Junior Highs to Middle Schools on Science Programs*. Paper presented at the National Association of Research in Science Teaching Conference. Fontana, WI.

Jones, M.G. (1990, December). *Changing Student Misconceptions Through Cognitive Conflict and Cooperative Learning*. Paper presented at the National Science Teachers Association Regional Conference.Washington, DC.

Jones, M.G., DeLucia, S. & Davis, J. (1990, November). *The Impact of Middle School Organizational Changes on Science Instruction*. Paper presented at the National Middle School Association. Long Beach, CA.

Jones, M.G. (1990, August). *Where the River Meets the Sea: Estuarine Ecology Activities*. Paper presented at the National Marine Education Conference. Hilo, HI.

Jones, M.G. (1990, July). *Cognitive Conflict and Cooperative Learning*. Paper presented at the International Association for the Study of Cooperative Education Conference. Baltimore, MD.

Jones, M.G. (1990, April). *Get Your Feet Wet: Head for the Estuary*. Paper presented at the National Science Teachers National Convention. Atlanta, GA.

Jones, M.G. (1990, April). *Cognitive Conflict and Cooperative Learning*. Paper presented at the National Association for Research in Science Teaching Annual Conference. Atlanta, GA.

Jones, M.G. (1989, March). *T-Zone, Target Students and Science Classroom Interactions.* Paper presented at the annual meeting of the National Association of Research in Science Teaching. San Francisco, CA.

Burke, W. & Jones, M.G. (1989, October). *Teacher Education Through Partnership: A Model of Collaboration*. Paper presented at the National Middle School Association Annual Conference. Toronto, Canada.

Jones, M.G. (1989, March). *Gender Differences in Student-Teacher Interactions in Physical Science and Chemistry Classrooms*. Paper presented at the annual meeting of the Association for Supervision and Curriculum Development. Orlando, FL.

Jones, M.G. (1988, April). *Gender Differences in Student-Teacher Interactions in Physical Science and Chemistry Classes*. Paper presented at the National Association for Research in Science Teaching. St. Louis, MO.

Wheatley, J., and Jones, G. (1986, March). *Characteristics of Cooperative Student-Teacher Relationships*. Paper presented at the National Science Teacher Association Annual Meeting. San Francisco, CA.

Regional, State and Local Presentations

Jones, M. G., Carrier, S., Delgado, C., Grifenhagen, J., (2020). *Bringing a Sense of Swe to Your Science Instruction: Educator Workshop*. NC State University. Raleigh, NC.

Jones, M. G. (2021, January). *Science Hobbyists: Research in Informal Education*. Guest presentation, elementary education. NC State University. Raleigh, NC.

Jones, M. G. (2020, October). *Understanding Science Career Aspirations: Factors Predicting Future Science Task Value*. Guest presentation EMS 732. Raleigh, NC.

Jones, M.G. (2020, October). *Awe in Teaching and Learning*. Presentation, Catalyst Research Grant Virtual Symposium, Friday Institute, NC State University. Raleigh, NC.

Jones, M.G. (2020, Sept). *Mentoring for Faculty*. RLA Junior Faculty Forum. NC State University. Raleigh, NC.

Jones, M. G. (2020, June). *Mentoring and Advising*. Academic Pathways: Gearing Up for Faculty. NC State University. Raleigh, NC.

Jones, M. G. (2020, July). *Investigations in Nanotechnology*. NC Science Summit. Chapel Hill-Carrboro City Schools.

Jones, M. G. (2020, February). *Beyond the Child: Building Science Capital and Parent Science Habitus Through Family STEM Programs*. Celebration of Research. NC State College of Education. Raleigh, NC.

Jones, M. G., Refvem, E., Rende, K., Huff, P. & Nieuwsma, J (2019, November). *Investigations in Nanotechnology: Integrating Nano in the Curriculum*. Presentation at the NC Science Teachers Association Conference. Winston-Salem, NC.

Jones, M. G., Refvem, E., Rende, K., Huff, P. & Nieuwsma, J. (2019, November). *Making Lessons Pop with Virtual Reality*. Presentation at the NC Science Teachers Association Conference. Winston-Salem, NC.

Cayton, E., & Jones, M. G. (2019, November). *How Much Does That Cost? Strategies for Teaching Science on a Budget*. Presentation at the NC Science Teachers Association Conference. Winston-Salem, NC.

Jones, M.G., Ennes, E., Rende, K., & Niewsma, J. (2019, October). *STEM Education Initiatives: Making a Difference*. Presentation made to the Friday Institute National Advisory Board. Raleigh, NC.

Ennes, M., Jones, M. G., Cayton, E., Phillips, L., Huff, P., Chesnutt, K., Lee, T., Carrier, S., Ward, R., (2018, November). *“Feeling Like a Real Scientist:” Creating Tomorrow’s Scientists*. Presentation at National Science Teachers Association Regional Conference. Charlotte, NC.

Jones, M. G., Ennes, M., Hite, R., Corin, E., Childers, G., Cayton, E., (2018, November). *Don’t Become a Basket Case: Integrate Engineering with Ease Using Case Studies*. Presentation at National Science Teachers Association Regional Conference. Charlotte, NC.

Jones, M. G., Ennes, M., Cayton, E., Chesnutt, K., Englehardt, H., Baird, E., (2018, November). *Science is Who We Are and What We Do*. Presentation at National Science Teachers Association Regional Conference. Charlotte, NC.

Jones, M. G. (2018, May). *Promoting STEM Interests and Careers*. Presentation at the Friday Institute Advisory Board Meeting, NC State University. Raleigh NC.

Jones, M. G., & Umbach, P. (2018, April). *Understanding the Grant Review Process: Insights About Review Panels*. Presentation made at the Research Café Project Development and Management, NC State University. Raleigh, NC.

Jones, M. G. (2018, March). *Community Engaged Scholarship*. Invited presentation at The Engaged Scholarship for Ethics and Innovation in STEM Fields conference. Raleigh, NC.

Jones, M. G., Cayton, E., Chesnutt, K., Ennes, M., Ward, R., Huff, P. (2017, October). *Enhancing Motivation, Confidence, and Career Goals: Creating Tomorrow’s Scientists*. Presentation at NC Science Teachers Association Conference. Greensboro, NC.

Tracy, J., Jones, M. G., Ennes, M., Cayton, E., Chesnutt, K., Huff, P., Ward, R. (2017, October). *Bioinspired Materials*. Presentation at NC Science Teachers Association Conference. Greensboro, NC.

Jones, M. G., & Hite, R.  (2016, May). *An Exploration of 3-D, Haptic-Enabled Virtual Reality Technologies in Educational Research.* Research presented to the NC State Virtual Reality Working Group, Friday Institute for Educational Innovation. Raleigh, NC.

Jones, G., Cayton, E., Chesnutt, K. , Ennes, M., & Justice, N., (2016, October). *The Power School: Electrifying Ideas for Teaching Energy*. NC Science Teachers Association Annual Meeting. Greensboro, NC.

Chesnutt, K., Jones, M.G., Cayton, E., Ennes, M., & Huff, P. (2016, October). *Packing Your Scale Backpack: Resources for Enhancing Out-of-School Learning of Size and Scale*. NC Science Teachers Association Annual Meeting. Greensboro, NC.

Ennes, M., Jones, M. G., Chesnutt, K. (2016, September). *Improving Informal Educator Self-Efficacy in Teaching Science Concepts.* Presented at the Environmental Educators of North Carolina Conference. Black Mountain, NC.

Jones, G., Hite, R., Pereya, M., Ennes, M., Cayton, E., Chesnutt, K. (2016, April). *Cracking the Case: Investigating Science and Engineering with Case Studies*. Scaling STEM: Strategies that Engage the Mind. Research Triangle Park, NC

Jones, M. G., Hite, R., Chesnutt, K., Corin, E., Pereyra, M., & Childers, G. (2015, November). *Bypass Misconceptions! Strategies to Teach Heart Anatomy and Physiology*. Workshop presented at the NC Science Teachers Association. Winston-Salem, NC.

Jones, M. G., Muth, J., Justice, N., Corin, E. & Cayton, E. (2015, November). *Engineering Innovation: Creating Smaller, Faster and More Efficient Electronics*. Workshop presented at the NC Science Teachers Association. Winston-Salem, NC.

Corin, E., Jones, M. G., Hite, R., Pereyra, M., Chesnutt, K., & Childers, G. (2015, November). *Preparing for a Lifetime of Science: Science Hobbies and Informal Interests*. Workshop presented at the NC Science Teachers Association. Winston-Salem, NC.

Jones, M. G., Hite, R., Chesnutt, K., Corin, E., & Pereyra, M. (2015, November). *Cracking the Case II: Decoding Even More Engineering Principles Using Case Studies*. Workshop presented at the NC Science Teachers Association. Winston-Salem, NC.

Jones, G., Hite, R., & Chesnutt, K. (2015, November). *Science Hobbyists and Citizen Scientists: Characteristics, Motivations,* *Experiences, and Career Trajectories.* Invited research presentation to the Chancellor of NC State University. Raleigh, NC.

Jones, M. G., Hite, R., & Chesnutt (2015, June). *Engineering with Virtual Reality*. Presentation to the NC State University Engineering Camp.

Hite, R., Chesnutt, K., Jones M.G. (2015, July). *Exploring Science Concepts for Students with Visual Impairments*. Friday Institute for Educational Innovation. Raleigh, NC

Jones, M. G., Hite, R, Chesnutt, K. (April, 2015). *One Health Sensor Competition*. Wake County Public Schools. Raleigh, NC.

Green, K., Hite, R., Jones, M.G., Kimball, L., Keech, C., Samuels, M., Walz, J. (2015, April). *Partnerships for STEM Education.* Presentation at the Scaling STEM Conference. Durham, NC.

Jones, M. G., Corin, E., Andre, T., Childers, G., & Hite, R (2015, March). *Informal Education: Characteristics of Hobbyists and Citizen Scientists*. University of North Carolina at Chapel Hill. Chapel Hill, NC.

Jones, M. G., Corin, E., Andre, T., Childers, G., & Hite, R (2015, March). *Development of Hobby Interests Over Time*. Presentation to Informal Educators, NC State University. Raleigh, NC.

Jones, M. G., Hite, R., Chesnutt, K., & Corin, E. (2015, March). *STEM Expo*. Centennial Middle School. Raleigh, NC.

Jones, M. G., Corin, E., Andre, T., Childers, G., & Hite, R (2015, March). *Social Justice and Access to STEM Hobbies*. Research presentation, NC State University. Raleigh, NC.

Chesnutt, K., Jones, M.G. (2015, February). *Carbon Sequestration.* Poster Judge, Wake STEM Early College High School. Raleigh, NC.

Childers, G., Jones, M.G., Hite, R., & Corin, E. (January, 2015). *Nanoscience: Size and Scale*. North Duplin Jr. - Sr. High School. Mt. Olive, NC.

Jones, M.G., Hite, R., Corin, E., Taylor, A. (2014, November). *Cracking the Case: Decoding Engineering Principles Using Case Studies*. Workshop presented at the NC Science Teachers Conference. Winston-Salem, NC.

Jones, M.G., Hite, R., Taylor, A. Corin, E., (2014, November). *Science and Engineering Share-a-Thon*. Workshop presented at the NC Science Teachers Conference. Winston-Salem, NC.

Jones, M. G. (2014, October). *Strategies for Teaching Nanotechnology*. Presentation to the NC State University Science Teachers Association. Raleigh, NC.

Corin, E., Jones, M. G., Andre, T., Chiders, G., & Hite, R. (2014, October). *Eager to Teach: Perspectives from Astronomy and Birding Hobbyists*. Paper presented at the Mid Atlantic Association of Science Teacher Educators Conference. Blowing Rock, NC.

Hite, R., Jones, M. G., Andre, T., Childers, G., & Corin, E. (2014). *Female and Minority Under-Representation in Science Hobbies: Implications for Expansion of the STEM Pipeline*. Paper presented at the Mid Atlantic Association of Science Teacher Educators Conference.
Blowing Rock, NC.

Corin, E.N., Jones, M.G. (2014, May). *Amateur Astronomers and Birders Engaged in Learning and Teaching: A Comparison of Science Hobbyists*. Poster presentation at the North Carolina State University STEM Education Research Symposium. Raleigh, NC.

Gardner, G.E., Jones, M.G., Paechter, M., Albe, V., Blonder, R., & Laherto, A. (2014, May). *Scientists Learning to Communicate:* *An International Comparison of Undergraduate Student Perceptions of Science Communication Training*. Paper presented at the first international conference of the Tennessee Association of Science Department Chairs: The Role of Multidisciplinary Research in Teaching and Learning. Morristown, TN.

Corin, E. N., Jones, M. G., Andre, T., Childers, G. M. (2013, May) *Astronomy Hobbyists: Factors that Influenced Career Choices*. North Carolina State University STEM Education Research Symposium. Raleigh, NC.

Corin, E. N., Jones, M. G., Andre, T., Childers, G. M. (2013, August) *Who Are Astronomy Hobbyists?* Carolina Association of Planetarium Educators Conference. Chapel Hill, NC.

Jones, G. and Childers, G. (April, 2013). *Nanotechnology Engineering Teacher Training*, North Carolina State University. Raleigh, NC.

Jones, G., Childers, G., Corin, E., & Hite, R. (November, 2013). *Habits of Highly Effective People*. Workshop for Durham County Teachers. Durham, NC.

Jones, G., Childers, G., Corin, E., & Hite, R. (November, 2013). *Nanotechnology Workshop for Educators*. Marbles Science Museum. Raleigh, NC.

Jones, G., Childers, G., Corin, E., & Hite, R. (October, 2013). *Nanotechnology Integration in Curricula.* Workshop for Durham County Teachers. Durham, NC.

Jones, G., Childers, G., Corin, E., & Hite, R. (August, 2013). *Nanotechnology, Engineering, and STEM Integration*. Workshop for Centennial Middle School Teachers. Raleigh, NC.

Corin, E. N., Jones, M. G., Andre, T., Childers, G. M. (May, 2013) *Astronomy Hobbyists: Factors that Influenced Career Choices*. North Carolina State University STEM Education Research Symposium. Raleigh, NC.

Jones, M.G., Tracy, J., Childers, G., Leagon, M., Corwin, E., Taylor, A., & Falvo, M. (2012, November). *What is the Big Deal About Nanotechnology?* Workshop presented to the NC Teachers Association Annual Meeting, Winston-Salem, NC.

Jones, M. G. (2011). *Nanotechnology: Big Ideas and New Science*. Presentation to Wake County Public Schools Principals and Teachers. Raleigh, NC.

Jones, M. G., Falvo, M., Taylor, A., Broadwell, B., and Childers, G. (2011). *Nanoscale Science*. NC Science Leaders Association Annual Meeting. Greensboro, NC.

Jones, M. G., Taylor, A., Woolard, L., Englehardt, H., Hall, A. (2011). *Nano Palooza: Nanotechnology for Teachers*. NC Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M.G. (2010). *Understanding Scale*. Poster presented at the Friday Institute for Educational Innovation Advisory Board. Raleigh, NC.

Jones, M.G. (2011). *New Directions in Materials Science: Making Stuff Workshop*. Presented at the NM Museum of Life and Sciences. Durham,NC.

Jones, M. G.,Tracy, J., & Woolard, L. (2010). *Nanospintronics: New Advancements in Science*. Workshop presented at the NC Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M. G., Taylor, A., Falvo, M., Hall, A., & Robert, S. (2010). *Modeling Phenomena at the Extremes of Science*. Workshop presented at the NC Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M. G. (2010). *Extreme Science Workshop*. Chowan Middle School. Tyner, NC.

Jones, M. G., Taylor, A., Falvo, M., Gardner, G., Thurmond, B., Robert, S. (2009). *Extreme Science: Scales From Nano to Galactic*. Presentation to the NC Science Teachers Association. Greensboro,NC.

Jones, M. G., & Falvo, M. (2009). *What is Nanotechnology and Why Should You Care? Scaling Ideas from the Nanometer to the Marketplace*. Invited presentation, NC Nanotechnology Commercialization Conference. Raleigh, NC.

Jones, M. G. (2009). *Faculty Perspectives on Research Support*. Presentation made to the Research Support Council, NC State University. Raleigh, NC.

Gardner, G. E., & Jones M. G. (2009, May). *Graduate Teaching Assistants’ Instructional Framing of the Social and Ethical Implications of Genetically-Modified Crops*. Poster presented at the Symposium on Life Sciences Education sponsored by the North Carolina Biotechnology Center. Research Triangle Park, NC.

Jones, M.G. (2009). *Family Science*. Wiley Elementary School. Raleigh,NC.

Taylor, A., & Jones, M.G. (2008, November). *What Factors Influence a Concept of Scale?* Paper presented at the annual meeting of the School Science and Math Association. Raleigh, NC.

Jones, M.G., & Taylor, A. (2008, November). *Learning About Scale: A Retrospective Look.* Paper presented at the annual meeting of the School Science and Math Association. Raleigh, NC.

Gardner, G., Jones, M. G., Taylor, A., Forrester, J., Krebs, D., & Robertson, L., (2008, November). *Nanotechnology in Undergraduate Education: Preparing Future Developers, Appliers, and Communicators of Nanoscience*. Paper presented at the annual meeting of the School Science and Math Association. Raleigh, NC.

Robertson, L., Jones, M.G., Gardner, G., & Dotger, S. (2008, November). *Unpacking the Kit: How Do Elementary Science Kits Affect Classroom Culture?* Paper presented at the School Science and Mathematics Association Annual Conference. Raleigh, NC.

Krebs, D., Jones, M. G., & Banks, A. (2008, November). *The Incorporation of Nanoscience into Chemistry Lessons Involving Ice Cream*. Paper presented at the School Science and Mathematics Association Annual Conference. Raleigh, NC.

Gardner, G., & Jones, M. G. (2008, March). *An Assessment of the Impacts of Education on Undergraduates’ Risk Perception of Emergent Science and Technology*. Poster session presented at the annual North Carolina State University Graduate Student Research Symposium. Raleigh, NC.

Jones, M. G., Falvo, M., Robertson, L., and Krebs, D. (2008). *Extreme Science: Scales from Nano to Galactic*. Invited workshop, Secondary Professional Development Institute, Durham Public Schools. Durham, NC.

Jones, M. G. & Taylor, A. (2007). *Introduction to Nanotechnology*. Workshop presented at the NC Museum of Life and Sciences. Durham, NC.

Jones, M.G., Taylor, A., & Krebs, D. (2007). *Meet a Scientist*. Presentation made at the Morehead Planetarium and Science Center, University of North Carolina. Chapel Hill, NC.

Jones, M. G., Taylor, A., Forrester, J., Krebs, D., Robertson, L., & Gardner, G. (2007). *Exploring Science at the Nanoscale*. Workshop presented at Stough Elementary School. Raleigh, NC.

Jones, M. G. (2007). *Collaborating in the Academy*. Presentation to the assistant professor’s discussion group, NC State University. Raleigh, NC.

Jones, M. G., Falvo, M., Taylor, A., Kubasko, D., Forrester, J., Gardner, G., Robertson, L., Krebs, D. (2007). *Nanoscale Science*. Workshop presented at the NC Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M. G., Taylor, A., Falvo, M., Forrester, J., & Kubasko, D. (2006). *No Stink socks, StrongerBikes, and Cancer-Destroying Nanobots: Exploring Nanotechnology*. Workshop presented at the NC Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M. G., Taylor, A., Scott,J., Nifong, J. (2006). *Polishing the Stone with Japanese Lesson Study: Teachers Sharing Model Lessons*. Presentation made to the NC Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M. G., (2005). *Teaching Nanotechnology*. Presentation made to the Technology Education Department students, NC State University. Raleigh, NC.

Jones, M. G., Broadwell, B., Falvo, M., Flores, A., & Oppewal, T. (2005). *Advancements in Nanotechnology and Nanoscale Science*. Paper presented at the North Carolina Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M. G. and Spires, H. (2004). *Research-Driven Innovation for 21st Century Education*. Keynote Speaker. EDTECH 2004.

Jones, M. G., Falvo, M., Minogue, J., & Broadwell, B. (2004). *It’s a Small, Small World: Teaching About Nanotechnology*. Paper presented at the North Carolina Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M. G., Tretter, T. R., Kubasko, D., Negishi, A., Minogue, J., Superfine, R., & Taylor, R., (2003, November). *Fighting Back: The War Against Viruses.* Paper presented at the North Carolina Science Teachers Association Annual Meeting. Greensboro, NC.

Jones, M. G. (2002, November 13). *Leadership for Teachers*. Presentation made to the NC Science Teachers Association. Greensboro, NC.

Jones, M. G., Bokinsky, A., Kubasko, D., Tretter, T., Mabry, K., Day, N., & Sidensticker, L. (2002). *Hands-On Experiences with Viruses*. Presentation made to the North Carolina Science Teachers Conference. Greensboro,NC.

Tretter, T., Jones, M. G., Kubsko, D., Negishi, A., & Bokinsky, A. (2002). *Size is Important*. Presentation made to the North Carolina Science Teachers Conference. Greensboro, NC.

Jones, M. G., Kubasko, D., Andre, T., Taylor, R., Superfine, R., Negishi, A., Daye, N., Smith, B., Dennision, P. (2001, November). *Virtual Hands-On Experiences: Using Technology for Students to Touch Viruses*. Presentation made to the North Carolina Science Teachers Conference. Greensboro, NC.

Jones, M.G.. (2001, February). *The Impact of High-Stakes Testing in North Carolina*. Invited presentation made to Carolina Chapter of Phi Delta Kappa, University of North Carolina. Chapel Hill, NC.

Jones, M. G., (and 14 Durham Public School Teachers) (2000). *Zany, Bizarre and Engaging Science Investigations That Invite Inquiry*. Presentation made to the North Carolina Science Teachers. Greensboro, NC.

Hargrove, T.Y., Jones, M.G., Jones, B., Hardin, B., Chapman, L. and Davis, M. (2000, February). *Assessing the ABCs: The Impact of High-Stakes Testing in North Carolina*. Presentation made to the Southeast Education Alliance Board of Directors. Kenansville, NC.

Hargrove T.Y., Jones, M.G., Jones, B., Hardin, B., Chapman, L. and Davis, M. (2000, February). *Assessing the ABCs: The Impact of High-Stakes Testing in North Carolina*. Presentation made to Phi Delta Kappa, University of North Carolina at Wilmington. Wilmington, NC.

Jones, M.G., Hardin, B., Jones, B., Chapman, L., Davis, M. (2000, March). *The Impact of High-Stakes Assessment on Science Instruction*. Paper presented at the annual meeting of NCARE. Chapel Hill, NC.

Hargrove T.Y., Jones, M.G., Jones, B., Hardin, B., Chapman, L. and Davis, M. (2000, March). *The Impact of High-Stakes Testing in North Carolina and Changing Assessment for the Future*. Presentation made to The Southeast Education Alliance. Kenansville, NC.

Jones, M.G., Hardin, B., Jones, B., Davis, M., & Chapman, L. (1998, September). *Science and the State's ABC Program.* Paper presented at the Mid-Atlantic AETS Conference. Chapel Hill, NC.

Jones, M.G. & Rua, M. (1998, November). *GLOBAL Science Leaders for the 21st Century*. Workshop presented at the North Carolina Science Teachers Association. Greensboro, NC.

Carboni, L., Brader-Araje, L., Jones, M. G., & Rua, M. (1999, April). *Science Tool Use, Control, Authority, and Gender*. Paper presented at the North Carolina Association of Research in Education Annual Meeting. Chapel Hill, NC.

Vesilind, E., Horne, C., & Jones, M. G. (1999, March). *Favorite Units, Activities and Explorations from the Middle Grades Teacher Education Program, UNC-CH.* Paper presented to the North Carolina Middle School Association Annual Meeting. Greensboro, NC.

Jones, M. G. (1998, January). *Science Education: Bridging the Future*. Keynote Address, Teacher Conference, NC Museum of Life and Sciences. Durham, NC.

Jones, M.G. & Vesilind, E. (1997, October). *Defining Science in the Context of Reform*. Paper presented at the Mid-Atlantic AETS Conference. Mt. Lake, VA.

Jones, M.G. & Rua, M. (1997, November). *Operation Primary Physical Science*. Paper presented at the North Carolina Science Teachers Association. Winston-Salem, NC.

Brader-Araje, L. & Jones, M.G. (1997, November). *Tools of Gender: Conversation Space and Control During Dyad Interaction*. Paper presented at the Eighth annual Duke University Women's Studies Graduate Research Conference. Durham, NC.

Jones, M.G., & Vesilind, E. (1996, February). *Situated Science: Defining Science in the Context of Reform*. North Carolina Association of Research in Education. Chapel Hill, NC.

Jones, M.G,. & Rua, M. (1996, March). *Wet, Wild, and Wacky Water Activities*. Paper presented at the North Carolina Middle School Association. Greensboro, NC.

Rua, M., Jones, M.G., & Carter, G. (1996, February). *Teachers' Conceptual Growth Within Vygotsky's Zone of Proximal Development*. North Carolina Association of Research in Education. Chapel Hill, NC.

Jones, M.G., Rua, M., & Norris, G. (1996, November). *Project WET: An Interdisciplinary Environmental Curriculum*. A pre-conference short course offered at the North Carolina Science Teachers Association. Greensboro, NC.

Jones, M.G. (1996, June). *Gender Activities for Students, Teachers, and Parents*. Paper presented at the Public Schools of North Carolina "Excellence Through Equity and Diversity" Conference. Greensboro, NC.

Jones, M.G,. & Rua, M. (1995, November). *Wet, Wild, and Wacky Water Activities*. Paper presented at the North Carolina Science Teachers Association. Winston-Salem, NC.

Jones, M. G. (1995, March). *Implementing and Assessing the New Science NC Standard Course of Study: Focusing on Conceptual Understanding*. Presentation to the North Carolina Middle School Conference. Greensboro, NC.

Jones, M. G. (1995, November). *Leadership/Literacy: Middle School Reform*. Presentation to the Delta Kappa Gamma Society International. Chapel Hill, NC.

Jones, M.G. (1994, November). *Family Science*. Short course. North Carolina Science Teachers Association. Raleigh, NC.

Jones, M. G. (1994, May). *Science Stereotypes and Gender*. Keynote Address, Expanding Your Horizons Conference, Science and Mathematics Alliance. Chapel Hill, NC.

Jones, M.G. (1994, March). *Body Works: Using Whole Body Activities with Middle School Students*. Workshop presented at the N.C. League of Middle Level Schools Conference. Greensboro, NC.

Jones, M.G. (1993, November). *Sound Ideas: Wetland activities*. Workshop presented at the North Carolina Science Teachers Association. High Point, NC.

Jones, M.G. (1993, November). *TEACH-STAT: Turning Kids Into Private Detectives*. Workshop presented at the North Carolina Science Teachers Association. High Point, NC.

Jones, M.G. (1993, November). *Elementary Make-and-Take*. Workshop presented at the North Carolina Science Teachers Association. High Point, NC.

Carter, G., & Jones, M.G. (1993, January). *The Effects of Ability-Paired Interactions by Fifth-Graders on Balance Concept Attainment*. Paper presented at the N.C. Association for Research in Education. Greensboro, NC.

Jones, M.G. (1993, January). *Case Study: Improving Mathematics and Science Instruction in Elementary Schools*. Paper presented at the N.C. Association for Research in Education. Greensboro, NC.

Jones, M.G. (1993, March). *Exploring North Carolina's Sounds and Marshes*. Presentation to the N.C. League of Middle Level Schools. Greensboro, NC.

Jones, M. G. (1992, December). *North Carolina's FIRST Elementary Science Project: A Statewide Teacher Leadership Development Model*. Presentation to the National Science Teachers Area Convention. Charlotte, NC.

Jones, M.G. (1992, September). *Cooperative Learning*. Workshop presented at Duke University. Durham, NC.

Jones, M.G. (1992, May). *Shifting Research Paradigms: Interactions to Cognition*. Presentation to the North Carolina State University Research Institute. Raleigh, NC.

Jones, M.G. & Carter, G. (1992, March). *Encouraging Family Involvement in Science and Math*. Presentation to the N.C. League of Middle Level Schools Conference. Winston-Salem, NC.

Jones, M.G., & Vesilind, E. (1992, February). *Changes in Student Teacher-Pupil Interactions: Cognitive Restructuring or Paralysis*? Paper presented at the North Carolina Association for Research in Education. Chapel Hill, NC.

Jones, M.G. (1991, October). *Family Science Nights in Your Schools*. Workshop presented at the North Carolina Science Teachers Conference. Raleigh, NC.

Jones, M.G. (1991, October). *Designing Great Activities*. Presentation to the North Carolina Science Teachers Conference. Raleigh, NC.

Jones, M.G. (1991, October). *Sex Equity in Education*. Presentation to the American Association of University Women. Chapel Hill, NC.

Jones, M.G. (1991, May). *Get Your Feet Wet: Head for the Estuary*. Paper presented at the North Carolina Science Teachers Spring Conference. Chapel Hill, NC.

Jones, M.G. (1991, March). *Active Involvement in Learnin*g. Pre-conference Session, N.C. League of Middle Level Schools Conference. Research Triangle Park, NC.

Jones, M.G. (1991, February). C*ooperative Problem Solving*. Invited Address, Catholic Diocese of Charlotte. Greensboro, NC.

Jones, M.G. (1991, February). *No Contest: Gender Differences in Student Research*. Paper presented at the N.C. Association for Research in Education. Chapel Hill, NC.

Jones, M.G. (1990, July). *Cooperative Learning: Developmentally Appropriate for the Middle Level Student*. Keynote Address given at the UNC-G Middle Grades Conference. Greensboro, NC.

Jones, M.G. (1990, June). *Project Estuary*. Paper presented at the Mid-Atlantic Marine Education Conference. Beaufort, NC.

Jones, M.G. (1990, March). *Cooperative Learning and Cognitive Conflict*. Paper presented at the North Carolina Association for Research in Education Conference. Research Triangle Park, NC.

Jones, M.G. (1990, March). *Cooperative Problem-Solving for the Middle Level Educator*. Paper presented at the North Carolina League of Middle Level Schools Conference. Charlotte, NC.

Jones, M.G. (1990, January). *Characteristics of Excellent Research*. Paper presented at the Junior Science and Humanities Symposium. University of North Carolina at Chapel Hill. Chapel Hill, NC.

Jones, M.G. (1989, November). *Save Our Sounds- Project Estuary*. Presentation at the North Carolina Science Teachers Association. Charlotte, NC.

Jones, M.G. (1989, November). *Cooperative Problem Solving*. Presentation made to the Annual Education Conference, Diocese of Raleigh. Greensboro, NC.

Jones, M.G. (1989, July). *Cooperative Problem-Solving for Early Adolescents*. Presentation to the East Carolina Middle School Conference. Greenville, NC.

Jones, M.G., & Moore, C. (1989, January). *Cooperative Learning*. Paper presented at the annual meeting of the North Carolina League of Middle Level Schools. Research Triangle Park, NC.

Burke, B., Jones, M.G., & Moore, C. (1989, January). *Teacher Education Through Partnership: The UNC Model*. Paper presented at the annual meeting of the North Carolina League of Middle Level Schools. Research Triangle Park, NC.

Jones, M.G. (1989, April). *An Overview of NC's National Estuarine Research Reserve System*. Paper presented at the meeting of the Mid-Atlantic Marine Educators Association. Beaufort, NC.

Jones, M.G. (1989, July). *Cooperative Problem Solving for Early Adolescents.* Paper presented at the East Carolina University Middle School Conference. Greenville, NC.

Jones, M.G. (1989, November). S*ave Our Sounds: Project Estuary*. Paper presented at the N.C. Science Teacher's Annual Meeting. Charlotte, NC.

Jones, M.G. (1988, November). *Get Your Feet Wet: Head for the Estuary*. Paper presented at the annual meeting of the North Carolina Science Teachers Association. Asheville, NC.

Jones, M.G. (1988, November). *The Missing Half in Science*. Paper presented at the annual meeting of the North Carolina Science Teachers Association. Asheville, NC.

Jones, M.G., MacAller, T., Dorsey, L., Bailey, J., & Bedwell, N. (1988, November). *Enhancing Problem-Solving Through Cooperative Learning*. Paper presented at the annual meeting of the North Carolina Science Teachers Association. Asheville, NC.

Jones, M.G., & Woolard, E. (October, 1987). *Technology and the Future- An Integrated Approach to Math and Science*. Paper presented at the 16th Annual N.C. State Mathematics Conference. Raleigh, NC.

Jones, M.G. (1985, March). *EQUALS*. Paper presented at the N.C. Conference on Mathematics and Science: Issues and Concerns regarding Enrollment of Women and Minorities in Mathematics and Science. Raleigh, NC.

Media Outlets Where Cited

The Conversation, The Guardian, The Herald-Sun, Discover, The Charlotte Observer, PBS, Houston Chronicle, News24, San Francisco Chronicle/SF Gate, Albany Times-Union, Good Men Project, Lee Enterprises Newspapers, San Antonio Press-News, Inspiring STEM, Idaho Press, TEGNA TV/Website

Other Professional Presentations/Professional Meetings Attended

* Statistics Interdisciplinary Workshop, NC State University (February, 2015).
* Microaggressions in Everyday Life: Implications for Higher Education (October, 2014).
* Diversity Workshop (2014).
* Taskstream: Artifacts and Assessment, Raleigh, NC (December 14, 2006).
* Advancing Nanoscience Education Workshop, SRI International. Menlo Park, CA (March 28, 2005).
* National Science Supervisors Association, Anaheim, Ca. (March, 1994).
* North Carolina Science Supervisors Association, Chapel Hill, NC (April 1994).
* SDPI Conference on the Standard Course of Study, Raleigh, NC (April 1994).
* Project Learning Tree Facilitators Training, Salter Path, NC (October 12-13, 1994).
* Mathematics and Science Education Research Institute, Raleigh, NC (May 1993).
* Asa T. Spaulding Sr. Memorial Lecture Presented by Vanessa Siddle Walker, (October 7, 1993).
* N.C. Equity Conference on Gender Equity in Schools, Raleigh, NC (June 12, 1993).
* NCSSA/NSSA Leadership Development Conference, Charlotte, NC (December 9, 1992).
* Ira Gordon Lecture, Chapel Hill, NC (February 4, 1992).

Scholarly and Professional Organizations

* European Science Education Association
* American Educational Research Association
* National Association of Research in Science Teaching
* Association of Educators of Teachers of Science
* National Science Teachers Association
* North Carolina Science Teachers Association

Service Activities

Editor

* Co-Editor in Chief, *International Journal of Science Education* (January 2020 – present)
* Editor, *International Journal of Science Education* (November 2008- present)
* Guest Editor, Gendered Paths into STEM. Disparities Between Females and Males in STEM Over the Life-Span for *Frontiers in Psychology*, 2018-2019

Editorial Review Boards

* Board of Editors, *International Journal of Science Education*- Part B (2017- present)
* Editorial Board –*Journal of Science and Educational Technology* (2008- present)
* Editorial Board - *International Journal of Science Education* (1998 - present)
* Editorial Board – *Journal of Nanotechnology Education* (2007- 2020)
* Board of Reviewers - *Science Education* (1995-2009)
* Editorial Board - *Journal of Science Teacher Education* (2000 -2005)
* Editorial Board - *Journal of Research in Science Teaching* (1991-1994)

National Service

* Advisory Board, MedLAB Experience, Museum of Science and Industry (2020-present)
* Advisory Board- Examining the Free-Choice Science Learning Networks of Urban Gardeners, Institute for Learning Innovation (2020-present)
* Advisory Board, FOSSIL, University of Florida (2013- present)
* Oversight Committee, AETS (2003- Present)
* School Science and Mathematics Endowment Committee (2004- present)
* Population Education, Trainer (2020-21)
* Reviewer, NSF Panels (2020, 2021)
* External Reviewer, Promotion, Technion University (2021)
* NARST Conference Reviewer (2020)
* Advisory Board, Exploring the Use of Non-Science Themed Art in Science Education, Chicago Museum of Science and Industry (2020, 2021)
* Review Panel, Institute of Education Sciences (2019, 2020)
* External Review, Promotion and Tenure, Indiana University Bloomington (2019)
* External Review, Promotion and Tenure, Virginia Commonwealth University (2018)
* Reviewer, *Cognitive Processing* (2018)
* Guest Editor, Gendered Paths into STEM. Disparities Between Females and Males in STEM Over the Life-Span for Frontiers in Psychology (2018-2019)
* Reviewer, *Educational Policy* (2017)
* Publications Committee, ASTE (2014-2017)
* NARST Program Reviewer, (2014-2017)
* ASTE Program Reviewer (2015)
* NSF Review Panel, AISL (2015)
* NSF Reviewer (2015)
* External Reviewer for Promotion and Tenure, Purdue University, Weizmann Institute, Israel, West Virginia University and University of Missouri (2015-2016)
* Reviewer, Computers and Education (2015)
* External Reviewer, Purdue University (2014)
* Distinguished Contributions Through Research Award Committee- Co-Chair, NARST (2014)
* National Association of Research in Science Teaching, Conference Reviewer (2014)
* Advisory Board, STUDIO STEM NSF Grant, Virginia Tech University (2011-2014)
* Advisory Board, IES ADI Implementation Project, Florida State University (2011-2014)
* NSF Review Panel Chair, Itest Proposal Panel (2011)
* External Advisor, NSF Career Grant, Clemson University (2011)
* Distinguished Contributions Through Research Award Committee, NARST (2011-2014)
* Reviewer, *Computers in Education* (2011)
* External Reviewer, Promotion and Tenure, Virginia Tech (2010)
* Reviewer, Computers and Education (2010)
* Reviewer, Science Education (2010)
* Member, Committee for the Policy Statement: The Role of Research on Science Teaching and Learning, NSTA
* Reviewer, Instructional Science (2010)
* Review Panel, NSF (2010)
* Reviewer, NARST program proposals (2011)
* Reviewer, NSTA Press (2011)
* Reviewer, NSTA Press (2009)
* Reviewer, European Science Education Research Association Conference (2009)
* National Science Teachers Association Research Position Statement Panel (2009)
* External reviewer, University of Wisconsin-Milwaukee Research Growth Initiative (RGI) (2008, 2009)
* International Web Seminar for Teachers- Jones, M. G., Falvo, M., & Taylor, A. (January, 2008). *Nanoscience and the Future*. International web seminar presented by the National Science Teachers Association.
* International Web Seminar for Teachers - Jones, M. G., Falvo, M., & Taylor, A. (January, 2008). *Nanoscale Science*. International web seminar presented by the National Science Teachers Association.
* Executive Review Board, AERA, (2008)
* Reviewer, French Embassy, Partner University Fund, Micro and Nano technology proposal.
* Reviewer, ASTE conference proposals, (2008)
* Reviewer, NARST conference proposals, (2008)
* Reviewer, Journal of The Learning Sciences, (2008)
* Reviewer, Journal of Engineering Education, (2007)
* Reviewer, NARST conference proposals (2007)
* Reviewer, ASTE conference proposals, (2007)
* Faculty external review, University of Georgia
* RAISE Invitational Conference
* American Educational Research Association AERJ Reviewer (2006)
* National Association of Research in Science Teaching, Conference Reviewer (2006)
* Nanoscale Informal Science Education Network, Advisor 2005-2007)
* Journal of Research in Science Teaching reviewer (2006)
* National Science Teachers Association book reviewer (2006)
* NSF, Nanoscale Informal Science Education Network, Advisor
* School Science and Mathematics Awards Selection Committee (2006)
* NSF CAREER Review Panel (November 2005)
* Rice University, NSF Center for Biological and Environmental Nanotechnology Advisory Board (2004 to present)
* Co-Chair Dissertation Award Committee, National Association of Research in Science Teaching (2004- present)
* Reviewer NSF, Developmental and Learning Sciences (2004)
* NSF Review Panel- IERI (2004)
* Reviewer, NSF Division of Research, Evaluation, and Communication (2003)
* Committee Member National Association for Research in Science Teaching Dissertation Award Committee (2003-2006)
* NSF Review Panel- Teacher Professional Continuum (2003)
* Reviewer for *American Educational Research Journal* (2003)
* Reviewer for the *Journal of Educational Policy, Research, and Practice* (2003)
* Reviewer for the *Journal of Science Teacher Education* (2003)
* Reviewer for the *International Journal of Science Education* (2003)
* Reviewer for *Science Education* (2003)
* Reviewer for *American Educational Research Journal* (2003)
* Reviewer for *Journal of Research in Science Teaching* (2003)
* IEEE Virtual Reality 2003 Program committee.
* Board of Directors, SciQuest Foundation (2000- 2004)
* NSF Review Panel, Research on Learning in Education (ROLE) Division, (July, 2001)
* Reviewer, NSF Site Visit to MIT, (March, 2002)
* Association of Educators of Teachers of Science Equity Committee (2002-2003)
* IEEE Haptics Symposium Conference Reviewer, 2001
* AERA Session Discussant (2002)
* Mentor, NSF-DSG Research Exchange (October, 2001- May, 2002)
* Executive Board Member, National Association of Research in Science Teaching (1999-2001)
* National Association of Research in Science Teaching- Masters Award Committee (2003)
* National Association of Research in Science Teaching-Outstanding Dissertation Awards Committee (1995, 1996).
* National Association of Research in Science Teaching-Program Committee (1994-1998)
* Program Strand Coordinator, National Association of Research in Science Teaching (1994-1998)
* Referee, AERA Division K, Section 1, (1998)
* Honorary Advisor, Institute for High Intelligence Education, Hong Kong (1998)
* Publications Committee, Association for the Education of Teachers of Science (1998)
* External Reviewer For Promotion and Tenure, Women's Studies Program, University of Hawaii at Manoa (1995)
* External Reviewer For Promotion and Tenure, Department of Science Education, East Carolina University (1995)
* Presentation- *Gender Equity in Middle Schools*, Center for Early Adolescence, District-wide Planning Institute (June 25, 1994)
* Advisory Board, Center for Early Adolescence (1994)
* Advisory Board, Center for Early Adolescence, Middle Grades Institute (1994)
* Advisory Board, Science Education and Quantitative Literacy Project, Oberlin College (1994-96)
* National Science Scholars Program- Selection Committee (1993-94)
* Reviewer- Benchmarks for Science Literacy, American Association the Advancement of Science (1993-94)
* National Association for Research in Science Teaching- Masters Award Committee (1990-1993)
* National Science Foundation, Review Panel, Teacher Enhancement (1990)

State, Regional and Local Service

* Congressional App Contest Host and Judge, (November 2017, 2018, 2019, 2020, 2021)
* Science of the COVID-19 Vaccine, (January 2021)
* Marbles Learning Advisory Committee (December 2019, 2020)
* Congressional App Contest Advisory Council (2019-2020)
* Ravenscroft School Science Department Review Team (December 2019)
* Demonstrations, Spring Fever Family Event, Centennial Middle School. (May 2016)
* Virtual Reality zParty, (May 20, 2016)
* Webinar, Addressing Broader Impacts. NC State University (April, 2016)
* Science Festival (2016- 2017)
* Energy Expo, Marbles Kids Museum, January 2017)
* STEM Investigations, Guilford County Schools (January 2017)
* NanoDays 2017, NC State University (April 2017)
* Judge for Special Award, NC Science and Engineering Fair (April 2016)
* Virtual reality for teaching health, Centennial Middle School (May 2015)
* Engaging Students in Research, Ligon Middle School (October 2014)
* Judge, Sensor Symposium at Ligon Middle School, (November 2014)
* STEM Family Night Carroll Middle School, (June 2014) Presenter, *Exploring the Unseen World: Nano-Structures and Nano-Inspired Innovations* (April 2014)
* Investigating Science with Virtual Reality, Centennial Middle School
(November-December 2014)
* Steering Coordinating Committee, Wake STEM Early College High School (2014-2015)
* Congressional STEM App Contest, NC State University Organizer (2014)
* Kenan Fellows, Selection Committee (2014, 2015)
* STEM Family Night, Carroll Middle School (November 2014)
* Judge Carbon Sequestration Project, STEM Early College High School (February, 2015)
* Family STEM Program, Centennial Middle School (2013, 2014, 2015)
* Board of Directors, NC Science Olympiad (2000-present)
* Judge, Centennial Middle School Science Fair, Raleigh, NC (2013-2014)
* Judge, Nanotechnology Research, Wake County Public Schools, September (2010-2011)
* Presenter, NanoDays Marbles Children's Museum, (April 2011).
* Presenter, Carnival of Science and Math, Stowe Elementary School, (October 2010).
* Board of Directors, NC Science Olympiad (2007-2011)
* Science Fair Judge, Centennial Middle School, Raleigh NC (February 2011)
* Science Teacher Workshop, Chowan Middle School, Tyner, NC. (June, 2010)
* Exhibit Advisor, Discovery Place, Charlotte, NC, (January 2009)
* Presenter, Carnival of Science and Math, Stowe Elementary School (October 2009)
* Science Fair Judge, Centennial Middle School, Raleigh NC (January 2009)
* Presenter, Wiley Science Night, Wiley Elementary School (March 2009)
* Presenter, Carnival of Science and Math, Stowe Elementary School (October 2008)
* Scale Workshop, MAZE Days for Students with Visual Impairment, UNC-CH (April, 2008)
* Advisor, Scale Exhibit Morehead Planetarium and Science Center, Chapel Hill, NC
* Board of Directors, NC Science Olympiad (2007)
* Science Nanotechnology Café, NC Museum of Life and Sciences (2007)
* Co-Chair, Education Working Group, Nanotechnology Initiative, N C Board of Science and Technology (2005)
* Central Regional Science Fair Judge (2004)
* Durham Public Schools K-8 Infrastructure Committee (2001-present) Chair of the Professional Development Committee.
* Project Learning Tree Workshop (2001)
* Coordinated elementary science staff development for 180 elementary teachers for five sessions, Durham, NC.
* Speaker, Science Spectacular, Pearsontown Elementary School, Durham, NC. (2000)
* Board of Directors, North Carolina Association for Research in Education (1998-99).
* Coordinator, Professional Development Schools Book Inquiry Group, McDougle Middle School (1997-1999)
* Advisory Board, EMPOWER SCIENCE NSF Grant, NCSU (1999)
* Advisory Board, The Early Recognition and Cultivation of Potential, U.S. Department of Education (1999)
* Conducted a Family Science Program, Frank Porter Graham Elementary School, Chapel Hill, NC (November, 1998)
* Taught model science classes one morning a week, Grady Brown Elementary School (1996-98)
* Operation Primary Physical Science Mini-conference, Winston Salem, NC (1997)
* Integrating Science Through the ABC's Teacher Workshop, Winston Salem, NC (1997)
* Advisory Board, Program for Precollege Science and Mathematics Education (1990 – 2002)
* Phi Delta Kappa- Research Award Committee Chair (1994-2002)
* Phi Delta Kappa- Dissertation Award Committee Chair (1994-2002)
* Treasurer, NC Science Supervisors Association (1994-1997)
* Family Science Workshop, NC Museum of Life and Sciences (June, 1996).
* Middle School Summer Institute for Teachers- Patterns, Cycles, and Change (June 1996)
* Chair, General Competencies, Invitational Conference to Review Guidelines and Competencies, NC Department of Public Instruction (1996)
* Teach Stat Educators Institute, Co-Coordinator and Instructor (June 1995)
* Family Science Workshop, Fayetteville State University (April 1995)
* Elementary Science Curriculum Awareness Workshop, Instructor (February 1995)
* Central Regional Science Fair, Judge, Wilson, NC (March 25, 1995)
* Science Guidelines and Competencies Revision Committee, State Department of Public Instruction (1995).
* Woods And Water Workshop, (October 1-2, 1995)
* Teach-Stat Workshop, Instructor (June 1994)
* Family Science Workshop, UNC-G, Rockingham County, (July 12-15, 1994)
* Coastal Environment Workshop, Carolina Power and Light, Brunswick Nuclear Plant
(June 21, 1994)
* Taught 4 model science classes for Pearsontown Elementary School (1995-96).
* Cooperative Learning Workshop, Lee County Schools (June 14, 1994)
* Cooperative Learning Workshop, Durham Algebra Project, Durham Public Schools,
(June 27, 1994)
* Science Workshop, Duplin County Schools (May 2, 1994)
* Clinical Teacher Institute, Middle Grades Program, UNC-CH (February 1994)
* Planning Team-McDougel Middle School, Chapel Hill/Carrboro City Schools (1993)
* Presentation- Middle School: Developmental Transitions and Curriculum Connections, Orange County Schools (October 1993)
* Cooperative Learning Workshop for Mathematics Educators, Cary Elementary School
(July 1994)
* Panelist- Grants Opportunities, Learning Through the Arts, January 1994
* Family Science Workshop- Vena Wilburn Elementary School, January, 1994
* Cooperative Learning Workshop, Region 3 Middle School Mini-Conference, Chewning Middle School (April 1993)
* Steering Committee, Project Scientifica, NC Museum of Life and Sciences (1991- 1994)
* Region 3 Advisory Council, NC League of Middle Level Schools (1993)
* Science Fair Judge, Carrington Middle School (1993)
* Clinical Teacher Institute, UNC-Ch, (1993)
* Clinical Teacher Seminars, UNC-Ch, (May 12, Nov 2, Feb 11, April 26, 1993)
* Science Education Forum Discussion Leader, SDPI, (October 1993)
* Teach STAT Faculty Committee (1991- 94)
* Committee to Revise the Science Standard Course of Study, SDPI, (April 1994)
* Keynote Address, Equity in Science Education: Women and Minorities Conference, NC Wesleyan College (February 1994)
* Teach Stat Educators Institute, Co-Coordinator and Instructor (April 1994)
* Family Science Workshop, Fayetteville State University (February 1994)
* Teach-Stat Workshop, Instructor (June 1993)
* Research Institute Planning Committee (December 1993)
* State Science Fair Judge (1993)
* Cooperative Learning Workshop for Middle School Educators, Charity Middle School, (1993)
* Family Science Workshop, Appalachian State University, (1993)
* Family Science Workshop, Appalachian State University, (November 14, 1993)
* Family Science Workshop, Fayetteville State University Precollege Program (March 20, 1993)
* Family Science Workshop, Fayetteville State University Leadership Institute (March 20, 1993)
* Review Panel, Presidential Science Awards for Excellence in Mathematics and Science Teaching (March 1993)
* Science Extravaganza, Aldert Root Classical Studies Elementary School (May 1992)
* Cooperative Learning Workshop, Dare County Schools, Manteo, NC (August 20, 1992)
* Project FIRST Advisory Committee, (1990-1992)
* Science Fair Judge, Carrington Middle School, (1992)
* Public Service Outreach Science Committee, Raleigh Fish and Wildlife (1992)
* NC Department of Public Instruction Middle Grades Committee to Revise Guidelines and Competencies, (1990-92)
* N.C. Alliance for Mathematics and Science, Minority and Women Subcommittee, (1992)
* N.C. Alliance for Mathematics and Science, Precollege Subcommittee (1992)
* Cooperative Mathematics, Duke University (April 1992)
* Goals of Science Education, Culbreth Middle School, Chapel Hill (December 1991)
* Sex Equity in Education, American Association of University Women, Chapel Hill
(October 1991)
* Gender Issues in Math and Science, Presentation Made to students at NCSU
(September 1991)
* Family Science, Hope Valley Elementary School (1991)
* Mathematics and Science Technology Conference Planning Committee (1991)
* Science Fair Judge: State Science Fair, Greensboro (April, 1991)
* Principals Executive Program, Panelist and Discussion Leader (February 1991)
* Middle School Implementation Committee, Chapel Hill, NC (1990)
* Advisory Committee- Project for the Improvement and Reform of Schools and Teaching (October 1990)
* Southern Association of Colleges and Schools, Visitation Committee, Neal Middle School, Durham County Schools (April 1990)
* NASA/NSTA Space Science Student Involvement Program, Regional Judge (March 1990)
* Science Olympiad Event Director, Meredith College (January 1990)
* Junior Science and Humanities Symposium Paper Judge, UNC-CH (January 1990)
* N.C. State Department of Public Instruction Middle Grades Teacher Education Standards Committee, (May-September 1990).
* Science Fair Judge: State Science Fair, Greensboro (March 1990).
* Science Fair Judge: Region 3 Science Fair, Smithfield NC 1989.
* Science Fair Judge: State Science Fair, Greensboro, NC (March 1989)
* Biotechnology Center- Education Advisory Board (1987-1989).

University Service

* Research Leadership Academy: Panel for Junior Faculty Forum (2019, 2020, 2021)
* Outstanding Mentor Award, Selection Committee (2018, 2019, 2020, 2021)
* Guest Speaker, Graduate School Academic Pathways Program (2019, 2020)
* College of Education Global Programs Working Group (2019, 2020, 2021)
* Review Committee on possible research misconduct (2020, 2021)
* Research Leadership Academy, Interdisciplinary Research Symposium Planning
Committee (2020)
* Goodnight Scholar Mentor (2019)
* Research Retreat, Interdisciplinary Research Initiative Facilitator (2020)
* Research Leadership Academy, Selection Committee (2018)
* Outstanding Mentor Award, Selection Committee (2018, 2019, 2020)
* Holladay Medal, Selection Committee (2018)
* University Faculty Scholars, Selection Committee (2017)
* Chair, Research Leadership Academy (2016-2018)
* Demonstrations, STEM Ed Day (2017)
* Park Scholar Mentor 2015- 2017
* ZSpace Virtual Reality Workshop, NC State University, TAMGEOMS (May 25, 2016)
* Technology, Design Education Search Committee (2015-2016)
* NanoDays Organizer (2004-2017)
* Global Leadership in Public Science Cluster Hire Committee (4 Faculty Positions)
(2015- present)
* Friday Institute Leadership Committee (2015- present)
* College PhD Course Development Committee (2015)
* Faculty Review Panel for NCSU NSF Fellowship Applications (2015)
* Faculty Scholar- Dinner Series, Goodnight Scholars Program (2015)
* Young Scholars Program Coordinator (2013-2015)
* Research Experience for Teachers Coordinator (2013-2015)
* University Scholars Selection Committee, (2014-2015)
* University Research Committee (2003-2015)
* MED Graduate Coordinator (interim Spring 2015)
* K-12 Outreach Committee, (2014- present)2016
* Leadership Committee, Friday Institute for Educational Innovation, (2014-present)
* Peer Teaching Review- Educational Psychology (2015)
* Alumni Distinguished Graduate Professor Selection Committee (2015)
* University Research Committee (2002 to 2017)
* NanoDays Director (for 2000+ middle and high school students)
* Advisory Board, NSF Maximizing The Impact of STEM Outreach Project (2012- 2015)
* Director, ASSIST Young Scholars Program (2013- 2017)
* Director, ASSIST Research Experience for Teachers (2013- 2017)
* Park Scholars Enrichment Grant Committee (2011)
* Kenan Fellow Faculty Sponsor (2010-2011)
* Advisory Board, NSF Maximizing The Impact of STEM Outreach Project (2011-2012)
* Fellow, Friday Institute for Educational Innovation (2011-2014)
* Research Operations Council, URC representative (2008-2009)
* Chair, University Research Committee (2008)
* NCSU Nano Steering Committee (2007- present)
* Nanotechnology Education Committee, Chair (2007- 2011)
* Engineering Research Center Organizing Meeting (2006)
* Plant Information Center Advisory Board (1999-2002)
* Chancellor's Science Discovery Center Committee (2000- 2002)
* Cognitive Psychology and NanoEducation Seminar Coordinator (2002)
* Advisory Board, Teaching Fellows Program (1994-1998).
* NC Botanical Garden Advisory Board (1993-2002).
* Advisory Board, MSEN Pre-College Program (1994-2002).
* Provost Office -Morehead Planetarium Safety Review Committee, Chair
* Search Committee, Dean, School of Education (1995-1996).
* Clinical Teacher Training Institute(1995- 98).
* Research Presentation- Curriculum and Instruction Doctoral Seminar (1994-1997).
* Center for Early Adolescence Teacher Preparation Advisory Panel (1994).
* Environmental Resources Project, Advisory Board (1991-1995).
* FIRST Project Advisory Committee (1990-1992).
* NanoDays Director (for 1,500 middle and high school students) (2006- present)

College of Education Service

* FI Leadership Team (2017, 2018, 2019, 2020, 2021)
* Global Programs Working Group (2020, 2021)
* Goodnight Scholar Selection Committee (2021)
* Review Committee – Doctoral Research Continuity Grants (2020)
* Professional Track Faculty Committee (2019, 2020, 2021)
* DEI Task Force (2020, 2021)
* Chair, Search Committee for Teaching Assistant Professor in Science Education
* Stakeholder Listening Session, Friday Institute (2020)
* Chair, Departmental Voting Faculty (2015, 2019, 2020)
* Professional Track Faculty Task Force (2019-2020)
* Research Leadership Award Selection Committee 2018- 2020)
* University Scholar Selection Committee (2013-2018).
* Teaching Professor Search Committee (2015)
* Cluster Hire Committee (2015)
* Research Committee (2010-present)
* Faculty Search Committee, (2014).
* Council on Multicultural Initiatives and Diversity (2010-11)
* NSF Proposal Development: Expert Panel (2011)
* STEM Course Design Committee (2010)
* Recruitment, NC Science Teachers Conference (2010)
* Research Advisory Panel (2008-2009)
* Ad Hoc Committee for New Faculty Support (2007)
* Outreach Council (2007)
* Search committee, Chair Department of Mathematics, Science, and Technology Education (2007-2009)
* Scholarship Committee (2007- 2010)
* Chair, College Research Committee (2006-2007)
* Search Committee, Elementary Science (2006)
* Nanotechnology, Presentation to the NSTA student chapter (2006)
* College Review, Promotion and Tenure Committee (2003- 2005)
* Friday Institute Faculty Advisory Board
* Friday Institute Space Committee
* Triangle East Partners in Education (TEPIE) Apex High School Representative
* College Research Committee (2003- present)
* Math and Science Collaboratory (2003- present)
* Clinical Teacher Training Institute (1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2001, 2001, 2002).
* Institutional representative for AACTE (2002)
* Special Education Search Committee (2002).
* Chair Mathematics and Science Interdisciplinary Committee (Fall 2002, Member 2001-2003).
* Graduate Studies Council (1999-2001)
* SDPI-NCATE Steering Committee (2002).
* Coordinator, State Review Preparation (Fall, 2001).
* Gender Interdisciplinary Committee (2001-2002).
* MED Science Cohort Faculty Leader (2001-2003)
* MED Faculty Committee (2002-present)
* MED Curriculum Planning Committee (2000-2001).
* Post-Tenure Review Committee (1999- 2001).
* Chair, Faculty Advisory Council (1998- 1999).
* Presentations- Teaching Fellows, (1994- 1998).
* Travel Committee (1995-present)
* Middle Grades Curriculum Committee- Chair (1988-94).
* PDS Coordinators Committee (1994-1995).
* Human Subjects Review Committee (1990-1997).
* Faculty Fair Presentation (1996-97).
* Seminar Coordinator- Chaos Theory and Classroom Interactions. (1997)
* Committee to Review the Five Point Plan (1994).
* Curriculum and Instruction Doctoral Admissions Committee (1990- 96).
* Presentation- Honors Seminar (April 12, 1994).
* Science Faculty Search Committees (1993, 1994).
* NCATE Steering Committee (1992).
* Professional Education Committee (1992).
* Curriculum Committee for Innovative Programs (1992).
* Search Committee, Paideia Center Director (1992).
* Search Committee, Associate Director, Math And Science Education Center (1992).
* Faculty Advisory Group, Center for Educational Leadership (1992).
* Search Committee, Executive Director For Alumni Affairs (1991).
* NCATE Steering Committee (1991).
* Coordinated the Clinical Teacher Institute (May 1991).
* Board of Visitors Committee (1991).
* Mathematics and Science Education Center Search Committee, Precollege Program (1990).
* Mathematics and Science Technology Conference Planning Committee, UNC-CH, (September, 1990).
* Water Quality Institute- Advisory Board (1989-1991).
* Teacher Education Through Partnership- Steering Committee (1988-1991).
* Teacher Education Through Partnership- Campus Committee (1988-1991).
* Committee to Examine Gifted and Talented Education (1988).

Regional, State and Local Teacher In-service Education (Presented)

* Power America: Teaching Concepts of Power and Energy, Raleigh, NC. (August 2015).
* Nanotechnology Engineering Teacher Training, North Carolina State University. Raleigh, NC. (April, 2013).
* Seven Habits of Highly Effective People. Durham, NC, (November, 2013).
* Nanotechnology Workshop for Educators. Marbles Science Museum. Raleigh, NC. (November, 2013).
* Nanotechnology Integration in Curricula, Workshop for Durham County Teachers. Durham, NC. (October, 2013).
* Nanotechnology, Engineering, and STEM Integration, Workshop for Middle School Teachers. Raleigh, NC. (August, 2013).
* Effective Teaching: Habits, Skills, and Time Management. Halifax County, Halifax, NC. (August 2011).
* SMART for Teachers Technology Learning Workshops, Chowan Middle School. Tyner, NC, (June 2010).
* Size and Scale. Durham Public Schools, Middle and High School Teachers (August, 2008).
* Nanotechnology, Wayne County Schools. (May 2006).
* Advancements in Nanotechnology. Durham Public Schools Middle and High School Teachers (August 2002).
* Coastal Ecology. Durham, Orange, Chatham, and Chapel Hill Teachers (April 2002).
* Eno River Ecology. Durham Public Schools (May 2002).
* Global Science Leaders for the 21st Century. Durham Public Schools (February, 1998- present). Met monthly for five years.
* Hispanic Family Science and Mathematics. NC Teachers (July 1998).
* Integrating Science Through the ABC's. NC Teachers (June 1997).
* Operation Primary Physical Science. NC Teachers (June 1997).
* Exemplary Science Programs. Durham Public Schools Principals (March 1997).
* Mathematics and Science for Students and Their Families. NC Teachers (June 1996).
* Tools for Cognition. NC Teachers (June 1996).
* Conceptual Science. Durham Public Schools Teachers (1995).
* Cooperative Learning Techniques for the Middle Grades Math Teacher. Durham City Schools (January 1992).
* Cooperative Learning For The Middle Level Educator. Beulaville Schools. (January 1992).
* Advanced Cooperative Learning Workshop. Dixon High School (January 1992).
* Cooperative Learning Workshop. Wilton Elementary School (January 1992).
* Middle Grades Cooperative Mathematics Workshop. University of North Carolina (August 1991).
* Cooperative Learning Workshop. Dixon High School (August 1991).
* Cooperative Learning Workshop. Whiteville City Schools (August 1991).
* Cooperative Learning Workshop. Project ELMS, Chapel Hill, NC (July 1991).
* Project Estuary Facilitators Institute. Beaufort, NC (June 1991).
* Elementary Science Project Workshop. University of North Carolina (June 1991).
* Cooperative Learning Workshop. Washington County Schools (May 1991).
* EQUALS Conference (May 1991).
* Family Science Training Institute. University of North Carolina at Chapel Hill (April 1991).
* Cooperative Learning Workshop. Granville County Schools (August 1991).
* Cooperative Learning Workshop. Hawley Middle School (September 1991).
* Cooperative Learning Workshop. Greensboro College (April 1991).
* Saturday Science. Presentation for students at Butner-Stem Elementary School (March 1991).
* School Improvement Workshop. Cumberland County Schools (March, 1991).
* Clinical Teacher Institute. Middle Grades Program, University of North Carolina at Chapel Hill (June 1991).
* Cooperative Learning Workshop. Southeast Middle School, Guilford County Schools (September, 1990).
* Clinical Teacher Institute. Middle Grades Program, University of North Carolina at Chapel Hill (September 1990).
* Cooperative Learning Workshop for Title 1 Reading Teachers. Wayne County Schools (August 1990).
* Cooperative Learning for Middle and Intermediate Teachers. Hoke County Schools,(August 1990).
* Project Estuary Workshop. Greensboro College, Kure Beach, NC (July 1990).
* Project Estuary Workshop. Catawba College, Catawba, NC (July 1990).
* Mathematics Manipulatives Workshop. University of North Carolina at Chapel Hill (July 1990).
* Hands-On Science For Elementary Teachers. University of North Carolina at Chapel Hill, NC State University & Youngsville Schools (June 1990).
* Cooperative Problem Solving Workshop. E.E. Smith Middle School, Kenansville, NC (February, 1990).
* Cooperative Problem-Solving Workshop. Warsaw Middle School, Warsaw, NC (January, 1990).
* Cooperative Science Workshop. Triangle Science Alliance (October 1989).
* Cooperative Learning for Mathematics Teachers. Southeastern Community College (August 1989).
* Cooperative Learning Workshop. Franklin County Schools (August 1989).
* Clinical Teacher Summer Institute. University of North Carolina at Chapel Hill (June, 1989).
* Estuaries. Presentation made to the Water Quality Institute, Department of Environmental Sciences (July 1989).
* Cooperative Problem Solving. Glaxo Teacher Conference, Mathematics and Science Education Center, University of North Carolina at Chapel Hill (July 1989).
* Cooperative Learning: Presentation for Administrators. Johnston County, NC (January 1989).
* Cooperative Learning: A Workshop for Elementary Teachers. Johnston County Schools (August 1988).
* Cooperative Problem-Solving: A Workshop for Secondary Mathematics Teachers. Johnston County Schools (August 1988).
* Cooperative Science: A Workshop for Secondary Science Teachers. Johnston County Schools, (August 1988).