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(UGA Doctoral Graduate (1992)
Advisor, Dr. R. Yeany)
Professor of Science Education
Science, Mathematics, & Technology in Education
University of Maryland

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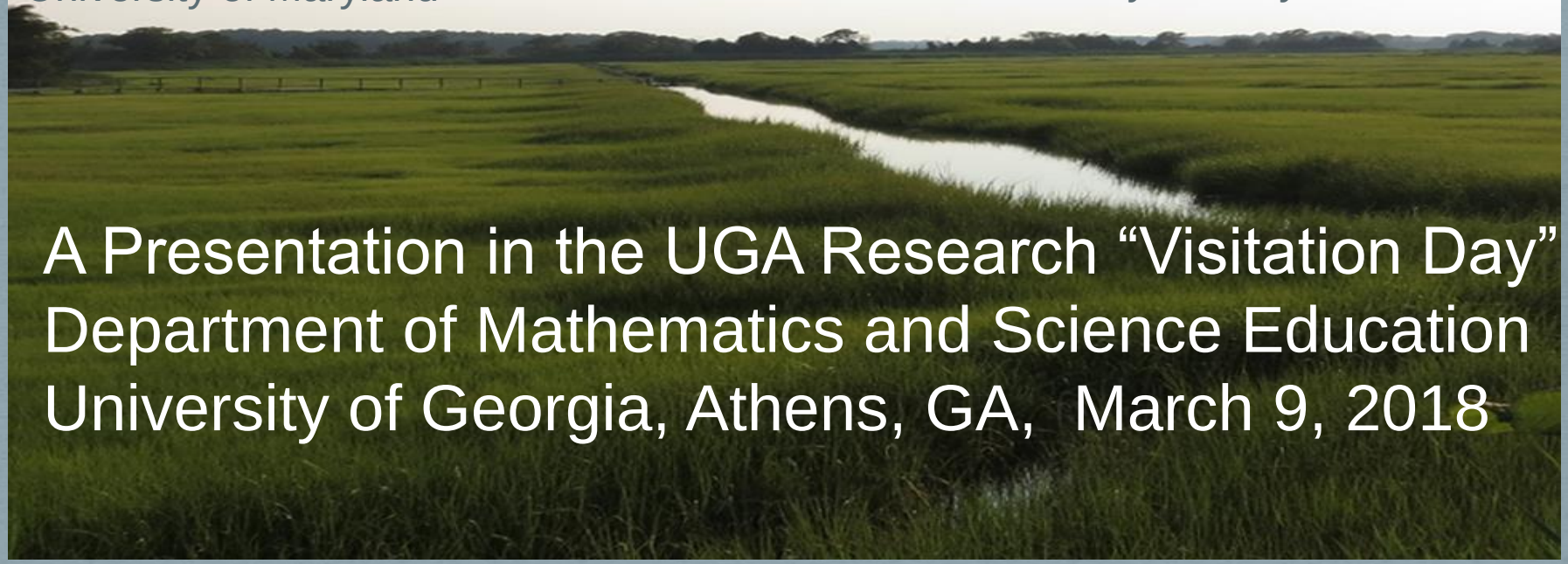
(UMD Doctoral Graduate (2009)
Advisor, Dr. J. R. McGinnis)
Research Associate
MADE CLEAR Project
University of Maryland



A Presentation in the UGA Research “Visitation Day”
Department of Mathematics and Science Education
University of Georgia, Athens, GA, March 9, 2018

My Research Specialization

I have specialized in the study of:

(i) science teacher education with emphasis in: STS and socioscientific issues (SSI); learners with exceptionality; making connections between mathematics and science; bridging formal and informal science education; climate change education; and computational thinking

(ii) learners' understanding of science.

Ethical Stance Taken Throughout My Research

A Focus on
Social Justice and Equity

My Preferred Orientation Toward Conducting Research Research in Our Field

A Focus on Originality And Creativity

Research Without External Funding

Studies in science teacher education that focus on gender, ethnicity, and exceptionality

Sample Publications

McGinnis, J. R., Kahn, S. (2014). Special needs and talents in science learning. In N. G. Lederman (Ed), *The handbook of research in science : 2nd Edition,* (pp. 223-245), New York, NY: Routledge.

McGinnis, J. R. (2003). The morality of inclusive verses exclusive settings: Preparing teachers to teach students with developmental disabilities in science. In D. Zeidler (Ed.), *The role of moral reasoning on socio-scientific issues and discourse in science education* (pp. 195-216). Netherlands: Kluwer.

McGinnis, J. R., & Pearsall, M. (1998, October). Teaching elementary science methods to women: A male professor's experience from two perspectives. *Journal of Research in Science Teaching*, 35(8), 919-949.

McGinnis, J. R. (1994). Paths to multiculturalism: One perspective. In M. Atwater, K. Radzik-March, & M. Strutchens (Eds.), *Multicultural education: Inclusion of all* (pp. 277-289). Athens, GA: University of Georgia Press.

Research Supported by Large Scale External Funding (National Science Foundation)

***Major Projects*:**

- **MCTP, Maryland Collaborative for Teacher Preparation (1994-2004) http://terpconnect.umd.edu/~toh/MCTP/WWW/MCTPHomePage.html**
- **Project NEXUS (2005-2013) www.DrawnToScience.org**
- **MADE CLEAR (2011-2018) www.ClimateEdResearch.org**
- **CT->PSTE, Exploring The Integration Of Computational Thinking Into Preservice Elementary Science Teacher Education (2017-2019)**

Sample Publications

McGinnis, J. R., McDonald, C., Breslyn, W. & Hestness, E. (March, 2017). Supporting the inclusion of climate change in U.S. science education curricula by use of learning progressions. In D. Shephardson, A. Roychoudury & A. Hirsch (Eds), *Teaching and Learning about Climate Change: A Framework for Educators,* pp. 135-151. Routledge, New York/

McGinnis, J. R., Hestness, E., Riedinger, K., Katz, P., Marbach-Ad, G. & Dai, A. (2012). Informal science education in formal science teacher education. In K.Tobin, B. Frasier, & C. McRobbie (Eds.), *Second International Handbook of Science Education* (pp.1097-1108). The Netherlands: Kluwer. DOI 10.1007/978-1-4020-9041-7.

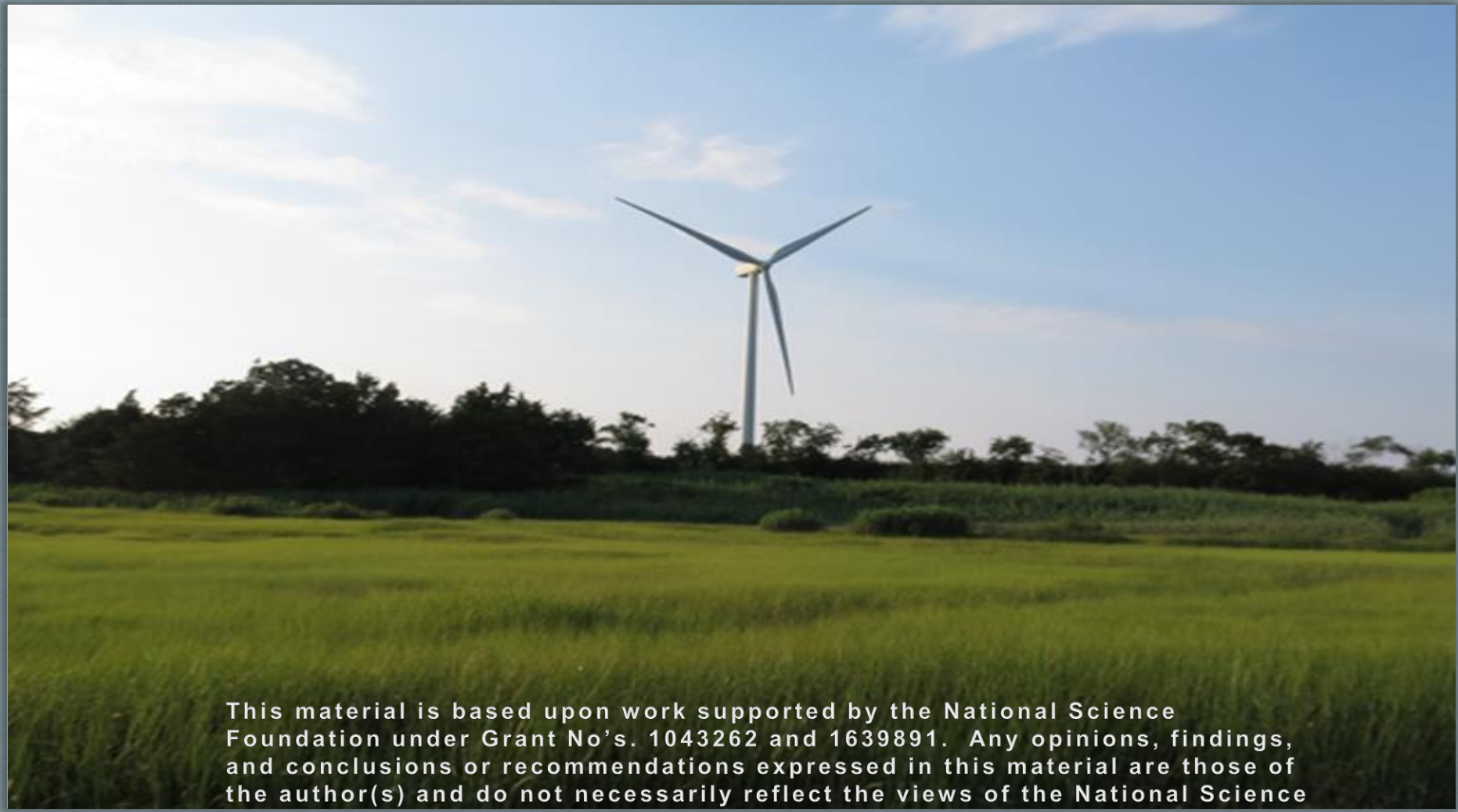
McGinnis, J. R., Parker, A., & Graeber, A. (2004). A cultural perspective of the induction of five reform-minded new specialist teachers of mathematics and science. *Journal of Research in Science Teaching,* 41(7), 720-747.

McGinnis, J. R., Kramer, S., Shama, G., Graeber, A., Parker, C. & Watanabe, T (2002, October). Undergraduates' attitudes and beliefs of subject matter and pedagogy measured periodically in a reform-based mathematics and science teacher preparation program. *Journal of Research in Science Teaching, 39(8),* 713-737.

A Sample Current Ongoing Study in MADE CLEAR and CT->PSTE to Discuss

***Research Question*:**

How do educators of science in their initial teacher education (ITE) evolve in their understanding of how to teach climate change to young learners if it is presented through a computational thinking core practice lens (with an emphasis on systems thinking)?



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