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Goodnight-NC GSK Foundation Distinguished Professor  
School of Public and International Affairs,  
North Carolina State University  
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**EDUCATION AND FELLOWSHIPS:**

- American Association for the Advancement of Science (AAAS) Fellow: Risk Assessment Science Policy Fellow, United States Department of Agriculture, Washington, DC (1997-1998)
- Life Science Research Foundation Postdoctoral Fellow, The Rockefeller University, New York (1995-1997)
- Ph.D., University of Colorado at Boulder, (1995); biochemistry
- B.A., College of St. Thomas, St. Paul, MN summa cum laude (1990); chemistry and biology.

**ACADEMIC POSITIONS:**

- 2013-present, **Professor, Goodnight-NC GSK Foundation Distinguished Professor in the Social Sciences, Co-Director, Genetic Engineering and Society Program**, School of Public and International Affairs, College of Humanities and Social Sciences, North Carolina State University
- 2015-present, **Graduate Faculty, Duke University**, Science and Society Master's Program.
- 2007-2013, **Associate Professor**, Humphrey School of Public Affairs, University of Minnesota; Science, Technology, and Environmental Policy
- 2009-2013, **Senior Member/Graduate Faculty** of Masters of Science in Security Technologies
- 2007-2013, **Senior Member/Graduate Faculty**, NSF-funded U of M Interdisciplinary Graduate Education and Research and Training (IGERT) program on Risk Analysis for Introduced Species and Genotypes
- 2006-2013, **Senior Member/Graduate Faculty** of the Conservation Biology Ph.D. Program
- 2006-2009 **Area Chair**, Science, Technology, and Environmental Policy, Humphrey School of Public Affairs, University of MN.
- 2006-2007, **Interim Director**, Center for Science, Technology, and Public Policy, Humphrey Institute, University of MN
- 2006-2007, **Assistant Professor**, Humphrey Institute, University of Minnesota
- 2004-2005, **Associate Director**, Initiative for Renewable Energy and the Environment, University of MN
- 2003-2006, **Affiliate Graduate Faculty** and **Associate Director**, Center for Science, Technology, and Public Policy, Humphrey Institute, University of MN

**PROFESSIONAL EXPERIENCE:**

- 1999-2003, **Study Director, Program Director, and Senior Program Officer**, National Academy of Sciences, National Research Council, Washington, DC
- 1998, **Program Specialist**, United States Department of Agriculture, Washington, DC

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**HONORS, APPOINTMENTS, AND AWARDS:**

- Canada Fulbright Research Chair in Policy Sciences, 2017-2018 (U of Ottawa) (Fulbright Core Scholar Award)
- World Economic Forum Global Futures Council on Technology, Values and Policy (2016-pres)
- National Academy of Sciences Committee on Future Biotechnology Products (2016-2017)
- Council on Agricultural Science and Technology (CAST) Taskforce on Gene Editing (2015-2017)
- Special Recognition for Outstanding Mentoring NCSU (2017)
- 2014 SRA Sigma Xi Distinguished Lecturer Award (in recognition of outstanding contributions to the profession of risk analysis) (2014)
- Goodnight-NC GSK Foundation Distinguished Professor in the Social Sciences, NCSU (2013- )

- Elected Secretary and Council Member for Society for Risk Analysis (2014-)
- Humphrey School Dean's Scholar (awarded to faculty for outstanding contributions) (2012-2013)
- Hennebach Visiting Professorship, Colorado School of Mines (Spring 2011)
- Expert Group. European Union (EU) FP7 project 'SYNTH-ETHICS' (2011)
- U.S. Food and Drug Administration (FDA) Blood Products Advisory Committee (2011-present)
- Best Technical Article (Special Interest Under 60,000) - GOLD for the article "Nanotech: A History Lesson" Minnesota Magazine and Publishing Association (2010)
- Elected Vice Chair (2012) and Chair (2014) for Gordon Research Conference on Science and Technology Policy.
- Elected Chair (2012) of Risk Policy and Law Subgroup for Society for Risk Analysis.
- Nominated for Association of Policy, Planning and Management (APPAM) Best Comparative Policy Analysis Paper Award (2010)
- European Commission Expert Group for 2011 Science in Society Work Programme (2009)
- Selected to serve on the United Nations WHO/FAO Expert Committee on Food and Nanotechnology (2009)
- Institute on the Environment (IonE) Resident Fellow (2009-2012)
- Selected for Executive Committee of International Society for the Study of Nanoscience and Emerging Technologies (2008-2010)
- Teacher of the Year, Humphrey Institute, (2004).
- Elected to Board of the Bio Business Alliance of Minnesota, (2005).
- Elected to the MN Governor's Biosciences Council, (2004).
- United States Department of Agriculture, Cooperative Research, Education, Extension Service Outstanding Employee Award (1998)
- American Association for the Advancement of Science Fellowship (1997-1998)
- Department of Energy Life Sciences Research Fellow Award (1995-1997)
- National Science Foundation Atmospheric Chemistry Traineeship (1993-1994)
- National Institutes of Health (NIH) Traineeship (1990-1991)
- College of St. Thomas Science Scholarship (full tuition, 4 years, 1986-1990)
- USA-Today (newspaper) All-USA Academic Team (1990)
- American Institute of Chemists Foundation Award (1990)
- Chemical Rubber Company Chemistry Achievement Award (1986)

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**PUBLICATIONS (JD, Ph.D., MPP, postdoc, junior non-faculty scholars, and MS student co-authors are underlined):**

Journal Articles & reviewed Book Chapters

- 1) Valdez RX, **Kuzma J**, Cummings C, and N. Peterson. Risk and Governance of De-extinction. *Environmental Science & Policy (in review)*
- 2) **Kuzma J**. and Z Meghani (2017). Governance of genetically engineered animals in the wild: A need for procedurally-robust risk analysis. *Science (in review)*
- 3) Jordan, N., K.M. Dorn, K.E. Wolf, P.M. Ewing, A.L. Fernandez, B.C. Runck, A. Williams, Y. Lu and, **J. Kuzma**. (2017) Modernizing the US Regulatory System for Emerging Agricultural Biotechnologies: Balancing Robust Exploration with Safety. *EMBO Journal (in review)* .
- 4) Linkov, I., Trumpf BD, Anklam E, Berube D, Boisseau P, Cummings C, Dana G, Ferson S, Florin M-V, Goldstein B, Hristozov, Jensen, **Kuzma J**, et al. (2017). Science and practice of risk policy and governance for emerging technologies. *Nature Biotechnology (in review)*
- 5) **Kuzma, J.** & Meghani, Z. (2017). Procedurally Robust Risk Assessment Framework (PRAFF) for New Genetically Engineered Organisms. *PLoS One (in review)*.
- 6) Meghani, Z. and **J. Kuzma** (2017). Gene Drives and the GM Mosquito: A Need for a New Risk Assessment Paradigm. *Journal of Responsible Innovation* (accepted with revision)
- 7) Herkert J., **Kuzma, J.** Roberts, P., Banks, E (2017). Ethics and responsible innovation in biotechnology communities: A pedagogy of engaged scholarship. *Proceedings of the 2017 ASEE Annual Conference 18015: 1-20.*

- 8) **Kuzma, J.** (2017). "Society and Policy Makers' Responsibilities" In *Consumer Perception of Product Risks and Benefits* Eds: G. Emilien, R. Weitkunat and F. Luedicke. Springer: Dordrecht.
- 9) **Kuzma, J.** (2017). Trails and Trials in Biotechnology Policy. Pp 85-95 In *Women in Sustainable Agriculture and Food Biotechnology* Ed. L. Privalle. Springer.
- 10) **Kuzma J.** (2017). "Risk, Environmental Governance, and Emerging Biotechnology" In *Environmental Governance Reconsidered: Challenges, Choices, and Opportunities, 2<sup>nd</sup> edition*. Eds. R. Durant, DJ Fiorino, and R O'Leary. MIT Press <https://mitpress.mit.edu/books/environmental-governance-reconsidered-0>
- 11) **Kuzma J.** (2017). Forum: Biosecurity Governance for a Realistic New World. *Issues in Science and Technology* 33: (2).
- 12) Cummings C. and **J. Kuzma** (2017) Societal Risk Evaluation Scheme (SRES): Scenario-based Multi-criteria Evaluation of Synthetic Biology Applications. *PLoS ONE* 12(1): e0168564.doi:10.1371/journal.pone.0168564.
- 13) **Trump B.**, Cummings C, **Kuzma, J.** and I. Linkov (2017). A Decision Analytic Model to Guide Early-Stage Government Regulatory Action: Applications for Synthetic Biology. *Regulation and Governance* doi:10.1111/reg.12142.
- 14) **Kuzma J.** (2016). A Missed Opportunity for Biotech Regulation. *Science* 353: 1211-1213.
- 15) **Kuzma J.** and **L. Rawls.** (2016) Engineering the Wild: Gene Drives and Intergenerational Equity. *Jurimetrics: The Journal of Law, Science and Technology* 56 (3): 279-296.
- 16) **Kuzma, J.** (2016). Rebooting the Debate about Genetic Engineering. *Nature* 531: 165-167.
- 17) **Kuzma, J.** and **J.P. Roberts.** (2016) Is Adaptation or Transformation Needed ? : Active Nanomaterials and Risk Analysis. *Journal of Nanoparticle Research* 18(7), 1-18.
- 18) **Kuzma J., A. Kokotovich,** and A. Kuzhabekova. (2016). Attitudes Towards Governance of Gene Editing. *Asian Biotechnology Development Review* 18(1): 69-92.
- 19) **Kuzma J.** (2015) Technology Governance Alternatives. *Issues in Science and Technology* 32(1): 10-11
- 20) Yue, C. **Shuoli, Z.** Cummings, C. **and J. Kuzma.** (2015) Investigating Factors Influencing Consumer Willingness to Buy GM Food and Nano-food: An Application of Structural Equation Modeling. *Journal of Nanoparticle Research* 17:283-302.
- 21) **Brown, J.** Fatehi, L, and **J. Kuzma.** (2015) Altruism and Skepticism in public attitudes toward food nanotechnology. *Journal of Nanoparticle Research* 17:122-140.
- 22) **Kuzma, J.** (2015) Translational Governance Research for Synthetic Biology. *Journal of Responsible Innovation* DOI: 10.1080/23299460.2014.1002055
- 23) Yue, C. **Shuoli, Z.** and **J. Kuzma.** (2015) Heterogeneous Consumer Preferences for Nanotechnology and Genetic-Modification Technology in Food Products. *Journal of Agricultural Economics*, 66(2), 308-328
- 24) **Kokotovich, A.** and **J. Kuzma J** (2014). Anticipatory governance and contested futures: Insights from the next generation of genetic engineering. *Bulletin of Science, Technology and Society* 34(4): 108-120.
- 25) **Kuzma, J.** (2014) "Properly Paced or Problematic?: Examining Governance of GMOs" in *Innovative Governance Models for Emerging Technologies* Editors Gary Marchant, Kenneth Abbott and Braden Allenby. Edward Elgar (editorial peer review)
- 26) **Kuzhabekova, A.** and **J. Kuzma** (2014) Mapping the Emerging Field of Genome Editing. *Technology Analysis and Strategic Management* 26(3): 321-352.
- 27) Gilna, B., **Kuzma J.**, and Showwalter, S. (2014) "Governance for Genetic Biocontrol Technologies for Invasive Species." *Biological Invasions* 16(6): 1299-1332.
- 28) **Haase, R. , J. Bielicki,** and **J. Kuzma.** (2013) Innovation in Emerging Energy Technologies: A case study analysis to inform the path forward for algal biofuels. *Energy Policy*, 61:1595–1607
- 29) **Brown, J.,** and **J. Kuzma.** (2013) "Hungry for Information: Public Attitudes toward Food Nanotechnology and Labeling" *Review of Policy Research* 30: 512-548.
- 30) **Korslund, K., Stephenson, S., Victor, A., Laird, A., and J. Kuzma.** (2013) Consumer Knowledge of Genetically Engineered Organisms (GEOs). *Journal of Science Policy and Governance* 3(1): 1-39.
- 31) **Kuzma, J.** (2013). "Envisioning Future Governance of the Bioeconomy" *The Environmental Forum* 30(3): 49. (edited)
- 32) **Kuzma, J.** Should Citizens Have a Say About Emerging Technologies? (2013) Scholar's Strategy Network, Policy Brief. Available at <http://www.scholarsstrategynetwork.org/>. (peer-reviewed & edited)
- 33) **L. Fatehi** and **Kuzma, J.** (2012) "Policy Innovation in Synthetic Biology Governance" *21st Century Borders/Synthetic Biology: Focus on Responsibility & Governance*, Institute on Science for Global Policy (ISGP). (peer-reviewed)

- 34) **Kuzma, J.** and **Kuzhabekova, A.** (2011) “Corporate Social Responsibility for Nanotechnology Oversight” *Medicine, Health Care, and Philosophy* 14(4): 407-419.
- 35) **Kuzma, J.,** and **Kokotovich, A.** (2011). “Renegotiating GM Crop Regulation” *EMBO Reports* 12: 883 – 888.
- 36) **Fatehi, L.**, Wolf, S., Ramachandran, G. and **J. Kuzma.** (2011). “Designing Nanobiotechnology Oversight”. *Journal of Nanoparticle Research* 13(4): 1341-1343.
- 37) Ramachandran, G. Wolf, S. Paradise, J., **Kuzma, J.,** Hall, R., and **L. Fatehi.** (2011) “Dynamic Oversight for Nanobiotechnology” *Journal of Nanoparticle Research* 13(4): 1345-1371.
- 38) **Kuzma, J.** and **Kuzhabekova, A.** (2011) „Nanotech oversight, voluntary data submission, and corporate social performance: Does company size matter?” *Journal of Nanoparticle Research* 13(4): 1499-1512.
- 39) **Kuzma J.** (2011) “Fritz Allhoff, Patrick Lin, and Daniel Moore. What is Nanotechnology and Why Does it Matter?: From Science to Ethics”. *Journal of Bioethical Inquiry* 8: 209-211.
- 40) Meghani, Z. and **J. Kuzma.** (2011). The “Revolving Door” between Regulatory Agencies and Industry: A Problem That Requires Reconceptualizing Objectivity” *Journal of Agricultural and Environmental Ethics*: 24 (6) 575-599.
- 41) **Kuzma, J.** “Nanotechnology Governance and Publics: Making Connections in Policy” in *Nanotechnology and the Public Sphere.* Ed Susanna Priest. Taylor & Francis (2011).
- 42) **Kuzma, J.** and S. Priest. “Nanotechnology, Risk and Oversight: Learning Lessons from Related Emerging Technologies,” *Risk Analysis* 30(11): 1688-1698 (2010).
- 43) **Kuzma, J., Kuzhabekova, A., Priest, S., and L. Yerhot.** “Expert Opinion of Emerging Technologies Oversight: Lessons for Nanotechnology from Biotechnology” p. 133-156 *Understanding Nanotechnology: Philosophy, Policy, and Publics.* Ed. Fieldeler, et al. IOS Press: Amsterdam (2010) (peer-reviewed volume)
- 44) **Yawson, R.** and **J. Kuzma.** “Systems mapping of consumer acceptance of agrifood nanotechnology” *Journal of Consumer Policy* 33 (4): 299- 322 (2010).
- 45) **Kuzma, J.** and **R. L. Johnson.** “Nanotechnology: Environmental Benefits,” *Encyclopedia of Nanoscience and Society* Ed. David Guston, SAGE Publications (2010) (edited volume)
- 46) **Kuzma, J.** and **T. Tanji,** "Unpacking Synthetic Biology for Oversight Policy" *Regulation & Governance* 4: 92-112 (2010).
- 47) **Kuzma, J.** “Multi-criteria decision making for studying nanotechnology & society,” *Encyclopedia of Nanoscience and Society* Ed. David Guston, SAGE Publications (2010) (edited volume)
- 48) **Kuzma, J.** “Nanotechnology in Animal Production: Upstream Assessment of Applications”. *Livestock Science* 130: 14-24 (2010).
- 49) **Kuzma, J.** “Nanotechnology: Piecing Together the Puzzle of Risk”. *Current Controversies in Science and Technology,* Volume III; Eds. D. Kleinman et al (2010).
- 50) **Kuzma, J.** “Nanotechnology Regulation and Oversight” In *Encyclopedia of Science and Technology Communication.* Ed. Susanna Priest. SAGE Publications (2010) (edited volume)
- 51) **Kuzma J.** and Z. Meghani . “A possible change in the U.S. risk -based decision making for emerging technological products: Compromised or enhanced objectivity?” *EMBO Reports* 10: 1-6 (2009).
- 52) **Kuzma, J.** and **Kuzhabekova, A. Wilder, K.** “Improving Oversight of Genetically Engineered Organisms” *Policy & Society* 28: 279-299 (2009).
- 53) Paradise, J., S.M.Wolf, **J. Kuzma,** G. Ramachandran, and E. Kokkoli. “Introduction: The Challenge of Developing Oversight Approaches to Nanobiotechnology,” *Journal of Law Medicine and Ethics* 37(4): 543-545 (2009).
- 54) Paradise, J., Wolf, S., **Kuzma, J., Kuzhabekova, A., Wedekind, A., Kokkoli, E.,** and G. Ramachandran. “Developing Oversight Strategies for Nanobiotechnology: Learning from Past Oversight Experiences.” *Journal of Law, Medicine, and Ethics* 37 (4): 688-705 (2009)
- 55) **Kuzma, J. Larson, J.** and **P. Najmaie.** “Evaluating Oversight Systems for Emerging Technologies: A Case Study of Genetically Engineered Organisms,” *Journal of Law Medicine and Ethics* 37 (4): 546-586 (2009).
- 56) **Kuzma, J.** “Biotechnology: Technology and Future, Prosperity and Risks”, pp. 523-531. in *A Companion to the Philosophy of Technology,* Ed. Berg, Oslen, Pedersen, and Hendricks. Wiley-Blackwell Publishing 2009 (peer-reviewed, edited volume)
- 57) **Kuzma, J.** “Global Challenges: Technology and Future, Prosperity and Risks”, pp. 538-545, in *A Companion to the Philosophy of Technology,* Ed. Berg, Oslen, Pedersen, and Hendricks. Wiley-Blackwell Publishing. 2009 (peer reviewed, edited volume).
- 58) **Kuzma, J., Paradise, J., Kim, J., Kokotovich, A., G. Ramachandran,** and Wolf, S.. “Integrated Oversight Assessment: A Historical Case Study and Multicriteria Approach” *Risk Analysis* 28(5): 1179-1195 (2008).



- 59) **Kuzma, J.** and J.C. Besley. "Ethics of Risk Analysis and Regulatory Review: From Bio- to Nanotechnology," *Nanoethics* 2(2): 149-162 (2008).
- 60) **Kuzma, J., Romanchek, J., and A. Kokotovich** "Upstream Oversight Assessment for Agrifood Nanotechnology." *Risk Analysis* 28(4): 1081-1098 (2008).
- 61) **Talukder, K. and J. Kuzma.** "A multi-perspective analysis for regulatory policy for Bt cotton in India as a case study". *Science and Public Policy* 35(2): 121-138.(2008).
- 62) Paradise, J., Wolf, S., Ramachandran, G., Kokkoli, E., Hall, R., and **J. Kuzma.** "Developing Oversight Frameworks for Nanobiotechnology," *MN Journal of Law, Science, and Technology* 9 (1): 399-416 (2008).
- 63) **Kuzma, J.** "Nanotechnology, Ethics and the Environment" in *Encyclopedia of Environmental Ethics and Philosophy*. pp. 80-83. Eds. J. Baird Callicott and Robert Frodeman. Macmillian Publishers. (2008). (peer reviewed, edited volume)
- 64) **Kuzma, J.** "FDA, the Environment and Ethics" in *Encyclopedia of Environmental Ethics and Philosophy*. pp. 359-360. Eds. J. Baird Callicott and Robert Frodeman. Macmillian Publishers. (2008). (peer reviewed, edited volume)
- 65) **Kuzma, J.** "Moving Forward Responsibly: Oversight for the Nanotechnology-Biology Interface," *Journal of Nanoparticle Research*, 9:165-182 (2007).
- 66) **Kuzma, J.** "Moving Forward Responsibly: Oversight for the Nanotechnology-Biology Interface," In *Nanotechnology and Occupational Health*, A. pp. 165-182. Maynard & D. Pui Eds. Dordrecht, Netherlands: Springer. 2007. (reprint of Journal of Nanoparticle article)
- 67) **Kuzma, J.** "Nanotechnology Oversight: Just do it" *Environmental Law Reporter* 36:10913-10920 (2006).
- 68) **Kuzma, J.** and A. Ahl. "Living with Bovine Spongiform Encephalopathy." *Risk Analysis* 26:585-588 (2006).
- 69) Moon, HW, Baer, C.K, Ascher, M. Cook, R.J, Franz, D., Hoy, M, Husnik, D.F., Jensen, H.H., Keller, K.H., Lederberg, J., Madden, L.V., Powers, L.S., Steinberg, A.D., Strating, A., Smith, R.E., **Kuzma, J.**, Grossblatt, N., Holliday, L., Sweatt, D., and S. Strongin. "U.S. agriculture is vulnerable to bioterrorism." *Journal of Veterinary Medicine Education* 30(2): 96-104 (2003).
- 70) **Kuzma, J.** "Report of the Lignin Modification Group." In *Criteria for Field Testing Plants with Engineered Regulatory, Metabolic and Signaling Pathways*. Pp. Wolfenbarger, L. ed. Information Systems for Biotechnology. 2002.
- 71) Ahl, A. and **J. Kuzma.** "Microbes, Food Safety and the Environment: Issues in Risk Analysis." *Technology* 6: 363-369 (1999).
- 72) Meekhof, R., **Kuzma, J.**, Mauriello, D., Osborn, T., Powell, M., Rice, C., and S. Shafer. (1998). "Adaptive Risk Analysis for Resource Conservation Programs." *Proceedings of Risk Based Decision Making in Water Resources VII*: 172-186, Editors, Yacov Y. Haimes David A. Moser (Editor), Eugene Z. Stakhiv. American Society of Civil Engineering.
- 73) Wu, Y., **Kuzma, J.**, Marechal, E., Graeff, R., Lee, H.C. and Chua, N-H. "Abscisic Acid Signaling Through Cyclic ADP-Ribose in Plants" *Science* 278: 2126-2130. (1997).
- 74) **Kuzma, J.**, Nemecek-Marshall, M., Pollock, W., and R. Fall. "Bacteria Produce the Volatile Hydrocarbon Isoprene" *Current Microbiology* 30: 97 (1995).
- 75) Nemecek-Marshall, M., Wojciechowski, C., **Kuzma, J.**, Silver, G., and R. Fall. "Marine Vibrio Species Produce the Volatile Organic Compound Acetone" *Applied and Environmental Microbiology* 61: 44 (1995).
- 76) **Kuzma, J.** and R. Fall. "Leaf Isoprene Emission Rate Is Dependent on Leaf Development and the Level of Isoprene Synthase" *Plant Physiology* 101: 435 (1993)

Peer-Reviewed and Edited Books/Journal Symposia

- 77) Murray R., Amasino R., Bradbury S., Evans B., Evans S., Farrens I, Krebs M., **Kuzma J.**, Maxon M, Medina R, Rejeski D, Wolt J, Laney K (2017). Preparing for the Future of Biotechnology. National Academies of Science, Engineering and Medicine committee report. National Academies Press: Washington DC. (peer reviewed)
- 78) Delborne, J., **Kuzma, J.**, Gould, F., Frow, E., Leitschuh, C. & Sudweeks, J. (Eds.). "Roadmap to Gene Drives." Spec. issue of *Journal of Responsible Innovation* (Taylor & Francis). In press.
- 72) "Governance of Nanobiotechnology" L. Fatehi, S.M.Wolf, G. Ramachandran, and **J. Kuzma.** *Special Symposium of Journal of Nanoparticle Research* 13(4) (2011).

- 79) “Developing Oversight Approaches to Nanobiotechnology: The Lessons of History.” S.M. Wolf, G. Ramachandran, **J. Kuzma**, and J. Paradise (eds.) *Special Symposium of Journal of Law, Medicine and Ethics*. 37 (4) (2009).
- 80) <sup>1</sup>National Research Council. **J. Kuzma**. Study Director. *Countering Agricultural Bioterrorism*. (2003).
- 81) <sup>2</sup>National Research Council. **J. Kuzma**, Study Director. *Genetically Modified Pest-Protected Plants: Science and Regulation*. (2000).
- 82) <sup>3</sup>National Research Council. **J. Kuzma**. Co-Study Director. *Indicators for Waterborne Pathogens*. 2004.
- 83) <sup>4</sup>National Research Council. **J. Kuzma**. Senior Program Officer. *Countering Bioterrorism: The Role of Science and Technology* 2002.

Policy Reports/other publications:

- 84) **Kuzma J.** (2016) As technology advances, how do we avoid losing touch with our values? World Economic Forum, <https://www.weforum.org/agenda/archive/fourth-industrial-revolution>.
- 85) **Kuzma J.** (2016). Future Generations and Gene Drives: the Importance of Intergenerational Equity. *Questions for a Resilient Future: Center for Humans and Nature*. <http://www.humansandnature.org/questions>, invited essay. <http://www.humansandnature.org/questions>
- 86) **Kuzma J.** (2016) “New genetic engineering is slipping past old regulations”, *Aeon* magazine, [aeon.co](http://aeon.co). May 6, 2016.
- 87) **Kuzma J.** and JP Roberts. Transformation or Adaptation: Active Nanomaterials and Risk Governance. Workshop paper for “Next Generation Nano Governance” American Chemical Society, CNS-ASU, and Notre Dame NSF funded workshop. Washington DC October 9, 2015.
- 88) Roberts JP, Stauffer S, Cummings C and **J. Kuzma**. (2015) Synthetic Biology Governance: Delphi Study Workshop Report. GES Center Report #2015.2. Available at [research.ncsu.edu/ges](http://research.ncsu.edu/ges)
- 89) Siplon, G., Herring, B., **Kuzma J.**, and Delborne, J. (2015). SynBio 101 Screenplay Draft. Museum of Life and Science, Durham, NC. (will be used for national museums’ effort on synthetic biology and public engagement).
- 90) GES Center Issue Brief #2015.1. Deextinction. K. Sears, S Stauffer, J. Kuzma.
- 91) **Kuzma, J.** (2014). Translational risk governance research. Paper for the Workshop on Research Agenda in the Societal Aspects of Synthetic Biology. Arizona State University. <http://cns.asu.edu/synbio/papers>.
- 92) Weiss Evans, S. et al. (including **Kuzma J.** one of twenty authors). Synthetic Biology: Missing the Point. Letter to *Nature* 510: 218 (2014)
- 93) Koroslund, K., Victor, A., Brown, J., and J. Kuzma. (2013) Examining the Oversight Challenges of Plant TagMo.: Workshop Report. U of MN, [www.igets.umn.edu](http://www.igets.umn.edu).
- 94) Victor, A. Fatehi, L., and J. Kuzma. Social Robotics and Governance Challenges. Workshop Report. (2013) published by U of MN Initiative on Governance and Emerging Technological Systems. [www.igets.umn.edu](http://www.igets.umn.edu)
- 95) **Kuzma, J.** and R. Haase. Genetically Modified Foods: Policy Context and Safety. Food Policy Research Center: Policy Brief #1. (2012) (*peer reviewed*)
- 96) “Convention on Biological Diversity (CBD) Biosafety Technical Series 02: Summary and Comparative Analysis of Nine National Approaches to Ecological Risk Assessment of Living Modified Organisms in the Context of the Cartagena Protocol on Biosafety, Annex III.” (2012) Shelby Flint, Thelma Heidel, Scott Loss, Jacob Osborne, Kristina Prescott, David Smith. Jennifer **Kuzma** and Dave Andow, faculty advisers. Available at <http://bch.cbd.int/database/record.shtml?documentid=103869>. *Peer reviewed*

<sup>1</sup> Contribution as study director to this NRC report was equivalent to being an editor of a published, peer-reviewed, scholarly book and contributor of chapters. The NRC has a very rigorous peer review process for its books. Its sister organization IOM does list study directors as editors.

<sup>2</sup> Contribution as study director to this NRC report was equivalent to being an editor of a published, peer-reviewed, scholarly book and contributor of chapters. The NRC has a very rigorous peer review process for its books. Its sister organization IOM does list study directors as editors.

<sup>3</sup> Contribution as co-study director to this NRC publications was equivalent to being a co-author of chapters for a published, peer-reviewed, scholarly book.

<sup>4</sup> Contribution as program officer to this NRC publication was equivalent to being a co-author of chapters for a published, peer-reviewed, scholarly book.

- 97) Dunens, E. Haase, R., **Kuzma, J.** and K. Quick. "Facing the Emerald Ash Borer in Minnesota". Report for the Stakeholder Public Dialogue. Humphrey School of Public Affairs, April 20, 2012.
- 98) Campbell, S., Haynes, C., **Kuzma J.**, Moody, C., Newberry D. and Ramachandran G., Minnesota Nanotechnology: A report to the state legislature. January 2011.
- 99) **Kuzma, J.** Sizing Up Nanotechnology Oversight. *MN Nano E-Newsletter*, #13, July 2010.
- 100) **Kuzma, J.** Nanotechnology: A History Lesson. *Momentum* magazine. Winter 2010.
- 101) United Nations FAO/WHO. (2009). FAO/WHO Expert Meeting on the Application of Nanotechnologies in the Food and Agriculture Sectors: Meeting Report. Experts: Abbot, L, Bartholomaeus, AR, Biesalski, HK, Bouwmeester, H., Chaudhry, Q, Cheesman, MA, Chen, H., Gatti, AM, Hirose, A., **Kuzma J.**, Martin, P, Morris, VJ, Oberdorster, G., Park HJ, Peltonen, KE, de Oliveira, CR. FAO/WHO Secretariat, de Lourdes Costarrica, M., Clarke, R., Takeuchi, M., Santini, N., Fukushima, K, Lutzow, M.
- 102) Warner, E., Riebe, M. and **J. Kuzma.** eds (2008). *Climate Change and Sustainable Development: Workshop Report.* Center for Science Technology and Public Policy, University of MN.
- 103) **Kuzma, J.** and P. VerHage. *Nanotechnology in Agriculture and Food Production: Anticipated Applications.* Project on Emerging Nanotechnologies, Woodrow Wilson International Center for Scholars. Washington DC September, 2006.
- 104) **Kuzma, J.** "Global Challenges and Biotechnology" *Economic Perspectives:* October, 2005.
- 105) **Kuzma, J.** Editor. *The Nanotechnology-Biology Interface: Exploring Models for Oversight.* September 15, 2005. Workshop Report, Center for Science, Technology, and Public Policy, University of Minnesota.
- 106) **Kuzma, J.** and L. Dobrovolny. Editors. *The Global Climate and Economic Development.* Center for Science, Technology, and Public Policy. Humphrey Institute. 2005
- 107) Medical Technology Leadership Forum (MTLF). *The Search for Quality and Value in Health Care.* February 2004 (**J. Kuzma**, initial author, then reviewed by MTLF board members and published by MTLF)
- 108) Medical Technology Leadership Forum (MTLF). *Facilitating the Continuum from Experimental to Clinical Use: Designing Alternative Models.* A University of Minnesota Summit. July 2003. (**J. Kuzma**, initial author, then reviewed by MTLF board members and published by MTLF)
- 109) **Kuzma, J.** editor. *The Environmental Impact of Agriculture and Energy Use: How new technologies, including biotechnology, can provide sustainable solutions.* Report from Research & Technology Seminar at the Intersection of Energy, Agriculture, and Biotechnology, June 30, 2003. Co-hosted by The Royal Norwegian Embassy, Washington D.C. and University of Minnesota
- 110) MTLF. *Breaking Down the Institutional Barriers to Multi-Disciplinary Research .* April 2003. (**J. Kuzma**, initial author, then reviewed by MTLF board members and published by MTLF)
- 111) Gould F., and **J. Kuzma.** "The Academy Responds (Biotech regulation)." *The Scientist.* October 14, 2002.
- 112) National Research Council. **J. Kuzma.** Senior Program Officer. *Marine Biotechnology in the 21<sup>st</sup> Century.* 2002.
- 113) National Research Council. **J. Kuzma.** Program Director. *Animal Biotechnology: Science-Based Concerns.* 2002.
- 114) National Research Council. **J. Kuzma.** Senior Program Officer. *Environmental Issues Associated with Transgenic Plants.* 2002.
- 115) National Research Council. **J. Kuzma.** Program Director. *Ecological Monitoring of Genetically Modified Crops.* 2001.
- 116) National Research Council. **J. Kuzma,** Program Officer. *Bioinformatics: Converting Data to Knowledge.* 2000.
- 117) National Research Council. **J. Kuzma,** Program Officer. *Finding the Path: Issues of Access to Research Resources.* 1999.
- 118) USDA Food Safety and Inspection Service, E. coli 0157:H7 Risk Assessment Team. **Kuzma, J.** drafted early parts of slaughter module. Part of resource team. "*Risk Assessment of the Public Health Impact of Escherichia coli 0157:H7 in Ground Beef*" (2001).
- 119) *Salmonella I* Enteritidis Risk Assessment Team, Kuzma (resource member) "*Salmonella Enteritidis Risk Assessment: Shell Eggs and Egg Products. Final report.*" Prepared for the USDA Food Safety and Inspection Service. June (1998).

#### Patent

- 120) R.R. Fall, **J. Kuzma**, and M. Nemecek-Marshall (1998). Materials and methods for the bacterial production of isoprene. U. S. patent 5,849,970. **Licensed 2008.**

**Refereed Published Conference Abstracts & Paper Presentations;**

- 1) Meghani, Z, & **J. Kuzma**. Genetically engineered animals, risks and regulations. 2017 Meeting of the Society for the Social Studies of Science (4S); Boston, Massachusetts, USA, August 30-Sept 2, 2017 (abstract accepted).
- 2) Herkert J., Roberts, P., Banks, E. and **J. Kuzma**. Ethics and responsible innovation in biotechnology communities: A pedagogy of engaged scholarship. American Society of Engineering Education. Annual Meeting. June 25 - 28, 2017, Columbus, Ohio.
- 3) **Kuzma J.** Lessons for Hyperloop One from the Biotechnology World. ASU Governance on Emerging Technologies, 5<sup>th</sup> Annual Conference, May 17-19, 2017.
- 4) **Kuzma, J.** Governance for Genetic Engineering to Control Disease Vectors in the Wild. American Association for the Advancement of Science Annual Meeting. Boston, MA. February 17, 2017.
- 5) **Kuzma J.** Systems thinking for risk governance of gene drives: A deliberative workshop. Society for Risk Analysis annual conference, December 12-14, 2016.
- 6) Elsensohn JE\*, Burrack HJ, Brown ZS, **Kuzma J.** Comparative risk analysis for agricultural genetic pest management technologies. Society for Risk Analysis annual conference, December 12-14, 2016. (accepted)
- 7) **Kuzma, J.** Anticipatory governance of gene drives. International Congress of Entomology. September 26, 2016. Orlando, FL.
- 8) Roberts P. & **J. Kuzma**. Consumers' Willingness to Purchase GM and Nano Foods. Governance of Emerging Technologies. Arizona State University. May 24-26, 2016.
- 9) Valdez R... Pitts E. & **J. Kuzma**. Rejecting Revival? Media Content Analysis of De-extinction. Governance of Emerging Technologies. Arizona State University. May 24-26, 2016.
- 10) **Kuzma, J.** Mental models & systems mapping for risk analysis of gene drives. Society for Risk Analysis Annual Meeting, Dec 7-10, 2015. Washington, DC.
- 11) **Kuzma, J.** A Delphi Study: Risk Data and Governance Needs for Environmental Applications of Synthetic Biology. World Congress on Risk 2015. July 19-22 Singapore.
- 12) Cummings, C. and **J. Kuzma**. Multidimensional risk profiling: A scenario-based evaluation of synthetic biology **applications** from a multidisciplinary expert Delphi study. Society for Risk Analysis Annual Meeting, December 2014.
- 13) King, S. Cummings, C., Ndoh, C., Stauffer, S., and **J. Kuzma**. Synthetic Biology Policy Delphi: When Expert Opinion Meets Public Engagement. Poster for NSF-funded Workshop on the Research Agendas of the Societal Implications of Synthetic Biology. Arizona State University. November 4-6, 2014.
- 14) Ndoh, T., **Kuzma, J.**, Cummings, C., Stauffer, S., and S. King. Regulatory Case-Study Analysis of a Synthetic Biology Application: Nitrogen fixation in rice crops through symbiosis with *Mesorhizobium loti*. Gordon Research Conference on Science and Technology Policy. Poster. August 10-15, 2014.
- 15) Yue, C., Shuoli, Z. and **J. Kuzma**. Heterogeneous Consumer Preferences for Nanotechnology and Genetic-Modification Technology in Food Products. Poster prepared for presentation at the Agricultural & Applied Economics Association's 2014 AAEA Annual Meeting, Minneapolis, Minnesota, July 27-29, 2014
- 16) Cummings, C., King, S., Ndoh, T., Stauffer, S., and **J. Kuzma**. Synthetic Biology and Risk Governance. Conference on 2<sup>nd</sup> Annual Governance of Emerging Technologies: Policy, Law and Ethics. Arizona State University, May 28, 2014.
- 17) **Kuzma, J.** Global Risk Governance of Genome Editing: On a collision course. Society for Risk Analysis, Baltimore, MD Dec 11, 2013.
- 18) Leili Fatehi. **Jennifer Kuzma.**; Pouya Najmaie, Delphi Approach to Finding a Cross-Disciplinary Definition of "Nano" for Research, Society, and Regulation. Society for Nanoscience and Society (S.Net) Annual Meeting, Boston, MA October 28-30, 2013.
- 19) **Kuzma, J.** and A. Kuzhabekova. "Exploring Genome Editing: Actors, Arenas, and Attitudes towards Governance". 1<sup>st</sup> Annual Conference on Emerging Technologies Governance, May 20-21, 2013.
- 20) **Kuzma, J.** "A Middle Ground in Risk Governance: Strong Objectivity, Post-Normal Science, and Critical Realism Applied to the Case of Genetically Engineered Mosquitos." Society for Risk Analysis Annual Meeting, San Francisco, CA, December 6-10, 2012.



- 21) **Kuzma, J.** “Application of Risk-Analytical Methods in Governance Contexts: Cases in Synthetic Biology for Agriculture and the Environment” Society for Risk Analysis Annual Meeting, San Francisco, CA, December 6-10, 2012.
- 22) **Kuzma, J., Kokotovich, A. and Kuzhabekova, A.** History Repeats Itself? Governance of New Methods for Targeted Genetic Modification in the U.S. Society for the Study of Nanoscience in Society (S.NET) Annual Conference, University of Twente, the Netherlands, on October 22-25, 2012.
- 23) **Kokotovich, A., and J. Kuzma.** Anticipatory governance and conflicting futures: Insights from the next generation of genetic engineering. Society for the Study of Nanoscience in Society (S.NET) Annual Conference University of Twente, the Netherlands, October 22-25, 2012.
- 24) **Kuzma, J.** "Governance Strategies for Genetic Pest Management: Options and Impacts" for Symposium on Genetic Pest Management: Global Strategies, Hurdles, and Future Directions (Brian Rector) at American Entomological Association Meeting, Knoxville, TN November 11-14, 2012 (accepted).
- 25) **Kuzma J., Brown, J. and L. Fatehi.** Skepticism and altruism in public attitudes towards food nanotechnology. Gordon Research Conference, Waterville, NH, August 5-10, 2012 (abstract accepted).
- 26) **Hollenkamp, L. and J. Kuzma.** Risk Governance of Nano-geoengineering. Society for Risk Analysis Annual Meeting. Charleston, SC. Dec 4-6, 2011. (abstract accepted)
- 27) **Kokotovich, A. and J. Kuzma.** Examining the potential futures of plant targeted genetic modification, Society for Risk Analysis Annual Meeting. Charleston, SC. Dec 4-6, 2011. (referred)
- 28) **Kuzma, J and A. Kuzhabekova.** Room for Good Will? Examining Voluntary Programs for Nano-Oversight in the Context of Corporate Social Responsibility. Society for the Study of Nanoscience in Society (S.NET) Annual Conference. Tempe, AZ November 4-6, 2011. Refereed.
- 29) **Brown, J., Kuzma, J., and A. Merrill.** Hungry for Information: Exploring the Public’s Perception of Nanotechnology in Food using Conversational Settings. Society for the Study of Nanoscience in Society (S.NET) Annual Conference. Tempe, AZ November 4-6, 2011. Refereed paper
- 30) **Kuzma, J. and A. Kuzhabekova.** A Window into the Field of Biotechnology Risk Analysis: A Bibliometric Approach. The Atlanta Conference on Science and Innovation Policy. Atlanta, GA Sept 15-17, 2011. Referred, paper.
- 31) **Meghani, Z. and J. Kuzma.** Reconfiguring the Regulatory System to Meet the Nanofood Regulation Challenge. Society for Philosophy of Science in Practice bi-annual meeting in Exeter, UK. June 22-24, 2011
- 32) **Kuzma, J.** “Dynamic Risk Governance for Converging Technologies”  
Symposium chair “Emerging Technologies: Dealing with Uncertainty in Risk Policy” Society for Risk Analysis Annual Meeting, December 2010.
- 33) **Yawson, R. and J. Kuzma.** Evidence review and experts’ opinion on consumer acceptance of agrifood nanotechnology International Conference on Food and Agricultural Applications of Nanotechnologies, Sao Carlos, Brazil, in June 20-25, 2010
- 34) **Meghani, Z and J. Kuzma.** The significance of the acknowledgement of the normativity of Risk assessment of food biotechnologies” 10<sup>th</sup> World Congress of Bioethics, Singapore, 28 – 31 July 2010
- 35) **Wolf, K. and J. Kuzma.** Rulemaking, Public Comments and Participation: A Case Study of Genetically Engineered Organisms . Graduate Student Conference sponsored by The American Association for the Advancement of Science (AAAS) and The National Academies (NAS). April 9-11, 2010
- 36) **Kokotovich, A., Kuzma, J. and D. Voytas.** Novel technologies, recurring challenges: Engaging the next generation of plant genetic modification. Graduate Student Conference sponsored by The American Association for the Advancement of Science (AAAS) and The National Academies (NAS). April 9-11, 2010.
- 37) **Kuzma, J. and R. Johnson.** “Emerging nanomaterials and environmental risk: What can systems modeling approaches offer risk analysis?” Submitted Society for Risk Analysis Annual Meeting, Baltimore, MD, Dec. 2009. Symposium chair, “System Dynamics Meets Risk Analysis – Integrating Approaches to Improve Health and Environmental Decisions” Refereed abstract.
- 38) **Kuzma, J. Paradise, J., Ramachandran, G, and Kuzhabekova, A.** “Comparative and Integrated Oversight Assessment for Emerging Technologies” Association of Public Policy Analysis and Management, 2009 Annual Fall Research Conference, 5-7 November, Washington, DC. Refereed, paper. **Invited to submit for Comparative Policy Analysis Best Paper Award.**
- 39) **Kuzma, J., Paradise, J., and A. Kuzhabekova.** “Cross Case-Comparison of Genetically Engineered Organisms, New Human Drugs, and Medical Devices Oversight: Lessons for Oversight of Nanotechnology

- Applied to Biological Systems.” Society for the Study of Nanoscience and Emerging Technologies, First Annual Conference; Seattle, Washington; September 8-11, 2009. Refereed
- 40) **Kuzma, J.** and **T. Tanji**, "Unpackaging Synthetic Biology: Identification of Policy Problems and Options" (2009). APSA 2009 Toronto Meeting Paper. Abstract available at SSRN: <http://ssrn.com/abstract=1451425> (paper reviewed at conference).
  - 41) **Meghani, Z.** and **J. Kuzma**. “ Democratization of Risk Assessment of Converging Technologies.” Society for the Philosophy of Science in Practice, University of MN, June 18-20, 2009. Refereed. Paper.
  - 42) **Kuzma, J.** and P. Thompson. “Ethical and Policy Analysis of Linkages between Public Perception and Oversight of Emerging Technologies,” Society for Risk Analysis Annual Meeting, Boston, MA Dec. 2008. Refereed.
  - 43) **Monson, M.** and **J. Kuzma** "Minnesota biofuels policy: analysis of the impacts of a renewable fuels standard versus a low carbon fuels standard on greenhouse gas emissions" System Dynamics Society Annual Meeting, Athens, Greece. July 2008. Refereed
  - 44) **Kuzma, J.** Multi-criteria approach to evaluating oversight: Genetically Engineered Organisms to Nanotechnology. American Political Science Association Annual Meeting Proceedings. Boston, August 28-31, 2008 refereed, paper
  - 45) Kuzma, J. **Larson, J.** and **P. Najmaie**. “Evaluating Oversight for Genetically Engineered Organisms in Food and Agriculture: An Integrated Approach,” Gordon Conference on New Frontiers in S&T Policy, August 17-22, 2008, Big Sky, MT, peer-reviewed
  - 46) Kuzma, J., **Paradise, J.**, **Kim, J.**, **Kokotovich, A.**, G. Ramachandran, and Wolf, S. “An Integrated Approach to Oversight for Emerging Technologies,” Gordon Conference on New Frontiers in S&T Policy, August 17-22, 2008, Big Sky, MT. peer-reviewed
  - 47) **Kuzma, J.** and J. Paradise. “Upstream and Integrated Oversight Assessment for Nanotechnology: A bidirectional approach to anticipatory risk analysis”. Society for Risk Analysis meeting, Dec. 2007, San Antonio, TX. refereed
  - 48) **Kuzma** "Food Biotechnology in Ethical Perspective: A Book Review," American Philosophical Association. International Society for Environmental Ethics and by the Society for the Philosophy of Technology, Chicago, April 15-16, 2007. refereed
  - 49) Kuzma, **J. Romanchek, J.** and **KokotovichA.** “Upstream Oversight Assessment for Agrifood Nanotechnology” American Association for the Advancement of Science (AAAS) meeting. , February 2007. refereed
  - 50) **Kuzma, J.** Chairperson. “Pathway Analysis to Assess the Farm-to-Table Risks of E. coli 0157:H7 in Hamburger.” Symposium for the Society for Risk Analysis Meeting, Phoenix, AZ. December 1998. refereed
  - 51) Roberts, T., and **J. Kuzma**. “The Contribution of Probabilistic Risk Assessment to Economic Analysis: E. coli 0157:H7 in Ground Beef.” American Agricultural Economics Association Annual Meeting, Salt Lake City, UT, August, 1998. Abstract published in Journal of the American Agricultural Economics Association, Volume 5, p. 1210. refereed
  - 52) Ferenc, S., McElvaine, M., Miller, M. and **J. Kuzma**. “Risk Assessment and Cost-Benefit Issues Associated with Antimicrobial Use in Food Animal Production.” Proceedings of the Symposium on The Role of Veterinary Therapeutics in Bacterial Resistance Development: Animal and Public Health Perspectives, January 1998, pp. 89-93. refereed
  - 53) Roberts, T., **Kuzma, J.**, and D. Hancock. “Fault-tree analysis and E. coli 0157:H7—US Human Illness, Food Sources, and Slaughter and Farm-Level Risk Factors.” Society for Risk Analysis Annual Meeting, December 7-10, 1997. refereed
  - 54) **Kuzma, J.**, Marechal, E., Graeff, R., Lee, H.C., and N-H. Chua. “Identification of Cyclic ADP-Ribose in Plants and Its Role in ABA-Mediated Signal Transduction” ABA Signal Transduction in Plants Conference Proceedings, Madrid, Spain, October, 1996. refereed
  - 55) **Kuzma, J.**, and R. Fall. “Bacterial Production of Isoprene” Proceedings from the International Symposium on the Genetics of Industrial Microorganisms, Montreal, Quebec. June 1994. refereed

#### **Invited and Scholarly Presentations and Panels**

- 1) **Kuzma J.** International Governance of Gene Drives. Invited plenary talk. ASU Governance on Emerging Technologies, 5<sup>th</sup> Annual Conference, May 17-19, 2017.

- 2) Kuzma, J. The Societal Dimensions of Gene Editing. Invited Plenary Talk. University-Industry Consortium. Baltimore, MD. April 27, 2017.
- 3) Kuzma J. "Proofreading Gene Edited Animals: Risk Governance Systems." Editing Nature Summit. Yale University. Plenary talk invited. April 20-21, 2017
- 4) Kuzma J. "The Social and Policy Systems Surrounding Emerging Biotechnologies, Microbes and the Environment" MEDx-IBIEM Joint Symposium: Frontiers in Microbiome Dynamics and Engineering, Duke University, March 10, 2017 (plenary).
- 5) Kuzma, J. "CRISPR, Gene drives, Governance and Ethics" Center for Genomics, UNC-Chapel Hill. March 9, 2017.
- 6) Kuzma J. From Genetic Engineering to Gene Editing: U.S. Governance Perspective. University of Tokyo & Kyoto University. February 3, 2017 (plenary, delivered remotely, translation by Dr. Makiko Matsuo)
- 7) Kuzma, J. Oversight of Genetic Engineering: Evaluating the past to inform the future. Duke University Rethinking Regulation Seminar. January 26, 2017.
- 8) Kuzma, J. Panel presentation for 2016 CPANC Crop Protection School, Dec. 6 2016.
- 9) Kuzma J. Seminar for UNC-CH Center for Genomics and Society investigators and trainees, Gene Drives, Governance and Ethics, March 3, 2017..
- 10) Kuzma, J. Roundtable participant. Emerging Gene Editing Technologies in Agriculture. Agree Transforming Food and Ag Policy, Convening Series, Meridian Institute., Washington DC October 14 2016
- 11) Kuzma, J. GMOs and Pesticides in a Governance Policy Context. 68<sup>th</sup> Crop Protection School Annual Meeting Of NC Crop Protection Association. December 6, 2017.
- 12) Kuzma, J. Governance of Genetically Engineered Organisms: A Social Science Perspective. Agbiome seminar, Raleigh, NC, November 28, 2016.
- 13) Kuzma J. "Hubris or Humility in the Regulatory Assessment of Gene Drives?" Gene Editing: Life and Law Beyond the Human, SUNY-Buffalo, NSF-funded workshop, Oct. 21-22, 2016.
- 14) Kuzma, J. "Governance for Engineered Pests in Historical and Systems Contexts" Keynote for OECD Workshop on Environmental Release of Engineered Pests: Building an International Governance Framework, Raleigh, NC October 6, 2016.
- 15) Kuzma, J. Genetic Engineering and Society. CALS Global Leadership Academy presentation for Turkish stakeholders. September 23, 2016.
- 16) Kuzma, J. "Gene Editing and Emerging Issues", Agree Initiative, Meridian Institute, DC. October 10, 2016.
- 17) Kuzma, J. "Innovation in Governance." North Carolina Agricultural Biotechnology Summit, September 27, 2016.
- 18) Kuzma, J. Panel, Values in Impact Assessment, NSF funded project, Hastings Center. May 2016.
- 19) Kuzma, J., "Bt and social resistance", Living with Resistance, Social and Environmental Synthesis Center, NSF-funded workshop, Annapolis, MD. April 25-29, 2016.
- 20) Kuzma J., "Gene drives: Who's Behind the Wheel?", The Three I's & Biosecurity, FBI, MSMR, and NCABR Conference, Chapel Hill, NC. Plenary presentation. April 14, 2016.
- 21) Kuzma J. Presentation for Honors College Bioethics class, March 31, 2016.
- 22) Kuzma, J. Genetic Engineering and Society. Jefferson Scholars Program presentation. February 8, 2016.
- 23) Kuzma J. Panelist for Science Policy Advocacy Group (SPAG) University of North Carolina, Chapel Hill, on "Advocacy 101"; February 1, 2016.
- 24) Kuzma, J. "GMOs and the Future of the Global Food Supply and Medical Innovations" CATO Institute debate with Robert Fraley CTO and VP of Monsanto. January 22, 2016.
- 25) Kuzma, J. "Is regulatory harmonization desirable for gene edited animals?" National Academy of Sciences, A Workshop of the Roundtable on Science and Welfare in Laboratory Animal Use Gene Editing to Modify Animal Genomes for Research - Scientific and Ethical Considerations. Washington, DC. December 7-8, 2015.
- 26) Kuzma, J. "Designing a Regulatory System that Adapts to Emerging Risks, Technologies" Leadership in a Time of Rapid Change: Envisioning Solutions to Environmental Challenges. Duke University Nicholas School 10<sup>th</sup> Anniversary Forum. October 22, 2015.
- 27) **Kuzma J.** and JP Roberts. Transformation or Adaptation: Active Nanomaterials and Risk Governance. Workshop paper for "Next Generation Nano Governance" American Chemical Society, CNS-ASU, and Notre Dame NSF funded workshop. Washington DC October 9, 2015
- 28) Kuzma J. Genetic Engineering: A New Phase of Policy and Perception. Population Medicine Seminar, Vet School, NCSU/UNC/Duke. October 5, 2015.

- 29) Kuzma J. Panel for National Science Foundation Nanoscale Science and Engineering meeting on “Social Science”, December 10, 2015
- 30) Kuzma, J., No Hands at the Wheel? Gene Drives, Genetic Engineering, and Society. Duke University, Periodic Tables, Durham’s Science Café, June 25, 2015 (invited public presentation)
- 31) Kuzma, J. Risk and Media. Biotechnology Literacy Project Boot camp. Academics Review, U of FL, and Genetic Literacy Project workshop. University of CA-Davis. Many 31-June 3, 2015. (plenary panel)
- 32) Kuzma, J. Intergenerational Equity, Gene Drives, and Conceptions of Nature. May 26-28, 2015 for Governance of Emerging Technologies 3<sup>rd</sup> Annual Conference. Arizona State University. (invited plenary)
- 33) Kuzma J. Gene Editing and Governance. 1<sup>st</sup> Annual Workshop on GE@NC State. NCSU. April 28, 2015.
- 34) Kuzma J. Ethical, Legal, and Regulatory Considerations. New Genomic Solutions for Conservation Problems Workshop. Long Now Foundation. Sausalito, CA. April 6-9 2015 (invited plenary panel)
- 35) Kuzma, J. Anticipatory Governance for Synthetic Biology: A Delphi Study. GES colloquium, NCSU, March 24, 2015.
- 36) Kuzma J. Gene Drives: Who’s behind the wheel? Yale Bioethics Seminar. March 3, 2015. (invited presentation)
- 37) Kuzma J. Panelist for Ethics Education and Training in Science and Engineering roundtable. The Rolf Buchdahl Symposium on Science, Technology, & Human Values. April 10, 2015. NCSU
- 38) Kuzma J. Ethics and genetically engineered organisms. Duke Science and Society seminar, Feb. 25, 2015. (invited presentation)
- 39) Kuzma J. Presentation on GM Food Safety. Women’s Conference of National Farm Bureau, March 28, 2015.
- 40) Kuzma J. GE Food Safety and Public Perception. For “Finding Common Ground: The GM Food Labeling Paradox”, University of MN, January 16, 2015. (invited presentation)
- 41) Kuzma, J. Responsible Development, Responsible Innovation: Global Governance of New Technologies. NSF sponsored Conference for Democratizing Technologies: Assessing the Roles of NGOs in Shaping Technological Futures. University of California, Santa Barbara. November 13-15, 2014. (invited presentation)
- 42) Kuzma, J. Anticipating Implications of Synthetic Biology. NSF Workshop on the Research Agendas in the Societal Implications of Synthetic Biology. ASU. November 4-6, 2014. (invited presentation)
- 43) Kuzma J. Anticipation and its Relation to Responsibility, Wilson Center Roundtable on Responsible Innovation in Synthetic Biology. Washington, DC. October 29, 2014 (invited presentation/participant)
- 44) Kuzma, J. GMOs: Safety, Public, and Labeling. MN State Legislature briefing. September 25, 2014. (invited presentation)
- 45) Kuzma, J. Genetic Engineering and Society. Presentation for CHASS Advisory Board, November 2014.
- 46) Kuzma, J. Genetic Engineering and Society. University Scholars Program (2 lectures for 300 students each), November 10, 2014.
- 47) Kuzma, J. Expert panelist for discussion at Chef’s Collaborative (national conference for over 300 chefs). September 29, 2014.
- 48) Kuzma J. Policy Sciences and GE crops: Data and Information Needs. Invited speaker for National Academy of Sciences National Research Council Study on GM Crops. Washington DC September 16, 2014. (invited presentation)
- 49) Kuzma, J. Regulation in a Rapidly Evolving Environment: Balancing Risk and Innovation. 2<sup>nd</sup> International Workshop for the Regulation of Animal Biotechnology. Invited for plenary by U.S. Dept. Agriculture. Brasilia, Brazil. August 21, 2014. (invited presentation)
- 50) Kuzma, J. Governance of New Biotechnologies. International Maize and Wheat Improvement Center. CIMMYT, Mexico City, Mexico. July 24, 2014. (invited presentation)
- 51) Kuzma J. Consumer Perceptions of Emerging Technologies in Food. International Conference on One Medicine One Science. University of Minnesota, Mpls, MN (plenary session speaker). April 29, 2014. (invited presentation)
- 52) Kuzma, J. Presentation at NC Biotechnology Center kick-off event for Biotechnology Professionals, April 16, 2014.
- 53) Kuzma J. Presentation on NCSU Park Scholars program panel, GM foods, April 2, 2014
- 54) Kuzma, J. Bioengineering as Second Nature. Chancellor’s Faculty Excellence Program symposium. April 25, 2014. (outreach presentation)
- 55) Kuzma, J. Emerging Technologies and Food: What Matters to Most? Center for Environmental and Natural Resource Economics & Policy, NCSU, April 11, 2014. (invited presentation)



- 56) Kuzma, J. Genome Editing: On a Collision Course. UNC-Chapel Hill Public Policy seminar, March 21, 2014. (invited presentation)
- 57) Kuzma, J. Chancellor's Reception for Policy Makers 2/26/14 UNC vs. NCSU game.
- 58) Kuzma, J. Beyond Old Debates: New Systems Risk Analysis (NESRA) in An Action-oriented Approach, National Academy of Sciences, Gordon and Betty Moore Foundation, Palo Alto, CA . March 13, 2014. (invited presentation)
- 59) Kuzma J. Woodrow Wilson Center Invited workshop on "Creating a Research Agenda for the Ecological Implications of Synthetic Biology. (funded by NSF) January 8, 2014.
- 60) Kuzma, J. Utopian Views on Risk governance of Emerging Technologies. International Symposium on Risk Governance of Science and Technology University of Tokyo , Toyko Japan. December 17, 2013 (plenary presentation) (invited presentation)
- 61) Kuzma, J. Panelist for "Genetic Roulette" UMN Public Health week, April 1, 2013.
- 62) Kuzma J. Emerging Technologies and U.S. Food Governance Systems. International Symposium on Risk Governance of Science and Technology University of Tokyo , Toyko Japan. December 15, 2013 (Closed workshop presentation)
- 63) Kuzma J. Hungry for Information: Nanofood labeling. "Food Labeling: Nice to Know or Need to Know?" June 6, 2013. Finding Common Ground Forum Series, St. Paul, MN
- 64) Kuzma, J. Invited roundtable participant. "Managing the Risks of Synthetic Biology: Assessing the U.S. Regulatory System" (DOE-funded study that is being conducted by Sarah Carter and Robert Friedman at the J. Craig Venter Institute in collaboration with Michael Rodemeyer of the University of Virginia and Michele Garfinkel at the European Molecular Biology Organization), Washington DC, August 27-28, 2012.
- 65) Kuzma, J. Principles, Perspectives and Policy Studies for Transgenic Organisms in the Environment "Mosquitos Transgénicos: ¿Dónde estamos en Panamá? Forum on Transgenic Mosquitos. Smithsonian Tropical Resarch Institute, Gorgas, and University of Panama. Panama City, Panama. May 16, 2012. (invited speaker)
- 66) Kuzma, J., Properly paced or problematic: Learning from the Coordinated Framework for Biotech. Pacing Governance with Science and Technology. NSF-sponsored workshop. Arizona State University, March 5-6, 2012. (invited speaker)
- 67) Kuzma, J. Panel Discussant, IGERT seminar, Re-examining US GMO Governance: Continuing Tensions and Contemporary Conflicts", Friday, April 27, 2012. University of Minnesota. (invited panel speaker)
- 68) Kuzma, J. Integrated approaches to studying oversight for Genetically Modified Organisms. Genetics and Society seminar. NCSU. February 3, 2012. (invited speaker)
- 69) Kuzma, J. Panelist for Emerging Risks of Synthetic Biology. February 28, 2012. The George Washington University Law School, Environmental Law Program, Woodrow Wilson International Center for Scholars, Society for Risk Analysis, Washington DC (invited speaker)
- 70) Kuzma, J. and D. Fitzpatrick. Women in S&T Policy. Presentation for Humphrey Advisory Council. April 2012.
- 71) Kuzma J. Ethics of S&T funding. Broader Impacts Seminar. University of Minnesota. April 2012.
- 72) Kuzma, J. Panel respondent for Energy and Environmental Law and Governance Workshop. May 4, 2012.
- 73) Kuzma, J. Invited Panelist for session on "Pacing Law with Emerging Technologies". Society for the Study of Nanoscience in Society (S.NET) Annual Conference. Tempe, AZ November 4-6, 2011. (invited panelist)
- 74) Kuzma, J. Nanotechnology and the Environment: Policy from local to national. Invited pre-presentation for Dr. Paul Bertsch's Ninth Annual William E. Larson and Raymond R. Allmaras Lecture on Emerging Issues in Soil and Water, Program, Wednesday 13 April 2011, University of Minnesota. (invited speaker)
- 75) Kuzma, J. Emerging Technologies: Progress or Poor Paradigms? Hennebach Visiting Professor Lecture, March 23, 2011, Colorado School of Mines. (invited speaker)
- 76) Kuzma, J. Emerging Technologies: Oversight under uncertainty. Policy@Tech Seminar Series. Georgia Tech. February 23, 2011. (invited speaker)
- 77) Kuzma, J. U of MN Graduate Program in Neuroscience Career Forum. Speaker. April 11, 2011.
- 78) Kuzma J. Panelist. Science Museum of Minnesota Science Café for NanoNight 2011. National Nanodays. Black Dog Café St. Paul, MN. March 29, 2011.
- 79) Kuzma, J. "Bio and Nanotechnology: Policy and potential social and environmental implications". North American Hazardous Materials Management Association. Mpls, MN Invited plenary speaker. May 24, 2010.
- 80) Kuzma, J. "Emerging Technologies and the Environment: The Right Pushmi-Pullyu?" Frontiers on the Environment lecture series. University of Minnesota. November 10, 2010. (invited speaker)

- 81) Kuzma, J. "Teenage Identity or Midlife Crisis: The Tangled Web of Science and Technology Policy Education" Gordon Conference on Science and Technology Policy. August 2010. (invited plenary speaker)
- 82) Kuzma, J. International Symposium on Genetic Biocontrol Of Invasive Fish, USDA/FWS/ SeaGrant, Minneapolis, MN June 21-24, 2010. (invited speaker)
- 83) Kuzma, J. "Governance of Agrifood Nanotechnology: Research and Policy Implications" International Conference on Food and Agricultural Applications of Nanotechnologies, Sao Carlos, Brazil, in June 20-25, 2010 (invited speaker)
- 84) Kuzma, J. IGERT symposium, "Right Risks: Ethics and Ecological Risk Analysis", University of MN, April 30, 2010 (invited plenary speaker)
- 85) Kuzma J. "Dynamic Oversight for Emerging Technologies" Governing Nanobiotechnology: Reinventing Oversight in the 21<sup>st</sup> Century. Mpls, MN April 15, 2010 (plenary speaker, moderator, and conference co-organizer)
- 86) Kuzma, J. National Nanotechnology Initiative (NNI) workshop, "Capstone Meeting: Risk Management Methods and Ethical, Legal and Societal Implications of Nanotechnology." March 30-31, 2010, Washington DC. (invited expert roundtable participant).
- 87) Kuzma J. Briefing speaker for Senator Al Franken's staff on nanotechnology Senate bills going through Congress. March 31, 2010
- 88) Kuzma, J. "Systems Approaches to Environmental Risk of Nanomaterials" Midwestern States Risk Assessment Symposium on Nov 3, 2009 at the Hyatt Regency Hotel in Indianapolis. (invited speaker)
- 89) Kuzma, J. Invited participant in National Academy of Sciences-National Research Council workshop on Agrifood Nanotechnology, August 22, 2009, in Washington DC.
- 90) Kuzma, J. Invited plenary panelist. "Current State and Direction of Science in Guiding Decision Making on the Safe Use of Nanotechnology" EPA and the University of Massachusetts Amherst International Conference on the Environmental Implications and Applications of Nanotechnology, June 9-11, 2009, in Amherst, Massachusetts.
- 91) Kuzma, J. "Preparing for the Future of Emerging Technologies Oversight: Upstream and Integrated Oversight Assessment" Assoc. for the Advancement of Science (AAAS) Science Policy meeting, April 30-May 1, 2009. Washington, DC. (invited panel presentation).
- 92) Kuzma, J. Examining Emerging Technologies: What's Next in Science Oversight? New Strategies & Accountability? What's Next in Law, Health & the Life Sciences? Debating Openness, Access & Accountabilit. 10th Anniversary of the Consortium on Law and Values in Health, Environment & the Life Sciences and Joint Degree Program in Law, Health & the Life Sciences, March 6, 2009, University of Minnesota (invited speaker)
- 93) Kuzma, J. "GMOs and Environmental Risk Policy" for Conservation Biology Seminar Series, U of M, November 30, 2009.
- 94) Kuzma, J. Guest lecture on emerging technologies and FDA policy "Food and Drug Safety: Whom Can You Trust?" Undergraduate Honors Program course, U of M, November 10, 2009.
- 95) Kuzma, J. "No Small Matter: Nanotechnology and Social Issues", Microscopy Camp! For grades 7-12 Metro High School Science Teachers. July 28, 2009.
- 96) Kuzma, J." Nanotechnology: The Science of the Small" St. Francis Xavier Middle School, Buffalo, MN, April 20, 2009.
- 97) Kuzma, J. "Where Science Meets Policy: Oversight for Genetic Engineering" College of St. Catherine's, St. Paul, MN. April 7, 2009. (invited speaker)
- 98) Kuzma, J. Invited participant for USC workshop on forming a society for Nanotechnology and Society (one of 30 invitees from around nation and world). May 19, 2008.
- 99) Kuzma, J. Panel on Emerging Technology Enterprises, Gordon Conference on S&T Policy, Big Sky, MT, August 2008.
- 100) Kuzma, J. "Nanotechnology, Oversight Policy". Hennepin Country Bar Association, April 2008. (invited speaker)
- 101) Kuzma J. with area faculty and staff. "STEP Vision 2020", Humphrey Institute Vision 2020, April 2008.
- 102) Kuzma, J. Nanotechnology, Animal Production and the Future. World Conference on Animal Production, Capetown, South Africa. November 25-27, 2008 (invited speaker)
- 103) Kuzma, J. Oversight and Regulatory Challenges for Energy and Environmental Applications of Nanotechnology. Midwest E3 2008 conference. University of MN, November 18, 2008 (invited speaker)
- 104) Kuzma, J. Global Policy Forum, University of MN, "Does U.S. S&T Policy need a Paradigm Shift?" Sept. 16, 2008.

- 105) Kuzma, J. "A Public Policy View on Risk Management for Nanomaterials," Washington DC, Society for risk Analysis Workshop on "Risk Analysis: Advancing the Science for Naonmaterial Risk Management." Sept 10-11, 2008 (invited panelist)
- 106) Kuzma, J. "Risk Communication Challenges for Nanomaterials: A Taxonomy (Typology) within the Framework of Risk Analysis," Communicating Health and Safety Risks on Emerging Technologies in the 21<sup>st</sup> Century. North Carolina State University, NSF workshop, August 28-29, 2008 (invited speaker).
- 107) Kuzma, J. Facilitator for IREE Algae and Biofuels Summit, October 16, 2008, Minneapolis, MN.
- 108) Kuzma, J." Emerging Technologies, S&T Policy, and the (Your) Future." University of St. Thomas. October 3, 2008 (invited speaker)
- 109) Kuzma, J. "A Path to Renewal of America's Global Role in Health Science Policy," Innovation 2008, Sept. 2008. University of MN.
- 110) Kuzma, J. "Innovation for Green Chemistry: Policy Options and Challenges," Green Chemistry in Minnesota: Opportunities and Challenges for Leadership, May 28, 2008, University of Minnesota. (moderator and introductory panel speaker).
- 111) Kuzma, J., Monson, M., and Warner, E. "Introduction to System Dynamics," HHH Graduate Faculty Meeting, March 2008.
- 112) Monson, M., Kelley, S. (Kuzma, J\*) State Legislative Testimony for Biosciences and Emerging Technology Committee, February 27, 2008. (\*Monson, Kuzma's RA, presented their work)
- 113) Kuzma, J. "Nanotechnology and Society: no Small Matter" MN Society of Professional Engineers, Feb 19, 2008. (invited speaker)
- 114) Kuzma, J. "Nanotechnology: What's new, what isn't and why it matters?" Mindstretch keynote speaker. October 31, 2007. (invited speaker)
- 115) Kuzma, J. "Agricultural Nanotechnology: From Science to Society" National Academy of Sciences, National Research Council, Board on Agriculture and Natural Resources Meeting, May 13, 2008. (invited speaker)
- 116) Kuzma, J. , "Agricultural Nanotechnology: Risk and Oversight Policy" USDA, Office of the Secretary, Office of the Chief Economist, ORACBA Risk Forum, Washington, DC, May 13, 2008. (invited speaker)
- 117) Wolf, S. Kokkoli, E. Kuzma, J., Paradise J., Ramachandran, G. Evaluating Oversight Mechanisms for Active Nanostructures and Nanosystems: Learning from Past Technologies in a Societal Context. 2007 NSF Nanoscale Science and Engineering Grantees Conference. December 3-6, 2007, NSF - Arlington, VA.
- 118) Kuzma, ., "Risk and Regulation for Emerging Technologies", Northeastern University Nanotechnology Regulation Workshop May1-2, 2007, Boston, MA. (invited speaker)
- 119) Kuzma, Romanchek, Kokotovich "Agrifood Nanotechnology: Applications and Oversight," Michigan State University, What is agrifood nanotechnology? NSF Workshop, April 2-3, 2007. (invited speaker)
- 120) Kuzma, J. "Nano and health: an Ethical Perspective," Exploratorium, San Francisco, Nanoforum keynote presentation. June 6, 2007. (invited speaker)
- 121) Kuzma, J. "Nano and health: an Ethical Perspective," Science Museum of Minnesota, Nanoforum keynote presentation. April, 26, 2007. (invited speaker)
- 122) Kuzma "Future Research Needs for the ELSI-Nano community" National Science Foundation (NSF) PI meeting for ELSI nanotechnology investigators. March 15-16, 2007. (invited speaker)
- 123) Kuzma, Romanchek, Kokotovich "Oversight for Agrifood Nanotechnology: No Small Matter" Alberta Agricultural Research Institute, Nano-Agriculture workshop, March 1-2, 2007. (invited speaker)
- 124) Kuzma, J. MN Pollution Control Agency, "Grand Challenges for Nanotechnology Policy and the Environment," February 2007. (invited speaker)
- 125) Kuzma, J. Café Scientifique, Bell Museum of Natural History, "GEOs: An Intersection Between Science and Society." November 2006. (invited speaker)
- 126) Kuzma, J. 3M company's Technology Forum. "Nano-policy: No small matter" November 2006. (invited speaker)
- 127) Invited keynote speaker for Science Museum of Minnesota's Nanoforum. "The Brave New World of Nano Policy" August 2006.
- 128) Invited reviewer for Science Museum of Minnesota's Nanoscale Informal Science Education Network's Exhibits and Programs Workshop. July 2006Kuzma, J. MN Attorney General's CLE workshop, "Emerging Technologies, Policy, and Law: Getting It Right." June 2006. (invited speaker)
- 129) Invited Participant for National Nanotechnology Coordinating Office Workshop on Public Participation in Nanotechnology, May 2006. Washington, DC.

- 130) Invited Participant for Environmental Law Institute's workshop on Nanotechnology Governance, May 2006. Nashville, TN.
- 131) Kuzma, "Emerging Technologies: Challenges for Institutions and Oversight" National Association of Schools of Public Administration and Affairs meeting. October 19, 2006. (invited panelist)
- 132) Key speaker at press conference on Analysis of Early Stage R&D for Agrifood Nanotechnology. March 2006, Washington DC, Project on Emerging Nanotechnologies. <http://www.nanotechproject.org/index.php?id=50>
- 133) Kuzma and VerHage "Nanotechnology and Food" National Food Processors Association Meeting, Sept. 18, 2006. Washington DC (invited speaker)
- 134) Kuzma, "Active Nano Governance" International Risk Governance Council, The Risk Governance of Nanotechnology: Recommendations for Managing a Global Issue. July 2006, Zurich, Switzerland. (invited speaker)
- 135) Kuzma, J. "Regulation and non-food GM crops and cross-overs between White, Green and Red Biotechnology" one of 30 invited participant for EU-US Conference on Emerging biotechnology applications: EU, US and global regulatory perspectives. Hosted by the European Policy Center, December 4-6, 2005. Lille, France. (invited speaker and moderator)
- 136) Kuzma, J. Freeman Center International Trade Consortium. University of MN. "Genetic Engineering: Science, Uncertainty and International Trade". January 2004.
- 137) MN Biofiber Consortium Meeting, Initiative for Renewable Energy and the Environment: Bioenergy and Bioproducts, October 2004.
- 138) Initiative for Renewable Energy and the Environment Advisory Committee meeting. Policy, Economic and Ecosystem Issues. May 2004.
- 139) Kuzma, J. The Genomic Future: A Town Hall Meeting. Gene(sis) Exhibit Weisman Art Museum. Who Owns DNA? Panel Discussion. February 2004. (invited panelist)
- 140) Kuzma, J. MN Seed Coalition and Bioindustrial Consortium. Renewable Energy: A New Initiative at the University of Minnesota. November and December 2003. (invited speaker)
- 141) Interviewed for Fox Cable TV News on agricultural bioterrorism. September 2002.
- 142) Kuzma, J. "Genetically Modified Organisms in Food" Invited presentation for and participant in the Private and Public Scientific Academic and Consumer Food Policy Group (PAPSAC), Harvard Business School, November 2000.
- 143) Invited panelist for Meridian International Visitors' Program on Genetically Modified Organisms for UK scientists and regulators, May 2001.
- 144) Invited panelist for State Department's Visitors' Program on Risk Management for Belgian risk managers, March 2001.
- 145) Invited panelist for State Department and American Farm Bureau International Visitors' Program on Genetically Modified Organisms for UK regulators and stakeholders, July 2000.
- 146) Invited presentations for USDA's Advisory Committee on Agricultural Biotechnology meetings-- July and November 2000, and August 2001.
- 147) Presentation for Zambian delegation of government officials and scientists to discuss genetically engineered foods. Washington DC. September 2002.
- 148) Group leader and facilitator for the USDA Workshop on Criteria for Field Testing of Plants with Engineered Regulatory, Metabolic and Signaling Pathways. Washington DC June 2002.
- 149) Invited presentation for Pew Initiative on Food and Biotechnology's Stakeholder Forum. Crossroads of Science and Regulation for Genetically Engineered Organisms in Agriculture: The Role of the National Academies. March 2002.
- 150) Invited presentation on animal biotechnology issues for the Animal Biotechnology Stewardship Technical Committee of the Animal Commodity Organizations Group, November 2001.
- 151) Invited speaker for USDA's International Fellow Program for Yugoslavian scientists and regulators, Agricultural Biotechnology and Communication, July 2001.
- 152) Invited presentation for Southeast Asian Journalists interested in Agricultural Biotechnology, National Academy of Sciences Office of News and Public Information, July 2000.
- 153) Invited panelist for Meridian International's Biotechnology and Food Safety Program, Greek Grocers and Journalists. May 2000.
- 154) Invited panelist for Meridian International's Biotechnology and Food Safety Program. Italian Grocers and Journalists. March 2000.



- 155) Invited speaker for National Press Foundation. Agendas 2000: Biological Engineering of Food. January 2000.
- 156) Kuzma, J. "Biotechnology, Food and Agriculture: Understanding the spectrum of opportunities, challenges, and perspectives," Keynote Speaker for National Academies Presidents' Circle Meeting, September 1999.

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## PRESS INTERVIEWS and APPEARANCES

- 1) Quoted in Slate magazine story on The U.S. Regulations for Biotechnology Are Woefully Out of Date. April 21, 2017.
- 2) Interviewed for the CBC (Canadian Broadcast Corporation) radio story on Are we prepared for our gene altered future? March 25, 2017.
- 3) Research featured in PLoS Blog <http://blogs.plos.org/synbio/2017/03/27/can-a-new-model-help-governance-keep-up-with-synthetic-biology/> Can a new model help governance keep up with synthetic biology?
- 4) Quoted in MIT Tech Review, Rewriting Life, 5 Biotech Products U.S. Regulators Aren't Ready For, March 18, 2017
- 5) Interviewed on Australian Broadcasting Company (ABC) Call for open discussion on governance of gene editing technologies. The Science Show, February 25, 2017.
- 6) National Press Briefing on Gene Editing, AAAS Annual Meeting, February 16, 2017.
- 7) Quoted in Nature magazine, "Gene-edited animals face US regulatory crackdown" January 19, 2017.
- 8) Research highlighted in NCSU press release, Bioscience Technology, Phys.org, Science Daily, etc. New tool can help policymakers prioritize information needs for synthetic biology tech. January 17, 2017.
- 9) Interviewed and quoted in NBC News , 11 Surprising Predictions for 2017 From Some of The Biggest Names In Science, December 29, 2016
- 10) Mentioned in New York Times article "National Biotechnology Panel Faces New Conflict of Interest Questions" December 27, 2016.
- 11) Quoted in Wine Enthusiast magazine on "Can Science Save our Favorite Wines?" Decemberr 8, 2016.
- 12) Quoted in Associated Press Story on "Risk experts: Candidates not focusing on biggest threats" November 2, 2016.
- 13) Quoted in WUNC story "Scientists develop a hornless Holstein using 'gene editing.' Are you ready to eat it?" Oct 20, 2016.
- 14) Guest on Science Friday (Public Radio International, Airs on NPR) with Ira Flatow, October 14, 2016. <http://www.sciencefriday.com/segments/scientists-develop-a-hornless-cow-through-gene-editing/>
- 15) Interviewed on Future Biotech Policy, WCOM 103.5 FM, Chapel Hill and Carrboro Radio In Vivo <https://radioinvivo.org/2016/09/21/future-biotech-policy/>. September 21, 2016.
- 16) Quoted in Wired magazine article "Genes Might Be Helping the Tasmanian Devil Fight Off Face Cancer" August 30, 2016.
- 17) Quoted and research cited in The Boston Globe "Staying Ahead of Technology's Curves" August 21, 2016
- 18) Quoted in PBS Nova Next Now "Editing Out Pesticides", August 3, 2016.
- 19) Quoted in Science magazine, "U.S. Academies gives cautious go-ahead to gene drive" June 8, 2016
- 20) Quoted in Science magazine, "U.S. looking to expert panel to predict future GM products." April 19, 2016.
- 21) Quoted in Scientific American, "Editing the Mushroom", March 1 2016.
- 22) Quoted in Washington Post January 4, 2016, "Around the country, organic farmers are pushing for 'GE-free' zones"
- 23) Quoted in Nature Biotech article December 9, 2015 "A face lift for biotechnology rules begins"
- 24) Quoted in The Scientist magazine, "Unregulation of Biotech Crops", November 26, 2015.
- 25) Organized and moderated Genetic Engineering and Society Colloquium. November 3 & 10, 2015.
- 26) Quoted in Chem Engineering and News. On funding of synthetic biology and ethics and risk. Oct. 19, 2015
- 27) Quoted and story contributor to "Hopes and Fears: Life and Culture through a Global Lens" on ethics of engineering intelligence in humans. September 22, 2015. Available at [hopesandfears.com](http://hopesandfears.com).
- 28) Quoted in E.W. Scripps article "22 years of science since original 'Jurassic Park' movie" covered in In NBC & ABC news (Denver, Tulsa, Tampa Bay, Naples, Knoxville, etc. ), Independent Mail, June 12, 2015.
- 29) Quoted in Nature magazine, CRISPR the Disruptor, June 4, 2015.
- 30) Research covered in article in Food Safety Magazine, March 16, 2015.
- 31) Interviewed for and quoted in National Journal article on GM apple, February 19, 2015

- 32) Interviewed and quoted for National Public Radio on synthetic proteins., January 21, 2015. <http://www.npr.org/blogs/health/2015/01/21/378820888/scientists-give-genetically-modified-organisms-a-safety-switch>
- 33) Quoted in NY Times on gene editing January 2, 2015
- 34) Research featured and Quoted on All Things Considered WUNC Public Radio, GM and nanofoods 12/6/14 Catherine Brand.
- 35) Quoted in news reports on research on in Food Safety News, Physics.org, Medical News December 3, 2014.
- 36) Chemical and Engineering News on GM modified potato Chemical & Engineering News, 92(46), November 17, 2014 [
- 37) Quoted in Chemical and Engineering News on Convention on Biological Diversity and Synthetic Biology, November 10, 2014 <http://cen.acs.org/articles/92/i45/Oversight-Synthetic-Biology.html>
- 38) Story on GM mosquitos and GMOs. Appearance on UNC-TV August 12, 2014.
- 39) Appeared on WUNC-TV episode on GM Crops, New Fields for Food, January 30, 2014
- 40) Quoted in story on NSF's Science 360 Breaking News about study on nanofoods, October 29, 2013.
- 41) Quoted in Triangle Business Journal about study on nanofoods. October 28, 2013
- 42) Quoted in Nature magazine GENE EDITING. Nature 500, 389–390 (22 August 2013)
- 43) Interviewed for Chicago Public Radio on GM foods. Aired July 2013
- 44) Quoted in LA Times. March 23, 2013. Genetic modification strains old food and drug laws
- 45) Quoted in Los Angeles Times, GM Foods: Who has to tell? Feb 23, 2013.
- 46) Appearance on Fox 9 News (TV), January 20, 2013. GMO Labeling.
- 47) Interview with Richard Chin, St. Paul Pioneer Press, December 6, 2012; Article on page A1 12/20/12.
- 48) Science Museum of Minnesota, Scientist “expert” for Beaker and Brush discussion, August 14, 2012.
- 49) Interview with Chicago Tribune on nano sunscreens. June 13, 2012
- 50) Talk at Smithsonian Institution covered in Panama News, May [http://www.thepanamanews.com/pn/v\\_18/issue\\_04/nature\\_special\\_01.html](http://www.thepanamanews.com/pn/v_18/issue_04/nature_special_01.html)
- 51) Quoted in Food Quality magazine, FDA and nanomaterials, May 8, 2012. [http://www.foodquality.com/details/article/2038937/Proposed\\_FDA\\_Guidance\\_on\\_Nanomaterials\\_Seen\\_As\\_Flawed.html?tzcheck=1](http://www.foodquality.com/details/article/2038937/Proposed_FDA_Guidance_on_Nanomaterials_Seen_As_Flawed.html?tzcheck=1)
- 52) Interviewed Food Retail Leader Magazine, Nanofood guidance of FDA, April 2012.
- 53) Quoted in Nature news “The ‘most important questions’ in science policy shortlisted” March 9, 2012.
- 54) Quoted in Nature Biotech feature news “Tiptoeing around transgenics” March 2012.
- 55) Nano-Link Conference. Kuzma, J. Should we sweat the small stuff: Nanotechnology & Society. October 11, 2011.
- 56) Interviewed and quoted in *Newhaven Independent* October 11, 2011; story published, November 9, 2011
- 57) Interview with Ann Meyer, Reporter for Retailer Leader national magazine. August 31, 2011.
- 58) Quoted and featured in 14 December 2010. *Newhaven Independent* A Biotech Road Map?
- 59) Quoted in Technology Leadership Institute Fall 2010/2011 newsletter. November 16, 2010.
- 60) Quoted in *Winona Daily News* “Nanotechnology Takes Hold in SE Minnesota” April 25, 2010.
- 61) Work featured in March 2010, All About Feed magazine.
- 62) Quoted in AOL News. A. Schneider. “Why Nanotech Hasn't (Yet) Triggered 'the Yuck Factor'?”. March 24, 2010..
- 63) Interview used for “Take a Nanooze Break,” a long-term exhibit at the Walt Disney World Resort in Lake Buena Vista, FL, at Epcot Center. Premiered Feb 2010.
- 64) Interviewed and quoted in The Bloomington Alternative, S Higgs, June 28, 2009. “Nanotechnology : Revolution and Pollution”
- 65) Interviewed for and quoted in MinnPost Article, “As nanotechnology hits the marketplace, safety is a growing issue,” May 14, 2009. Dawson, J. Also posted on Inside Science News Service.
- 66) Quoted in AAAS news release reporting on research “Experts Explore the Dilemma of Regulating Nanotech and Other New Technologies” Lane, E. May 18, 2009.
- 67) Interview for Earth&Sky Radio, syndicate for over 1900 outlets. March 16, 2009. Aired April 2009.
- 68) Interviewed and quoted for Functional Ingredients magazine, Nanotechnology and food. March 2009.
- 69) Interviewed for “The Perils of Nanotechnology”, by Steven Higgs, *Counterpunch* May 1-15, 2009.
- 70) Quoted in Chemistry Times “Patent for renewable alternative to petroleum-derived isoprene granted to researcher” (10/18/2008)
- 71) Interview with Finance and Commerce Magazine, August 13<sup>th</sup>, 2008, story in print August 15, 2008.

- 72) Story in AzoNanotechnology news on recent published paper “Nanotechnology Providing Great Benefit Along with Potential Risk”, August 13, 2008.
- 73) Story in NanoWerk News on recent published papers, August 13, 2008.
- 74) Interview with Minnesota Public Radio, Green Chemistry, 5-23-08, Aired 5-28-08 on MPR news.
- 75) Interview with Western Producer newspaper in Saskatewan, Canada on agrifood nanotechnology. March 2008.
- 76) Great Lakes Radio Consortium (06/20/07) , Nanotech Nervousness, J. Kuzma discusses multiple nanoproducts being sold today. Environment Report.  
[http://www.gllrc.org/story.php3?story\\_id=3481](http://www.gllrc.org/story.php3?story_id=3481)
- 77) Invited Guest. MPR Midmorning with Kerry Miller, “Genetically Engineered Foods,” November 2006.
- 78) Interviewed for and quoted in New York Times “Engineering Food Additives at a Molecular Level” Page C1. October 10, 2008.
- 79) ISB News Report on published work. Jones, P.C. “A nanotechnology revolution in the food and agricultural industry,” Food HAACP Newsletter, Issue 214, 2006.
- 80) Rapporteur for “Standards for Nanotechnologies: A Workshop.” MSU, Sept. 11-12, 2006.
- 81) Article on research in Nanowerk News, “New report on nanotechnology in agriculture and food looks at potential applications, benefits, and risks,” September 7, 2006
- 82) Quoted/Interviewed in LiveScience article and FoxNews.com story, “Scientists Worry About Potential Risks of Nanotechnology in Food” Choi, C.Q, September 7, 2006..
- 83) Article and interview. Chemical and Engineering News. “Nanotechnology in Food and Agriculture: Database finds diverse themes and predominantly basic research in federally funded R&D”, April 17, 2006.
- 84) Story on recently published work “Report Urges Coordinated And Integrated Oversight Of Nanotechnology” ScienceDaily (Feb. 17, 2006)

## RESEARCH SUPPORT

### Pending

- I. Kuzma, J. co-PI DOE 2017-2022 \$25 million  
NextGen Biofuels and Bioproducts by Extreme Thermophiles (NextBET)  
Kelly (PI), Kuzma lead on Environmental Risk Analysis for \$1M over 5 years.

### Recent: not Funded (2016-2017)

- II. Kuzma, J. PI Templeton (2016-2018) \$1.2 Million  
Next generation voices in next generation biotechnology. Jones, Gail (coPI)
- III. Kuzma J. co-PI NSF 2016-2019 \$453,911  
Archiving Agricultural Genetic Engineering and Society (resubmitted 8/2016)  
M. Booker PI, A. Wynn, and E. Brown co-PIs
- IV. Kuzma J, co-I USDA NIFA 2017-2022 \$35 million  
SouthEast Atlantic Biofuels: Camelina Feedstock Development Partnership  
Chin PI Kuzma co-I, lead on Social and Policy Sciences for \$640K over 5 years.
- V. Kuzma J, co-PI Templeton Foundation \$217,000  
Gould PI, Genetic Engineering & Society: Enabling Balanced Inquiry and Decision making
- VI. Kuzma J. co-I DOE 2017-2022 \$35 million  
TREES-C: Triangle REnewable Energy Science – Center  
Kelly and Sederoff PIs. Kuzma co-I, lead on Social and Policy Sciences for \$1.25 million over 5 years.

### Current

- VII. Kuzma J. PI NSF 2016-2018 \$350,000  
Facilitating Learning about Meanings of Responsible Innovation in Bioengineering  
F. Gould, D. Berube, E. Banks, and J. Herkert co-PIs

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|-------|--|---------------------|------------|
| VIII. | <b>Kuzma, J. PI</b><br><b>Gene Drives: A Deliberative Workshop to Develop Frameworks for Research and Governance</b><br>Fred Gould co-PI | NSF 2015-2017       | \$50,000   |
| IX.   | <b>Kuzma J, coI</b><br><b>@Risk: Strengthening Canada's Ability to Manage Risk</b><br>M. Gattinger PI (U of Ottawa)                      | SSHRC/Genome Canada | \$195, 166 |

**PAST SUPPORT**

- |       |  |                                  |           |
|-------|--|----------------------------------|-----------|
| X.    | <b>Kuzma, J. PI</b><br><b>Systems Approaches to Research and Practice</b><br>Gordon Research Conference on S&T Policy  | NSF( 2014)                       | \$50,000  |
| XI.   | <b>Kuzma, J. PI</b><br><b>Comparing Public Attitudes Towards Genetically-Modified and Nanotechnology-Based Foods and Labeling</b><br>Food Policy Research Center policy analysis research grant.<br>Chengyan Yue, co-PI, applied economics.  | USDA 2013-2014                   | \$39,384  |
| XII.  | <b>Kuzma co PI</b><br><b>USDA Stakeholder Workshop on Coexistence of Genetically Engineered and Conventional Crops</b><br>Gould, Fred L. Kuzma, Jennifer Delborne, Jason Aaron Center on Genetic Engineering and Society (GES)<br>Animal and Plant Health Inspection Service (APHIS) – USDA      | USDA                             | \$30,676  |
| XIII. | <b>Kuzma, J. co-PI</b><br><b>Women in S&amp;T Policy</b><br>National Science Foundation. co-PIs, Kaye Husbands-Fealing (NAS/NRC & U of MN), Deborah Fitzpatrick (U of MN), Susan Cozzens (GA Tech), Laurel Doerr (Boston U) <i>Note: dropped off as co-PI in April 2014 due to move to NCSU.</i> | NSF 2012-2015                    | \$420,000 |
| XIV.  | <b>Kuzma J., PI</b><br><b>Looking Forward to Synthetic Biology Governance: Convergent Research Cases to Promote Policy-Making and Dialogue</b><br>Alfred P. Sloan Foundation . co-PI Christopher Cummings, Nanyang Technical University.   | Sloan 2013-2015                  | \$173,703 |
| IV.   | <b>Kuzma J. PI</b><br><b>Support for NCSU-IGEM team for International Competition</b><br>Berube co-mentor  | U of MI Risk Science Center 2015 | \$5000    |
| XV.   | <b>Kuzma, J. PI</b><br><b>How Small is Small Enough?: A Cross-Disciplinary Approach to Defining “Nano” for Research, Society, and Regulation</b><br>NSF National Nanotechnology Infrastructure Network (NNIN) Seed Grant. Leili Fatehi, co-PI.   | NSF-NNIN 2012-2013               | \$20,000  |
| XVI.  | <b>Kuzma, J. co-investigator, steering committee</b><br><b>Food Policy Research Center</b><br>Hueston, W. PI, Lindsey, Buhr, Rutherford, Virnig (coPIs). Foley, Story, Murtaugh, Kurzer (co-Is)  | USDA-NIFA 2012-2015              | \$960,000 |
| XVII. | <b>Kuzma, J. co-project leader</b><br><b>Ethical Expectations for Social Robots: A Cross-Sector Exploration</b><br>Fatehi PI, Kelley co-project leader   | Consortium 2012-2013             | \$25,848  |



- XVIII. Kuzma, J. PI GIA 2011-2012 \$35,357**  
**What Constitutes Risk Assessment for Emerging Technologies?**  
**A Science of Science Policy Approach.** Kuzma (PI) Grant-in-Aid, University of Minnesota.
- XIX. Kuzma, J. Institute on the Environment IonE 2009-2012 \$60,000**  
**Resident Fellow: Collaborative Systems Modeling.**
- XX. Kuzma, J. Co-PI NSF 2007-2013 \$3,086,497**  
**Risk Analysis for Introduced Species and Genotypes, Interdisciplinary Graduate Education and Research Training Grant (IGERT);**  
 Ray Newman, Susan Galatowitsch, Anne Kapuscinski (co-PI until 2009), Jennifer Kuzma (co-PI since May 2009, co-Investigator from 2007-2009)), David Andow, and Ruth Shaw.
- XXI. Kuzma, J. co-PI, National Science Foundation NSF 2009-2013 \$3,364,997**  
**TRPGR: Precise Engineering of Plant Genomes using Zinc Finger Nucleases.**  
**Societal implications (Kuzma lead)**  
 Daniel Voytas (PI), Jennifer Kuzma (co-PI)
- XXII. Kuzma, J. PI. Quick K. co-PI Consortium 2011-2012 \$27,500**  
**Public/Expert Boundary Work in Environmental Risk Management: The Emerald Ash Borer Consortium on Law and Values in the Health, Environmental, and Life Sciences.**
- XXIII. Kuzma, J. Co-PI, NSF 2007-2011 \$1,399,258**  
**Intuitive Toxicology and Public Engagement NSF NIRT Award SES-0709056**  
 David Berube, North Carolina State University (PI), Dietram Scheufele, U of WI, Kevin Elliott, Univ. of South Carolina, Patrick Gehrke University of South Carolina , and Jennifer Kuzma (coPIs) (one graduate RA 25% time, 50% summer for 2 years, 2009-2011, and 4 weeks summer salary for 2 years)
- XXIV. Kuzma, J. Co-PI, NSF 2006-2010 \$1,181,720**  
**Assessing Oversight Mechanisms for Active Nanostructures and Nanosystems: Learning from Past Technologies in a Social Context. NSF NIRT Award SES-0608791**  
 Susan Wolf (PI) , Jennifer Kuzma, Jordan Paradise, Effie Kokkoli, Gurumurthy Ramachandran (co-PIs). (one graduate RA 25% time, 50% summer for 4 years, and 4 weeks summer salary for 4 years to HHH)
- XXV. Kuzma, J. Co-I, Minnesota Office of Education, MOE 2009-2010, \$58,669**  
**Nanotechnology Education.** Leslie Flynn (PI), Lee Penn, Frank Joseph, John Nelson, Baskar Dahal, Brandy Toner, Jeffrey Long, Chun Wang, Wei Zhang, Sashank Varma, Keisha Varma, Andreas Stein, Christy Haynes, Jennifer Kuzma (co-Investigators) (1% salary for one year)
- XXVI. Kuzma, J., Co-PI, IREE 2005-2008, \$673,998.**  
 Initiative on Renewable Energy and the Environment Full cost accounting of Renewable Energy Systems. Tilman, Polasky, Kulacki, Eidman, Tiffany (co-PIs) Large Grant.
- XXVII. Kuzma, VerHage, and Kapuscinski. Survey and Assessment of Agrifood Nanotechnology. Consortium on Law and Values in Health, Environment, and the Life Sciences. \$11,612 (November 2005-October 2006).**
- XXVIII. Kuzma, Keller, Pui, and Talukder. The Nanotechnology-Biotechnology Interface: Exploring Models for Oversight. Consortium on Law and Values in Health, Environment, and the Life Sciences. \$21,000 (February 2005-January 2006)**
- XXIX. Kuzma and Rejeski (Pew Initiative on Emerging Nanotechnologies/Woodrow Wilson International Center for Scholars). The Nano-Bio Interface: Applications in Food and Agriculture—An Exploration of Projects, Potential Risk and Benefit Issues, and Governance Models. WWIC/Pew Emerging Nanotechnologies Grant. \$7,864 (May 2005-December 2005).**
- XXX. Kuzma, J., PI, Biobusiness Alliance of MN BBAM 2008-2009 Systems Modeling Initiative**

Steve Kelley (co-PI) **\$10,000**

- XXXI.** Polasky, S., **Kuzma, J.**, Tilman, D., and N. Zetouni. Full Cost Accounting of Renewable Energy Systems. **IREE Seed Grant.** (SG-P3-2004) (June 2004-May 2005) **\$38,506.**
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## **TEACHING, Training, and ADVISING:**

### **Team Advising**

- Mentor for team of 9 Ph.D. students to participate in the policy and practices International Genetic Engineering Machines (iGEM) competition (2014) **Winner of Best Project in Policy and Practices.**

### **Training**

- Developed Social and Ethical Implications (SEI) training course for graduate students working with nanomaterials at the U of MN National Nanotechnology Infrastructure Network (NNIN) (2010-present)
- Summer 2009, MRSEC-REU, Materials Research Science & Engineering Center, National Science Foundation, Research Experience for Undergraduates, Instructor for Ethics Session, June 22<sup>nd</sup>. Social Responsibility in Nanotechnology: Issues Raised by Advances in Nanotechnology

### **Teaching grants**

- Kuzma, J. European Studies Consortium. \$3000 Award to add European content to science and technology policy courses. Summer 2010.

### **Courses**

#### **NCSU**

- Readings and Independent Studies PA, 3 sections 2016-2017
- Spring 2017, S & T Policy PA 598/798
- Guest lecture, Research Methods and Design, PA 798 Fall 2017
- Spring 2015, 2016 PA 507, Public Policy Processes 3 credits
- Fall 2014, Spring 2014, Fall 2015, GES 591, Governance and Systems Modeling Approaches 3 credits
- Fall 2014 PA 895 Doctoral Dissertation Research,
- Summer 2014, GES 591, Pest Issues and Genetic Pest Management in Mexico (3 credits, 1 of 5 instructors)
- Spring 2014, GES 591, Governance and Systems Modeling Approache, 3 credits
- Spring 2014, PA 598/798, Science and Technology Policy, 3 credits
- Summer 2013, GES 591, Rodents and Islands: Invasive and Endangered Island Species, guest instructor.

#### **U of MN**

- Spring 2013. PA 5731 Emerging Technologies and Society, 3 credits
- Spring 2007, 2008, Fall 2008, 2009, 2010, 2011, 2012 PA 5711, Science and Technology Policy, 3 crs
- Spring 2008, 2009, 2010, 2012, 2013 PA 8082, Technology Policy Research: Working Group, 3 credits.
- Spring 2012. PA 5741 Risk Analysis and Policy, 3 credits
- Spring 2012. PA 5490 Gender and Public Policy, (2 sessions of 3 credit class, instructor D. Fitzpatrick)
- Fall 2010, 2011 ST 8511 (Master of Security Technologies Program) Public Policy, 1 credit (lead instructor, 1 other)
- Fall & Spring 2004-2012, PA 8991, Independent Study, 3 credits (over 15 students)
- Fall 2008, 2009, 2010 PA 8790/Law 6037/BHTX 8000 Nanotechnology Law, & Society, 3 credits
- Summer 2010, 2011, 2012. ST 8330, Critical Infrastructure Protection (co-instructor with 4 others)
  - Management of Security Technologies program (MoSST)
- Fall 2009, ISG 8021, Problem Solving Practicum in Risk Analysis, 3 credits.
- Fall 2008, 2009 ISG 5010, Risk Analysis for Introduced Species and Genotypes, 3 credits (NSF-IGERT course, team taught-5 core instructors)
- Fall 2006, 2007 PA 8790, Topics: Risk Analysis for Science and Technology Policy, 3 credits.
- Spring 2006, PA 5711, Science, Technology, and International Affairs, 3 credits.

- Fall 2003, PA 5790, Topics in Science and Technology Policy: Genetic Engineering , 2 credits.
- Spring 2005, 2006, 2008, 2009, PA 8002, Transforming Public Policy-- “Science and Technology’s Contributions to Public Policy” (Guest Lecturer)

## U of MN Graduated Students

### Ph.D. Committees

1. Aliya Kuzhabekova (Ph.D. Education Policy, committee member), graduated 2011.
2. Genya Dana (Ph.D., Conservation Biology, IGERT minor, committee member), graduated 2010.
3. Ron Millen, (Ph.D. Conservation Biology, committee member), graduated 2011.
4. Cortes, Rodrigo (Ph.D. Public Policy, Georgia Tech), graduated 2012.
5. Melissa Maurer-Jones (Ph.D. Chemistry, committee member) graduated 2012.
6. Ester McGinnis (Ph.D., Plant Biology, committee member), graduated 2012.
7. Adam Kokotovich (Ph.D. Natural Resources, IGERT minor, committee member), graduate 2014

### Master’s Paper Advisor & Chair

1. Courtney Blankenheim (MS 2013, paper & academic advisor), Clean Air Act and MN attainment.
  - **Winner of the 2013 Lloyd B. Short Award for best professional or plan B paper)**
2. Kevin Marquart (MS 2013), Life cycle analysis and Nanomedicine.
3. Amanda Kabage (MS 2013) Genetics research and public participation
4. Joseph Dammel (MS-JD 2013), Space policy and public values mapping.
5. Kelsi Anderson (MS 2013), E-participation and effectiveness.
6. Whitney Place (MS 2013), Water quality and agricultural inputs.
7. Christopher Jones (MPP 2013), Systems view of health, green space, and poverty.
8. Megan Roberts (MS-STEP, 2012, academic advisor, Plan A paper adviser) Child labor on farms.
9. Jonathan Brown (MS, 2012, Plan A, paper advisor) Public attitudes towards nanofoods
10. Sarah Goodspeed (MS 2012, Plan B, paper advisor). Sustainable agriculture.
11. Rachel Haase (MS 2012, Plan B, paper advisor). Algal Biofuels and innovation systems
  - **Winner of the U of MN New Directions in Environmental and Energy Law, Policy, and Geography Conference Student Paper Award)**
12. Mary Kemp (MS 2012, Plan B, paper advisor). Sustainable sourcing of palm oil.
13. Eric Barnett (MPP 2012, Professional paper, paper advisor). State counter-bioterrorism planning
14. Kenzie Consoer (MS 2012, Plan B, paper advisor). Risk governance and participation.
15. Christopher Jones (MPP 2012, Professional paper, paper advisor). Technology and health.
16. Brad Hagemeyer (MPP 2012, professional paper, paper advisor). State conservation programs.
17. Anushke Guenerthe (MS 2012, plan B, paper advisor in working group). IT and reconciliation.
18. Scott Haugen (MS 2012, professional paper, paper advisor in working group). Asian Carp
19. Rylee Main & Brandon Helm (MS-MPP 2012 paper advisor in working group). Water governance.
20. Katie Wolf (MS 2011 Plan A, academic advisor), Comment and rulemaking for GM Crops
21. Maryam Valapour (MPP, 2011, academic and paper advisor), Organ allocation policy
22. Luke Hollenkamp (MS 2010, paper & academic advisor), Nanogeoengineering
  - **Winner of the 2010 Lloyd B. Short Award for best professional or plan B paper)**
23. Aaron Cromwell (MS 2010, paper & academic advisor), Climate Action Planning
24. Youngbok Ryu (MS 2010, paper & academic advisor), State technological competitiveness
25. Roxanne Johnson (MS 2010, paper & academic advisor), Systems mapping nanoremediation
26. Todd Tanji (MS, 2009 paper advisor, Plan A) Synthetic biology: policy problems
27. Robert Yawson (MS, 2009 paper advisor, Plan A) Nanotechnology and food: consumer issues
28. Dane McFarlane (MS 2009, paper advisor, Plan A) System dynamics for cap and trade programs.
29. Ethan Warner (MS 2009, paper advisor, Plan A) Life cycle analysis in a low carbon fuel standard.
30. Theresa Woods (MPA, 2009, independent study paper advisor) Conservation & decision making.
31. Joseph Goldman (MPA, 2009, independent study paper advisor) City waste policy and law.
32. Dave Walter (MPP-STEP, 2008, paper advisor, Plan B), Conservation, economics, and biology.
33. Adam Kokotovich, (MS 2008, paper advisor, Plan A), Public participation in nanotechnology.
34. Mahri Monson (MS 2008, paper advisor, Plan A). System dynamics and biofuels policy.
35. Bjorn Gangeness (MS 2008, paper advisor, Plan B). Cellulosic bioenergy.

36. Daniel Enderson (MS-2008, paper advisor, Plan B), Methylmercury exposure in the Hmong community.
  - o **Winner of the 2008 Lloyd B. Short Award for best professional or plan B papers**
37. Ben Coler (MS-JD 2008, paper advisor, Plan B), Intellectual property and DNA sequences.
38. Lesli Rawles, (MS-JD 2006, paper advisor, Plan B), Pre-implantation genetic diagnostics.
39. Darrell Gerber (MS 2006, paper advisor, Plan B), Full cost accounting of renewable energy systems.
40. Kerri Elizabeth Sawyer (MS 2006, paper advisor, Plan B), Health disparities affecting children's environmental health.
41. Margaret Jacot, (MS-JD 2006, paper advisor, Plan B), Medical technology and gender.
42. Peter Verhage (MS 2006, paper advisor, Plan B), Framework for nanotechnology governance.
43. Kana Talukder, (MS 2006, paper advisor, Plan B), Biosafety in India versus the U. S.
44. Joshua Paul Schenck, (MS 2005, paper advisor, Plan A), Methyl mercury health costs.
45. Genya Dana, (MS 2005, paper advisor, Plan B), Trade policy and GEOS.
46. Sara Bertelson (MS 2004, paper advisor, Plan B), Waste management policy.
47. Katie Theisen (MS 2004, paper advisor, Plan B), Waste management policy.
48. Anna Blitz (MS 2004, paper advisor, Plan B), Water resource management policy.

**Academic Advisor or Committee Member**

49. Kelsi Anderson (MS, 2011 academic advisor)
50. Clayton Parker (MPA, 2010 academic advisor)
51. Kelly Morgan-Wilder (MS 2011, academic advisor)
52. Melissa Books (MPA 2011, academic advisor)
53. Steven Schultz (MPA 2011, academic advisor)
54. William Bushey (MS 2011, academic advisor)
55. Daniel Lynch (MS 2011 academic advisor)
56. Laura Yerhot (MPP-STEP, 2010 academic advisor), Women in STEP.
57. Matthew Pham (MS, academic advisor & committee member 2010), biofuel economics
58. Melissa Constantine, (MS 2010 plan B), health policy
59. Stacey Miller (MS 2009, Plan B) , Solar energy potential and spot market pricing.
60. Sara Johnson Phillips (MS-JD 2009, Plan B), Carbon dioxide and the Clean Air Act.
61. Joel Larson (MPP-STEP, 2009, Prof. Paper), State climate policy.
62. Andrew Gibbons (JD-MS, 2008 Plan B), Energy policy.
63. Melissa Pollak (MS 2008, Plan B) Carbon capture and sequestration.
64. Brenda M. Diethelm-Okita (MPA 2008).
65. Craig Nelson (MS 2007, Plan B) Renewable energy policies.
66. James Romanek (MS 2007, Plan B) Chicago Climate Exchange.
67. Joe Plummer (MS 2007, Plan B), Demand-side energy management.
68. Laura Silver (MS 2007, Plan B), Chicago Climate Exchange.
69. Rane Gunderson (MS 2007, Plan B), Climate change and LDCs.
70. Rong Wu (MS 2006, Plan B), China and C-sequestration.
71. Tim Patroski, (MS 2005, Plan A), International regulatory frameworks for GE fish.
72. Lydia Dobrovolny, (MS 2005, Plan B), An analysis of Minnesota's E85 pilot project.
73. Michael Michaud (MS 2005, Plan A). Wind energy and its potential.
74. Kathryn Jones, (MS 2005, Plan B), Municipal water conservation.
75. Melanie Kleiss, (MS-JD 2004, Plan B) Environmental aspects of hybrid vehicles.
76. Todd Reubold (MS 2004, Plan B) MN Energy policy.

**Ph.D. NCSU Past and Current Advisees**

**NCSU**

1. Tina Ndoh (2013-2015, 2015 graduated) , Ph.D. Public Administration NCSU, (chair)
2. Sheron King (2013-present), Ph.D. Public Administration, GPM-IGERT, NCSU, (co-chair)
3. John Patrick Roberts (2015- present), Ph.D. Public Administration (chair)
4. Jayce Sudweeks (2015-present), Ph.D. Public Administration, GPM-IGERT, NCSU (chair)
5. Katie Barnhill (2015-present), Ph.D. Natural Resources, GPM-IGERT (member)
6. Nicole Gutzman (2015-present) Ph.D. Entomology, GPM-IGERT (member)
7. Rene Valdez (2015-present) Ph.D. Natural Resources, GPM IGERT (member)
8. Teshanee Williams (2016-present) PhD Public Administration, NCSU (member)



**NCSU MPA**

1. Hunter Isgrig (2014- present, MPA)
2. Melissa Lyn Moats (2015-present, MPA)

**Duke University Masters of Science and Society (MA)**

1. Ashlyn Saunders—(2015, MA graduate)
2. Navneet Sandhu—(2015)

**Research Assistants Supervised & Supported\* with Grants**

**NCSU**

1. Mason Rizzo (2013)\*
2. Sheron King (2013-present)\*
3. Tina Ndoh (2013-2015)\*
4. J. Patrick Roberts (2014-present)\*
5. Lindsey Rawls (2015)
6. Jack Ahern (2016)
7. Betty Wiley (2017)

**U of MN**

8. Karen Korslund (2013)\*
9. Sarah Stephenson (2013)\*
10. Anders Victor (2013)\*
11. Megan Roberts (2012-2013)
12. Patti Ross (2012-present)\*
13. Rachel Haase (2010-2012)\*
14. Adam Kokotovich (2010-2012)\*
15. Katie Wolf (2009-2011)\*
16. Daniel Lynch MS (2009-2010)
17. Jonathan Brown MS (2009-2011)\*
18. Roxanne Johnson MS (2009-2010)\*
19. Robert Yawson MS (2009-2010)\*
20. Laura Yerhot MPP-STEP (2008-2009)
21. Kelly Morgan MS (2008-2009)\*
22. Aliya Kuzhabekova, Ph.D. Education Policy (2008-present)\*
23. Mahri Monson MS (2006-2008)\*
24. Joel Larson MPP-STEP (2007-2008)
25. Pouya Najmaie MS (2007-2008)\*
26. Adam Kokotovich MS(2005-2007)\*
27. James Romanchek MS (2006-2007)\*
28. Peter VerHage MS (2005-2006)\*
29. Darrell Gerber MS (2004-2006)\*
30. Kana Talukder MS(2004-2005)\*
31. Lydia Dobrovolny MS (2004-2005)\*

**Post-docs and Scholars supported/hosted**

**U of MN**

1. Aliya Kuzhabekova, Ph.D. (2011- 2013)
2. Leili Fatehi, J.D. (2011-2013)
3. Jonathan Brown, MS (2012-2013)

**NCSU**

4. Christopher Cummings Ph.D. (2013)

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**SERVICE**

- U.S. National Academies NAS Committee on Future Biotechnology Products (2016-present)
- World Economic Forum Global Futures Council on Technology, Values, and Policy (2016-present)
- NCSU University Faculty Senate (2016-2018)
- Review panel for Genome Canada's Life Sciences Research Projects (2016)
- NSF proposal review for Science in Society program, March-April 2016.
- Hosted and organized international workshop on "Roadmap to Gene Drives" Feb 24-26, 2016. NCSU.
- NCSU Plant Sciences Initiative Workgroup on Education and Society (2016- present)
- Office of Faculty Development, NCSU. Panelist for Faculty Development Training, Professor's community. "Talking to the Media" (January 14, 2016)
- Council for Agricultural Science and Technology (CAST) Taskforce on Gene Editing and Report Author (2015-2017)
- NCSU Chancellor's Budget Advisory Committee (2015-present)
- American Association for the Advancement of Science (AAAS) Section X Committee, Societal Implications of Science and Engineering. (2015 )
- Organized and Hosted International Workshop on Synthetic Biology Governance June 2014.
- Activity Development Team Activity Development Team. NSF Multi-site Public Engagement with Science-Synthetic Biology (MSPES). (2014-2017)
- Secretary and Council Member of Society for Risk Analysis (2014-2017)
- Program Committee, Annual Conference on Governance of Emerging Technologies: Policy, Ethics and Law, Arizona State University, 2013, 2014, 2015, 2016, 2017.
- World SRA Congress on Risk in Singapore International Program Committee 2015
- World Fair Expo 2015 USA Pavilion American Food 2.0 Advisory Board
- NCSU National Science Foundation IGERT Genetic Pest Management Faculty Executive Committee 2013- present
- NCSU CHASS Review of Promotion and Tenure Committee (2014-2016)
- NCSU SPIA S&T Policy Advisory Group 2013-2015
- NCSU CHASS Research Committee, 2013-2014.
- NCSU GES Center Executive Committee (2013-present)
- NCSU GPM-IGERT Executive Committee (2013-present)
- Co-organizer. Chancellor's Faculty Excellence Program Humans and Environment Panel. April 25, 2014 Event.
- Review Panel: Hemholtz Programme on "Technology, Innovation and Society" Karlsruhe, Germany, Feb 2014.
- U of MN Workshop host/organizer: Social Robotics and Governance April 5, 2013.
- U of MN Workshop host/organizer: Targeted Genetic Modification and governance. June 7, 2013.
- NSF site review team for SYNBERC (synthetic biology engineering research center), March 2013.
- Consortium on Law and Values in the Health, Environment, and Life Sciences Director Search Committee, Spring 2013.
- Faculty Steering Committee, U of MN Food Policy Research Center (2012-2013).
- FDA Blood Products Advisory Committee (2011 to 2014)
- Society for Risk Analysis, 2012 Annual Meeting Program Committee and Chair of Risk Policy and Law Subgroup.
- Reviewer for FDA risk assessment of BSE (May 2012)
- Humphrey School Ph.D. Committee (Fall 2011-2012)
- Denny Search Committee Humphrey School (2011-2012)
- Humphrey School Ad Hoc Working Group for Faculty Seminar Series (2012)
- Admissions Committee Humphrey School (2011-2013)
- Reviewer of National Academies/National Research Council report on Research for Environmental Implications of Nanomaterials (2011)
- U of MN General Research Advisory Committee, GIA proposal review (2011-present)
- Reviewer IFPRI Policy Brief (2011)
- Advisor to the Nanoscale Informal Science Education Network (NISE Net), Science Museum of Minnesota (2011-present)

- International Society for the Study of Nanoscience and Emerging Technologies Annual Meeting Program Committee (2011)
- ASU-NSF Project “Pacing Law & Ethics with Science & Technology” Adviser & Workshop Planning Team (2011-present)
- Minnesota Department of Health’s (MDH) Communication, Outreach, and Education Task Group for the Drinking Water Contaminants of Emerging Concern (CEC) (2010-present)
- Center for Nanotechnology in Society at Arizona State University, Board of Visitors (2010-present)
- U of M, Committee for Preparation of Nanotechnology Report for State Legislature (2010-2011)
- U of M, Humphrey Institute, Senior Fellows Merit Review Committee (2009-2010)
- Reviewer for National Science Foundation (NSF) Science and Society Grants (Spring 2010, Fall 2010, Spring 2011)
- Advisory Board of USDA "Sustainable Pathways to Achieving Biofuel Policy Goals" Project (S. Suh, PI; award number: 2009-10001-05108) (2010-2012)
- Secretary and Treasurer, Risk Policy and Law Subgroup, Society for Risk Analysis, (2009-2010)
- Member Expert Group for European Commission Science, Economy and Society Directorate, 2011 Work Programme (2009)
- Board Member, Social and Ethical Issues (SEI) Advisory Board of the National Nanotechnology Infrastructure Network (NNIN) (2009 to present)
- U of M, Affiliate Faculty and Advisory Board, NorthStar Initiative for Sustainable Enterprise at the Institute on the Environment (2009-present)
- U of M, Humphrey Institute, Lloyd B. Short Award Committee (2009)
- U of M, Social and Ethical Implications Point Person for U of M National Nanotechnology Infrastructure Network (2008-present)
- U of MN, Area Chair, Science, Technology, Environmental Policy, Humphrey Institute (2007-2009)
- MS degree program head, Humphrey Institute (2006-2009)
- U of M, Search Committee, Associate Director of the Initiative for Renewable Energy and the Environment (2008)
- U of M Interdisciplinary Graduate Education and Training (NSF-IGERT), Risk Analysis for Introduced Species and Genotypes, Curriculum Committee (2007-2009), Admissions Committee (2009-2010), Chair of Travel Committee (2010-2011), and Executive Council (2009-present)
- U of M Institute on the Environment’s Discovery Grants for Biofuels Review Panel (2007)
- Science Museum of Minnesota. Nanoforum Advisory Committee (March 2007-2008)
- U of M Humphrey Curriculum Committee, Humphrey Institute (2004-2009).
- U of M Humphrey Ph.D. exploratory committee (2007-2008)
- U of M Humphrey Institute Executive Council (2007-2008)
- U of M Humphrey Denny Search Committee (2006-2007, 2007-2008)
- U of M Initiative on Renewable Energy and the Environment (IREE) Working Group, University of MN (2003-2008)
- U of M Consortium on Law and Values in the Health, Life, and Environmental Sciences, University of MN (2005-2007), Member and Executive Committee (2005-2006)
- BioBusiness Alliance of MN—Board of Directors, Secretary, and Chairperson of the Legislative Group (2005-2008)
- U of M Steering Committee of the Ecosystem Science and Sustainability Initiative—U of M (2005-2006)
- Agricultural Funding Consortium of Canada, nanotechnology grants review panel, January 2007
- U of M Faculty Steering Committee for the President’s Initiative on the Environment and Renewable Energy (2005-2006)
- U of M Chicago Climate Change Membership Exploratory Committee (2004)
- U of M Humphrey Institute Search Committee for STEP faculty (2003-2004, 2004-2005)
- U of M Conservation Biology Forest Resource Policy Search Committee (2004-2005)
- Governor’s (MN) Biosciences Advisory Committee (2003-2005)
- Upper Midwest Hydrogen Initiative Planning Group (2003-2005)
- FBI Scientific Working Group on Microbial Genomics and Forensics (2002)
- Private and Public Scientific Academic and Consumer Food Policy Group (PAPSAC), Harvard Business School (2000)

- Member of the AAAS Fellowship Selection Committee: March 1999, 2000, and 2001. Reviewed applications for the AAAS Risk Assessment Science Policy Fellowship; interviewed and help rank the nominees.
  - Invited panelist for USDA Biotechnology Special Grants: April 2000. Reviewed research grants related to agricultural biotechnology.
  - Escherichia coli 0157:H7 Risk Assessment Team (1998-2000)
  - Society for Risk Analysis Food and Water Specialty Group (1997-1999)
  - National Food Safety Research Conference, organizing committee (1998)
  - Interagency Food Risk Assessment Group, chairperson (1997-1998)
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#### **JOURNAL SERVICE**

- Reviewer for *International Journal of Food Science and Technology* (2015)
  - Reviewer for *Food Policy* (2015)
  - Reviewer for *Journal of Responsible Innovation* (2014)
  - Reviewer for *Futures* (2014)
  - Editorial Board, *International Journal for Green Nanotechnology* (2008-present)
  - Faculty Editorial Board *Minnesota Journal of Law, Science, and Technology* (2008-present)
  - Reviewer for *Technological Forecasting and Social Change* (2012, 2013)
  - Reviewer for *Environmental Science & Technology* (2011)
  - Reviewer for *Journal of Innovation and Regional Development* (2010)
  - Reviewer for *Emerging Health Threats Journal* (2010)
  - Reviewer for *Trends in Biotechnology* (2010)
  - Reviewer for *Science* (2010)
  - Reviewer for *Studies in Ethics, Law, and Technology* (2010)
  - Reviewer for *Science Communication* (2009, 2010)
  - Reviewer for *Risk Analysis* (2008, 2009, 2010, 2011, 2012, 2013, 2014)
  - Reviewer for *Journal of Nanoparticle Research* (2007, 2008, 2010, 2012, 2013, 2016)
  - Reviewer for *Environmental Biosafety Research* (2007)
  - Reviewer for *Review of Policy Research* (2008)
  - Reviewer for *Science and Public Policy* (2008, 2010)
  - Reviewer for *The Handbook of Technology Management* (2008)
  - Reviewer for *Regulation and Governance* (2008, 2012)
  - Reviewer for *Public Understanding of Science* (2008)
  - Reviewer for *Nanoethics* (2008, 2009, 2010)
  - Reviewer for *CABI Reviews* (2009)
  - Reviewer for *World Patent Information* (2010)
  - Reviewer for *African Journal of Agricultural Research* (2012)
  - Reviewer for *PLOSOne* (2013)
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#### **PROFESSIONAL MEMBERSHIP & SERVICE**

- Council on Agricultural Science and Technology, Task Force Member and Author for Gene Drives (2015-2017)
  - Secretary and Council Member of Society for Risk Analysis (2014-present)
  - American Association for the Advancement of Science (AAAS) Section X Committee liaison, Societal Implications of Science and Engineering. (2015- )
  - World SRA Congress on Risk in Singapore International Program Committee 2015
  - Planning Committee of the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> Annual Conference on Governance of Emerging Technologies (2013, 2014), ASU.
  - Gordon Research Conference on Science and Technology Policy (Vice-Chair 2010-2012, chair 2012-2014)
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- Society for the Study of Nanoscience and Emerging Technologies (S-NET) (Executive Committee 2008-2010)
- American Association for the Advancement of Science (member)
- Society for Risk Analysis (member, member of Decision Analysis and Risk, Law and Policy, and Emerging Nanoscience subgroups; Secretary-Treasurer of Risk Law and Policy subgroup 2009-2010, chair elect 2010-2011, chair 2011-2012).
- American Political Science Association, Associate Member (Science, Technology and Environmental Politics Section)
- Association for Public Policy Analysis and Management (member 2008-2009)
- System Dynamics Society (member 2007-2008)

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**PROFESSIONAL EXPERIENCE:**

- 1999-2003 --Study Director, Program Director, and Senior Program Officer, National Academy of Sciences, National Research Council, Washington, DC**  
--served as study director for the NRC reports on Genetically Modified Pest-Protected Plants: Science and Regulation (2000), Countering Agricultural Bioterrorism (2002), and Indicators for Waterborne Pathogens (2004).  
  
--served as Senior Program Officer on several NRC projects in biotechnology and bioterrorism, including Making the Nation Safer: the Role of Science and Technology in Countering Terrorism (2002) and Ecological Monitoring for Genetically Modified Crops (2001).  
  
--served as 1) Program Director for the standing Committee on Agricultural Biotechnology, Health and the Environment, which oversaw several projects focusing on scientific and science policy issues associated with transgenic organisms used in agriculture and in food and fiber production, 2) Study Director for Indicators for Waterborne Pathogens, and 3) Senior Program Officer for Research Standards to Prevent the Dangerous Misuse of Biotechnology; Acquisition of Medical Countermeasures for Bioterrorism; Process to Identify and Assess the Unintended Health Effects of Genetically Engineered Foods; and Bioconfinement of Genetically Engineered Organisms.  
  
--Managed a portfolio of projects with over \$1 million budget. Responsible for all phases and aspects: outreach and communication with stakeholders from government, industry, academe and the NGO communities; proposal development; fund-raising; budgeting; keeping abreast of the latest technical developments; science-policy research; report writing and editing; study dissemination; workshop planning; guiding committee members through the consensus process; contact with project sponsors; and oversight of project staff.
- 10/99-12/99 **--Consultant for the Risk Science Institute of the International Life Sciences Institute, Washington, DC**  
--helped revise and redraft microbial risk assessment framework for waterborne pathogens
- 9/98-12/98 **--Program Specialist in Plant and Animal Systems at the Cooperative State Research, Education and Extension Service of the USDA, Washington, DC**  
--coordination & review of food safety and other special research grants  
--organization of national food safety conference  
--participation on drafting team for interagency report on food safety
- 9/97-9/98 **--AAAS Risk Assessment Science Policy Fellowship at the USDA, Washington, DC**

- microbial risk assessment and the role of risk assessment in policy and decision-making
  - coordination of interagency risk assessment working group for E. coli 0157:H7 in beef and hamburger
  - coordination of USDA Bovine Spongiform Encephalopathy (BSE) activities
  - participation in several risk analysis training activities
  
  - 10/95-8/97      -- **Research Fellow: plant molecular biology, The Rockefeller University, New York City.**
    - Dr. Nam Hai-Chua, mentor
    - identification of signal transduction intermediates during plant responses to cold, drought and salinity
  
  - 6/91-8/95      -- **Ph.D. thesis: environmental biochemistry, University of Colorado.**
    - Dr. Ray Fall, mentor
    - purification of novel plant enzyme
    - discovery of bacterial isoprene emission
    - regulation of novel enzymes/genes
  
  - 9/93-12/94     --**Teaching activities at University of Colorado, Boulder**
    - instructor for general chemistry lab and lecture
    - tutor and guest lecturer for biochemistry course
  
  - 8/90-5/91      --**Research assistant projects at University of Colorado, Boulder**
    - microbial degradation of pentachlorophenol
    - enzymology of DNA polymerase/primase
    - regulation of bacterial ice nucleation proteins
  
  - 6/89-1/90      --**Undergraduate research projects, St. Paul, MN**
    - role of ras p21 during liver cell regeneration
    - NSF project: isolation of B<sub>12</sub> biosynthetic genes from bacteria
  
  - 5/88-9/88      --**Field biology researcher for Metropolitan Mosquito Control, Mpls., MN**
    - correlation of mosquito stage of development to water and vegetation
  
  - 5/87-9/87      --**Technical aide at 3M Company in St. Paul, MN**
    - chemical analysis of magnetic media
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## PROFESSIONAL COURSEWORK & TRAINING

- Supervisory Training NCSU 2013-present
- Mid-Career Women's Faculty Group, Center for Teaching and Learning, 2011-2012
- Vantage Point (scientometric analysis software) Training, Atlanta, GA, Sept. 2011.
- Adolf Leopold Leadership Training, Institute on the Environment, August 2010.
- System Dynamics Workshop: George Richardson, hosted by Center for Science, Technology, and Public Policy and Biobusiness Alliance of MN. April (2008).
- System Dynamics Workshop Courses: Getting started with Ven Sim, Dynamic Experiments for a First Course, and Lessons for a First Course (2007)
- Center for Teaching and Learning: Active Lectures, Powerpoint Reconsidered, and Course Design (2007)
- Early Career Teaching Program, U of M (Fall 2007)
- Responsible Conduct of Research, U of M (2007)
- Supervisory Training, National Academies Staff Development, October 2002.
- Quantitative Risk Assessment Modeling, USDA Graduate School, April 1998.
- BSE Risk Communication Training, Focus Group, Inc., Washington DC, March/April 1998.

- Microbial Risks from Food: Quantification and Characterization, Society for Risk Analysis, December 1997.
- Introduction to Risk Assessment, USDA/FDA Graduate School Course, October 1997.