# Khara Grieger, Ph.D.

Assistant Professor in Environmental Health and Risk Assessment
North Carolina State University
Office: 3124 Plant Science Building, Raleigh, NC 27606
kdgriege@ncsu.edu

## EDUCATION

- PhD, Environmental Engineering, 2011, Technical University of Denmark
- MSc, Environmental Engineering, 2006, Technical University of Denmark
- MS, Plant Biology, 2003, Michigan State University
- BS, Zoology, 1999, Michigan State University

## ACADEMIC POSITIONS

- 2020 – Present, Assistant Professor in Environmental Health & Risk Assessment, NC State, Raleigh, NC
- 2019 – June 2020, Senior Research Scholar, Genetic Engineering and Society (GES) Center, NC State, Raleigh, NC
- 2012 – 2019, Senior Environmental Research Scientist, RTI International, Durham, NC
- 2017 – 2018, Duke University Visiting Scholar, Duke University-RTI International, Durham, NC
- 2011 – 2012, Post-Doctorate Researcher, Technical University of Denmark, Kgs. Lyngby, Denmark

## PROFESSIONAL EXPERIENCE

- 2026 – Present, Director of the Genetic Engineering and Society (GES) Center, NC State
- 2025 Deputy Director of the GES Center, NC State
- 2024 – Present Associate Director of Outreach and Engagement, Bezos Center for Sustainable Protein at NC State
- 2024 – Present, Board Member of Society for Risk Analysis (SRA)
- 2021 – Present, Co-Director of Knowledge Transfer for the Science and Technologies for Phosphorus Sustainability (STEPS) Center
- 2019 – Present, U.S. Co-Chair for Risk Management & Control Community of Research (COR); EU-US consortia on nano-environmental, health, and safety research
- 2019 – Present, Executive Committee Member, GES Center, NC State
- 2024 – 2024, President of SRA- Research Triangle Regional Organization

## HONORS AND AWARDS

- 2025, University Faculty Scholar, NC State University
- 2024, STEPS Center Broadening Participation Medal
- 2021, Goodnight Early Career Innovator Award, NC State
- 2018, Research Triangle Nanotechnology Network (RTNN) Collaborative Award
- 2018, HOT paper selection for *Environmental Science: Nano*
- 2017, Duke University Visiting Scholar Award
- 2017, American Society of Civil Engineers State-of-the-Art Civil Engineering Award
- 2013-2017, Highly Published Author Award, RTI International
- 2014, 2017, Highly Cited Author Award, RTI International
- 2014, Professional Development Award, RTI International
- 2013, Early Career Award, RTI International
- 2011, Best Young Scientist Prize, Integ-Risk and Society for Risk Analysis
- 2010, Student Merit Award, Emerging Nanoscale Materials Specialty Group, Society for Risk Analysis
- 2010, Travel Scholarship, Society for Risk Analysis
- 2010, Travel Scholarship, Otto Mønsteds Fund
- 2009, Outstanding Student Paper Award Certificate, American Geophysical Union
- 2009, Student Award, Fourth International Conference on Environmental Effects of Nanoparticles
- 2001, The Garden Club of America Summer Scholarship in Field Botany

## RESEARCH AND PROJECT SUPPORT

Current

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|---|---|---|
| I. | **Grieger PI,** Kuzma Co-PI (NC State – Iowa State)<br>Interdisciplinary Approaches to Evaluate Societal Implications and Foster Sustainability of Genetic Engineering and Nanotechnology in Food and Agriculture; 2022-2027 | USDA/NIFA $649,515 |
| II. | **Grieger Co-PI and Associate Director of Outreach and Engagement**<br>Bezos Center for Sustainable Proteins at NC State, Shirwaiker and Aimutis PIs (NC State), 2024-2029 | Bezos Earth Fund $30M |
| III. | **Grieger Co-PI and Knowledge Transfer Co-Director**, Jones PI (NC State)<br>Science and Technologies for Phosphorus Sustainability (STEPS) Center; 2021-2026;<br>*PI and Co-PI of STEPS-funded projects:* | NSF $25M |
| IV. | **Grieger Co-PI**, Bhadha (PI) (Univ. Florida); 2024-2026<br>ReDDDoT Phase 1: Planning Grant: Treatment Technologies for Phosphorus Mitigation | NSF $300,000 |
| V. | **Grieger Co-PI**, Jones (PI) (NC State); 2021-2026<br>Cultivating A Resilient Workforce by Integrating a Culturally Competent Community of Scholarship & Data Science in Food & Agricultural Research | USDA/NIFA $238,500 |
| VII. | **Grieger Key Personnel**, Khatib (PI) (Univ. of Rennes); 2025-2026<br>International Network for Researching, Advancing, and Assessing Materials for Environmental Sustainability (INFRAMES); NSF-AccelNet | NSF $26,000 |
| VIII. | **Grieger PI**, **Goodnight Innovator Award** (NC State); 2021-2025 | NC State, $66,000 |

Past Support

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| I. | **Grieger** and Kuzma **Co-PI** (NC State), Borsuk PI (Duke University),<br>Quick Fixes to Collective-Risk Social Dilemmas; 2020-2024 | NSF/DRMS $565,872 |
| II. | **Grieger Co-PI,** Williams PI (NC State)<br>GRIP4PSI: Improving Crop Productivity and Value Through Heterogeneous Data Integration, Analytics, and Decision Support Platforms; 2020-2024 | NC State $556,250 |
| III. | **Grieger PI**, Kuzma Co-PI (NC State)<br>Social Implications and Best Practices for Responsible Innovation of Nanotechnology in Food and Agriculture; 2019-2022 | USDA/NIFA $499,856 |
| IV. | **Grieger PI** (NC State – Duke University)<br>Society for Risk Analysis (SRA) Strategic Plan Initiative; 2019-2022 | SRA $20K |
| V. | **Grieger Co-PI**, Barnhill-Dilling PI (NC State)<br>Biotechnology Risk Assessment Grant Program; 2020-2022 | USDA/NIFA $25K |
| VI. | **Grieger** Project Team Member, Jones PI (NC State)<br>Research Triangle Nanotechnology Network (RTNN); 2019-2021 | NSF $5.5M |
| VII. | **Grieger Co-PI**, Jones PI (NC State)<br>Game-Changing Research Incentive Program (GRIP); Water Sustainability through Nanotechnology; 2017-2020 | RTI-NC State $575,000 |
| VIII. | **Grieger Co-PI**, Parvathikar PI (RTI)<br>Sustainable Farming Practices via Biogas-Derived Chemicals, 2018-2019 | RTI $85,000 |
| IX. | **Grieger Co-PI and RTI Lead**, Jensen PI (Danish National Research Centre for the Working Environment) caLIBRATe: Risk governance for manufactured nanomaterials and products; 2016-2019 | EU Commission €9.8M |
| X. | **Grieger Governance Lead**, Borsuk PI<br>Duke University Collaboratory Grant: Decisions, Risks, and Governance of Geoengineering | Duke University, $92,312 |
| XI. | **Grieger PI and Technical Lead**<br>Developing Robust Strategies to Address Emerging Risks and Building Resilience; 2017-2018 | Duke University, $51,947 |
| XII. | **Grieger Project Manager and Technical Lead**; RTI<br>Decision Analysis Support for Implementing a Risk-Informed Decision Making System in the FDA Foods and Veterinary Medicine Program; 2016-2018 | FDA/CVM |

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| XIII. | **Grieger Project Manager and Technical Lead**; RTI<br>Develop and Validate Risk Ranking Model (version 3); 2015-2017 | FDA/CFSAN |
| XIV. | **Grieger Project Manager and Technical Lead**; RTI<br>Development of a Risk-Ranking Tool for the Determination of High Risk Foods Among U.S. Food and Drug Administration–Regulated Products; 2013-2015 | FDA/CFSAN |
| XV. | **Grieger Technical Lead**; RTI<br>Validation of Tier 2 Processes for Occupational Exposure Banding; 2014 | NIOSH |
| XVI. | **Grieger Project Manager**; RTI<br>Implement and Evaluate the High Risk Foods Model: For Recordkeeping and Product Tracing; 2012-2013 | IFT |
| XVII. | **Grieger Project Manager**; RTI<br>Development of a Risk Ranking Tool for the Determination of High Risk Foods among FDA-Regulated Products; 2012-2013 | FDA/CFSAN |
| XVIII. | **Grieger Project Manager and Technical Lead**; RTI<br>Identify Army Materiel Incorporating Nanomaterials and Associated Soldier Health Risks; 2011-2012 | Army Corp |
| XIX. | **Grieger Project Manager and Technical Lead**; RTI<br>Comprehensive Environmental Assessment Web Interface; 2012 | EPA |
| XX. | **Grieger Project Manager and Technical Lead**; RTI<br>Nanomaterial Case Study Workshop Process: Identifying and Prioritizing Research for Multiwalled Carbon Nanotubes; 2011-2012 | EPA |
| XXI. | **Grieger Technical Lead**; Technical University of Denmark<br>• NanoImpactNet: European Network on Health and Environmental Impact of Nanomaterials; 2011<br>• iNTeg-Risk: Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related Risks; 2011<br>• PlasmaNice: Atmospheric Plasmas for Nanoscale Industrial Surface Processing; 2011<br>• RiskBridge; 2007-2009 | EU Commission |

## PUBLICATIONS (H-index = 30)

Journal Articles [*denotes student/trainee]

1. Wood, A., Consavage Stanley, K., Daly, J., **Grieger, K**., Aimutis, W.R., Shirwiker, R.A., Wilson, N. 2026. Trends, Challenges, and Opportunities for the United States Alternative Meat and Seafood Sector: Stakeholder-informed Perspectives. *NPJ Science of Food – In review.*
2. Sanders, K., Barnhill, S.B., Barry, N., Mulligan, P., Yang, M., **Grieger, K**. 2026. "Us versus them mentality": Exploring the role of othering and deficit model thinking as a barrier to sustainable agri-food technology development. *Agriculture and Human Values – In review.*
3. Kuzma, J., *Horgan, M., Larter, C., Cummings, C.L., *Cimadori, I., **Grieger, K.** 2025. Stakeholder Narratives on Actions to Address Concerns about the Sustainability of Emerging Technologies in Food and Agriculture. *Agriculture and Human Values – In review.*
4. *Oates, C., Rudko, N., McLamore, E., Rickabaugh, J., **Grieger, K.,** Muenich, R., Nelson, N. 2025. Community-Based Approaches Highlight Opportunities and Limitations in Addressing Socioeconomic Barriers to Water Quality Monitoring in the United States. *Journal of the ASABE – In review*.
5. Valcin, B., Mahmud, A., Uddin, S., Yang, Y., *Deviney, A., Jones, J., **Grieger, K**., Scholz, M., Morrison, E., Bhadha, J. 2025. Phosphorus Mitigation in Aqueous Systems: A Scoping Review of Treatment, Adoption Factors, and Stakeholder Engagement. *Sustainable Environment Research – In review*.
6. *Consavage Stanley, K., *Koivusaari, K., **Grieger, K.**, Wood, A., Jaffe, G., Aimutis, W.R., Wilson, N.L., Shirwaiker, R. 2026. Exploring the U.S. Regulatory and Legislative Landscapes for Cell-Cultivated Meat and Seafood. *Trends in Food Science & Technology – In press*.
7. McLamore, *Oates, C., E., Bhadha, J., **Grieger, K**., Rickabaugh, J., Nelson, N., Vanegas, D., Mayer, B. Thuberty, S., Guzman, S. 2025. Toward circular phosphorous systems: Integrating monitoring, data analytics, and collaborative governance for managing critical minerals. *ACS Sustainable Resource Management – In Review.*

8. *Loschin, N., Kuzma, J., Barrangou, R., **Grieger, K**. 2025. Environmental assessment and regulatory oversight of genetically engineered crops in the United States. *Environmental Science and Policy*, 173: 104237, https://doi.org/10.1016/j.envsci.2025.104237.
9. **Grieger, K.**, *Barry, N., *Bourne, K., *Deviney, A., Elser, J., Scholz, M., Jones, J.L. 2025. Engaging stakeholders in phosphorus sustainability: Lessons and implications for addressing other wicked problems. *Elementa: Science of the Anthropocene*, 13(1), https://doi.org/10.1525/elementa.2024.00060.
10. *Horgan, M., Cummings, C., *Loschin, N., Larter, *C., Cimadori, I., Dahlstrom, M. Kuzma, J., **Grieger, K.** 2025. Stakeholder perceptions of GE and nano-agrifoods. *Sustainability*, 17(15), 6795; https://doi.org/10.3390/su17156795.
11. *Oates, C., **Grieger, K**., Emanuel, R., Nelson, N. 2025. Surface waters in socially vulnerable areas are disproportionately under-monitored for nutrients in the U.S. South Atlantic-Gulf Region. *Nature Water*, 3, 831-840, https://doi.org/10.1038/s44221-025-00460-5.
12. **Grieger, K**., Scholz, M., Cummings, C.L., Crane, L., Boyer, T. 2025. Exploring awareness, implementation, and future use of urine diversion systems in U.S. university buildings. *Environmental Systems and Decision* 45, 17: https://doi.org/10.1007/s10669-025-10011-8.
13. Bacheva, V., Madison, I., Baldwin, M., Beilstein, M., Call, D., Deaver, J., Efimenko, K., Genzer, J., **Grieger, K**., Gu, A., Ilman, M., Liu, J., Li, S., Mayer, B., Mishra, A., Nino, J., Rubambiza, G., Sengers, P., Shepard, R., Woodson, J., Weatherspoon, H., Frank, M., Jones, J., Sozzani, R., Stroock, A. 2025. Transdisciplinary collaborations for advancing sustainable and resilient agricultural systems, *Global Change Biology,* 31(4): https://doi.org/10.1111/gcb.70142.
14. *Cimadori, I., Di Concetto, A., **Grieger, K**. 2025. The Protection of Selectively Bred and Gene Edited Farm Animals under EU Law. *European Journal of Risk Regulation*, 1-17, https://doi.org/10.1017/err.2025.12.
15. *Oates, C., Fajardo, H., **Grieger, K**., Obenour, D., Muenich, R., Nelson, N. 2024. Effective nutrient management of surface waters in the U.S. requires expanding water quality monitoring in agriculturally-intensive areas. *ACS Environmental Au*, https://doi.org/10.1021/acsenvironau.4c00060.
16. Jones, J.L., Berube, D.M., Cuchiara, M., **Grieger, K**., Hubal, E., Kariko, S.J., Strader, P., Theriault, Y. 2024. Positioning Nanotechnology to Address Climate Change. *Environment Systems and Decisions,* 44, 1039-1053. https://doi.org/10.1007/s10669-024-09991-w.
17. *Riza, M., **Grieger, K.**, Horgan, M., Burkholder, J., Jones, J. 2024. Environmental Impacts of Selected Metal Cations for Phosphorus (P) Capture in Natural Waters: A Review. *Chemosphere*, 34: 143162. https://doi.org/10.1016/j.chemosphere.2024.143162.
18. *Merck, A., Deaver, J., Crane, L., Morrison, E., Boyer, T., Call, D., Marshall, A., **Grieger, K.** 2024. Stakeholder Views of Science and Technologies for Phosphorus Sustainability: A Comparative Analysis of Three Case Studies in Phosphorus Recovery in the U.S. *Society & Natural Resources*, 1–18. https://doi.org/10.1080/08941920.2024.2389806.
19. *Merck, A., **Grieger, K.,** Crane, L., Boyer. T. 2024. Researchers must address regulatory regimes to scale up adoption of urine diversion systems in the U.S. *Environmental Research: Infrastructure and Sustainability*, 4, 023001, DOI 10.1088/2634-4505/ad59c3.
20. Lowry, G., Giraldo, J.P., Steinmetz, N., Avellan, A., Demirer, G., Ristroph, K., Wang, G., Hendren, C., Alabi, C., Caparco, A., Da Silva, W., Gonzalez, I., **Grieger, K.**, Jeon, S.J., Khodakovskaya, M., Kohay, H., Kumar, V., Muthuramalingam, R., Poffenbarger, H., Tilton, R., White, J. 2024. Opportunities and Challenges to Realizing Nano-enabled Precision Delivery in Plants. *Nature Nanotechnology,* 19, 1255–1269. https://doi.org/10.1038/s41565-024-01667-5.
21. **Grieger, K**., Wiener, J. Kuzma, J. 2024. Improving Risk Governance Strategies via Two-way Learning: A Comparative Analysis of Solar Geoengineering and Gene Drives. *Environment Systems and Decisions*, 44: 1054-1067. https://doi.org/10.1007/s10669-024-09979-6
22. Crane, L., *Merck, A., Delanthamajalu, S., **Grieger, K.**, Marshall, A.M., Boyer, T. 2024. Benchmarks for urine volume generation and phosphorus mass recovery in commercial and institutional buildings. *Water Research X,* 23: 100227. https://doi.org/10.1016/j.wroa.2024.100227.
23. **Grieger, K.**, Kuzma, J. 2023. Ensuring Sustainable Novel Plant Biotechnologies Requires Formalized Research and Assessment Programs. *ACS Agricultural Science & Technology*, 3, 11, 970–972. https://doi.org/10.1021/acsagscitech.3c00380
24. Kuzma, J., **Grieger, K.,** Cummings, C.L. *Cimadori, I., *Loschin, N., *Wei, W. 2023. Parameters, Practices, and Preferences for Regulatory Review of Emerging Biotechnology Products in Food and Agriculture. *Frontiers in Bioengineering and Biotechnology,* 11, 1256388, https://doi.org/10.3389/fbioe.2023.1256388

25. *Merck, A., Grieger, K., *Deviney, A., Marshall, A.M. 2023. Using a Phosphorus Flow Diagram as a Boundary Object to Inform Stakeholder Engagement. *Sustainability*, 15(15) 11496, https://doi.org/10.3390/su151511496.
26. *Wei, W., **Grieger, K**.**, Cummings, C.L. *Loschin, N., Kuzma, J. 2023. Identifying Sustainability Assessment Parameters of Genetically Engineered Agrifoods. *Plants, People, Planet*, 6: 29-43. https://doi.org/10.1002/ppp3.10411. (**corresponding author)
27. *Ethridge, S., **Grieger, K.**, Locke, A., Everman, W., Jordan, D., Leon, R. 2023. Views of RNAi approaches for weed management in turfgrass systems. *Weed Science*, 1-33. doi:10.1017/wsc.2023.37.
28. **Grieger, K.**, *Merck, A., *Deviney, A., Marshall, A. 2023. What are Stakeholder Views and Needs for Achieving Phosphorus Sustainability? *Environment Systems and Decisions,* 44: 114-125. https://doi.org/10.1007/s10669-023-09917-y
29. He, Q., Yan, Z., Qian, S., Xiong, T., **Grieger, K.,** Wang, X., Liu, C., Zhi, Y. 2023. Phytoextraction of per- and polyfluoroalkyl substances (PFAS) by weeds: Effect of PFAS physicochemical properties and plant physiological traits. *Journal of Hazardous Materials*, 454: 131492, https://doi.org/10.1016/j.jhazmat.2023.131492.
30. *Deviney, A., **Grieger, K.,** *Merck. A., Classen, J., Marshall, A.M. 2023. Phosphorus Sustainability through Coordinated Stakeholder Engagement: A Perspective. *Environment Systems and Decisions*, 43: 371-378. https://doi.org/10.1007/s10669-023-09896-0.
31. *Horgan, M., Hsain, A., Jones, J., **Grieger, K**. 2023. Development and application of screening-level risk analysis for emerging materials. *Sustainable Materials and Technologies*, 35, e00524. https://doi.org/10.1016/j.susmat.2022.e00524
32. *Merck, A., **Grieger, K**.**, Kuzma, J. 2022. How Can We Promote Responsible Innovation in U.S. Nano-Agrifood Research? *Environmental Science & Policy,* 137: 185-190. https://doi.org/10.1016/j.envsci.2022.08.027 (**corresponding author)
33. *Merck, A.W., **Grieger, K.**, Cuchiara, M., Kuzma, J. 2022. What Role Does Regulation Play in Responsible Innovation of Nanotechnology in Food and Agriculture? Insights and Framings from U.S. Stakeholders. *Bulletin of Science, Technology & Society*, 42(3), 85-103. https://doi.org/10.1177/02704676221102066
34. **Grieger, K.,** Cummings, C. 2022. Informing Environmental Health and Risk Priorities through Local Outreach and Extension. *Environment Systems & Decisions,* 42, 388-401. https://doi.org/10.1007/s10669-022-09864-0
35. Zhi, Y., Lu., H., **Grieger, K**., Munoz, G., Wei, L., Wang, X., He, Q., Qian, S. 2022. Bioaccumulation and Translocation of 6:2 Fluorotelomer Sulfonate, GenX, and Perfluoroalkyl Acids by Urban Spontaneous Plants. *ACS ES&T Engineering*, 2(7), 1169–1178. https://doi.org/10.1021/acsestengg.1c00423.
36. Gao, J., Huang, Y., Zhi, Y., Yao, J., Wang, F., Yang, W., Han, L., Lin, D., He, Q., Bing,W., **Grieger, K.** 2022. Assessing the Impacts of Urbanization on Stream Ecosystem Functioning: Litter Decomposition and Nutrient Uptake in Forest and Hyper-Eutrophic Stream. *Ecological Indicators,* 138: 108859: https://doi.org/10.1016/j.ecolind.2022.108859.
37. **Grieger, K.**, *Merck, A., Kuzma, K. 2022. Formulating Best Practices for Responsible Innovation of Nano-agrifoods through Stakeholder Insights and Reflection. *Journal of Responsible Technology*, 10: https://doi.org/10.1016/j.jrt.2022.100030.
38. **Grieger, K.,** *Zarate, S., Barnhill-Dilling, S.K., *Hunt, S., Jones, D., Kuzma, J. 2022. Fostering Responsible Innovation through Stakeholder Engagement: Case Study of North Carolina Sweetpotato Stakeholders. *Sustainability*, 14, 2274: https://doi.org/10.3390/su14042274.
39. Ruzante, J. M., Shumaker, E. T., Holt, S., Mayer, S., *Kokotovich, A., Cuchiara, M., Binder, A. R., Kuzma, J., and **Grieger, K**. 2022. Eliciting Stakeholder Perceptions Using a Novel Online Engagement Platform: A Case Study on Nano-Agrifoods*. RTI Press*. RTI Press Occasional Paper No. OP-0071-2201, https://doi.org/10.3768/rtipress.2022.op.0071.2201
40. *Kokotovich, A., Kuzma, J., Cummings, C., **Grieger**, **K**. 2021. Responsible Innovation Definitions, Practices, and Motivations from Nanotechnology Researchers in Food and Agriculture. *NanoEthics*, 15, 229–243. https://doi.org/10.1007/s11569-021-00404-9.
41. **Grieger, K.**, *Merck, A., Cuchiara, M., Binder, A., *Kokotovich, A., Cummings, C., Kuzma, J. 2021. Responsible Innovation of Nano-Agrifoods: Insights and Views from U.S. Stakeholders. *NanoImpact*, 24 (October 2021), 100365: https://doi.org/10.1016/j.impact.2021.100365.
42. Zhi, Y., Call, D., **Grieger, K.,** Duckworth, O., Jones, J.L., Knappe, D. 2021. Influence of Natural Organic Matter and pH on Phosphate Removal by and Lanthanum Release from Lanthanum-Modified Bentonite. *Water Research*, 202: 117399 – https://doi.org/10.1016/j.watres.2021.117399.
43. Cummings, C.L., Kuzma, J., *Kokotovich, A., *Glas, D., **Grieger, K**. 2021. Barriers to responsible innovation of nanotechnology applications in food and agriculture: A study of US experts and developers. *NanoImpact*, 23:

100326.
44. Kuiken, T., Barrangou, R., **Grieger**, **K**. 2021 "(Broken) Promises of Sustainable Food and Ag through New Biotechnologies: The CRISPR Case. *The CRISPR Journal*, 4(1): 25-31.
45. Huang, Y., Li, W., Gao, J., Wang, F., Yang, W., Han, L., Lin, D., Min, B., Zhi, Y., **Grieger**, K., Yao, J. 2021. Effect of microplastics on ecosystem function: Microbial nitrogen removal mediated by benthic macroinvertebrates. *Science of the Total Environment*, 754: 142133.
46. Doydora, S., Gatiboni, L., **Grieger**, **K**., Hesterberg, D., Jones, J., McLamore, E., Peters, R., Sozzani, R., Van den Broeck, L., Duckworth O. 2020. Accessing Legacy Phosphorus in Soil. *Soil Systems*, 4(74): doi:10.3390/soilsystems4040074.
47. Kuzma, J., **Grieger, K**. 2020. Community-Led Governance for Gene-Edited Crops. *Science*, 370(6519): 916-918.
48. Zhi, Y., Zhang, C., Hjorth, R., Baun, A., Duckworth, O., Call, D., Knappe, D., Jones, J., **Grieger, K.** 2020. Emerging Lanthanum (III)-containing Materials for Phosphate Removal from Water: A Review towards Future Developments. *Environment International*, 145: 106115.
49. Saia, S., Nelson, N., Huseth, A., **Grieger, K.,** Reich, B. 2020. Transitioning Machine Learning from Theory to Practice in Natural Resource Management. *Ecological Modelling,* 435: 109257.
50. Kuzma, J., **Grieger, K.**, Cummings, C.L., Brown, Z. S. 2020. Pandemics Call for Systems Approaches to Research and Funding. *Issues in Science and Technology*, May 4, 2020. Available: https://issues.org/pandemics-call-for-systems-approaches/
51. **Grieger, K**., Jones, J.L., Hansen, S.F., Hendren, C.O., Jensen, K.A., Kuzma, J., Baun, A. 2019. What are the Key Best Practices from Nanomaterial Risk Analysis That May Be Relevant for Other Emerging Technologies? *Nature Nanotechnology,* 14, 998–1001, doi:10.1038/s41565-019-0572-1.
52. Porcari, A., Borsella, E., Benighaus, C., **Grieger, K**., Isigonis, P., Chakravarty, S., Kines, P., Jensen, K.A. 2019. From Risk Perception to Risk Governance in Nanotechnology: A Multi-Stakeholder Study. *Journal of Nanoparticle Research*, 21(11), 1-19.
53. **Grieger, K.,** Felgenhauer, T., Renn, O., Wiener, J., Borsuk. 2019. Emerging Risk Governance for Stratospheric Aerosol Injection as a Climate Management Technology. *Environmental System and Decisions*, 39(4), 371-382.
54. Isigonis, P., Hristozov, D., Benighaus, C., Giubilato, E., **Grieger, K**., Pizzol, L., Semenzin, E., Linkov, I., Zabeo, A., Marcomini, A. 2019. Risk Governance of Nanomaterials: Review of Criteria and Tools for Risk Communication, Evaluation, and Mitigation. *Nanomaterials*, 9(696), doi:10.3390/nano9050696
55. Mortensen, N.P., Johnson, L., **Grieger, K.**, Fennell, T.R. 2019. Biological Interactions between Nanomaterials and Placental Development and Function Following Oral Exposure. *Reproductive Toxicology*, 90:150-165.
56. **Grieger, K.**, Bossa, N., Levis, J., von Borries, K., Strader, P., Cuchicara, M., Hendren, C.O., Hansen, S.F., Jones, J. 2018. Application and Testing of Risk Screening Tools for Nanomaterial Risk Analysis. *Environmental Science: Nano*, 5:1844-1858.
57. Hjorth, R., Holden, P.A., Hansen, S.F., Colman, B.P., **Grieger, K.,** Hendren, C.O. 2017. The Role of Alternative Testing Strategies in Environmental Risk Assessment of Engineered Nanomaterials. *Environmental Science: Nano*, 4:292-301.
58. Ruzante, J., **Grieger, K**., Woodward, K., Lambertini, E., Kowalcyk, B. 2017. The Use of Multi-Criteria Decision Analysis in Food Safety Risk-Benefit Assessment*. Food Protection Trends*, March: 132-139.
59. Lebov, J., **Grieger K.**, Womack D., Zaccaro, D. Whitehead, N. Kowalcyk, B., Macdonald, P. 2017. A Framework for One Health Research. *One Health*, 3:44-50.
60. **Grieger, K**., Harrington, J., Mortensen, N. 2016. Prioritizing Research Needs for Analytical Techniques Suited for Engineered Nanomaterials in Food. *Trends in Food Science & Technology*, 50: 219-229.
61. **Grieger, K**., Hansen, S.F., Mortensen, N., Cates, S., Kowalcyk, B. 2016. International Implications of Labeling Foods containing Engineered Nanomaterials. *Journal of Food Protection*, 79(5): 830-842.
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5. **Grieger, K**. 2025. Nanotechnology and Sustainable Food and Agricultural Futures: Insights and Perspectives from U.S. Stakeholders. SETAC, Portland, OR.
6. Loschin, N., **Grieger, K**. 2025. Evaluating Environmental Risk Governance and Assessment for Genetically Engineered Crops in Select Case Studies. International Society for Biosafety Research (ISBR), Ghent, BE.
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29. Felgenhauer, T., Borsuk, M., Wiener, J., Nelson, A., Philippe, S., Seddon, J., **Grieger, K.**, McEnvoy, D., Cherry, T., Kroll, S., Kuzma, J., McGinty, M., Moreno-Cruz, J., Brown, Z. 2023. Stratospheric and Other Monitoring to Enable Governance of Solar Geoengineering. Governance of Emerging Technologies Conference (GETS), Phoenix, AZ.
30. Cimadori, I., Di Concetto, A., **Grieger, K**., Torres.G. 2022. The Protection of Genetically-Selected Animals: A Focus on EU Law. George Washington University, Animals and the Anthropocene: A Legal Scholarship Symposium, Washington, DC.
31. **Grieger, K**. 2022. Fostering Responsible Innovation of Nano-Agrifoods through Interdisciplinary Perspectives and Insights. Society for Risk Analysis (SRA) Annual Meeting, Tampa, FL.
32. Wei, W., **Grieger, K**. 2022. Key Parameters to Consider in Environmental Risk Assessment of Genetically Engineered and Gene Edited Agrifoods. Society for Risk Analysis (SRA) Annual Meeting, Tampa, FL.
33. Merck, A**., Grieger, K.** 2022. Stakeholder Engagement for Phosphorus Sustainability: Opportunities, Challenges, and New Directions. Society for Risk Analysis (SRA) Annual Meeting, Tampa, FL.
34. Loschin, N., **Grieger, K.** 2022. Evaluating Risks, Benefits, and Societal Implications of Novel Agrifood Technologies. Society for Risk Analysis (SRA) Annual Meeting, Tampa, FL.
35. Kuzma, J., **Grieger, K**. 2022. Bi-directional learning for risk governance of solar geoengineering and gene drives: A comparison of technological and governance features across two emerging technologies. Society for Risk Analysis (SRA) Annual Meeting, Tampa, FL.
36. Riza, M., **Grieger, K**. 2022. Risk Screening of P-Capturing Materials for Eutrophication Control: Environmental Impacts and Sustainable Management. Society for Risk Analysis (SRA) Annual Meeting, Tampa, FL.
37. Merck, A., **Grieger, K.,** Deviney, A., Marshall, A.M. 2022. Evaluating Stakeholder Needs, Perceptions, and Concerns for Phosphorus Sustainability. Sustainable Phosphorus Summit, Raleigh, NC.
38. Deviney, A., **Grieger, K**., Merck, A., Classen, J., Marshall, A.M. 2022. Phosphorus Sustainability through Coordinated Stakeholder Engagement. Sustainable Phosphorus Summit, Raleigh, NC.
39. Bhada, J., Guzman, S., Capasso, J., Morgan, K., **Grieger, K**., Scholz, M. 2022. Science and Technologies for Phosphorus Sustainability (STEPS) Initiative; Mechanisms for Knowledge Transfer. Extension Professional Associations of Florida - University of Florida, Institute of Food and Agricultural Sciences, Panama City, FL.
40. **Grieger, K**. Cummings, C., Merck, A., Kuzma, J. 2021. Stakeholder Perceptions of Nanotechnology in Food and Agriculture and Adherence to Responsible Innovation. Society for Risk Analysis (SRA) (virtual meeting).
41. Byrley, P., **Grieger, K.,** Cummings, C. 2021. Creation of the SRA Research Triangle Regional Organization: Opportunities and Challenges. Society for Risk Analysis (SRA) (virtual meeting).
42. Merck, A., **Grieger, K.,** Cuchiara, M., Kuzma, K. 2021. What Role for Regulation in Responsible Innovation of Nano-Agrifoods? Views from U.S. Stakeholders. Society for Risk Analysis (SRA) (virtual meeting).
43. Felgenhauer, T., **Grieger, K.,** Wiener, J., Kuzma, K., Borsuk, M. 2021. Implications of Solar Geoengineering for Strategic Behavior and Climate Governance. Society for Risk Analysis (SRA) (virtual meeting).
44. **Grieger, K**. 2021. Responsible Innovation of Nanotech in Food and Ag Sectors: Perspectives from Researchers and Stakeholders. 10th Sustainable Nanotechnology Organization (SNO) conference (virtual meeting).
45. Malsch, I., **Grieger**, **K**., Isigonis, P., Bouman, E., Afantitis, A., Melagraki, G., Dusinska, M. 2021. Demonstration of RiskGONE Ethical Impact Assessment online tools by analysing the case of ZnO nanoparticles to combat citrus greening. Ethical Impacts of Nano in Agrifoods.
46. Knappe, D., Yue, C., Call, D.F., Duckworth, O., **Grieger, K**., Jones, J. 2021. Effects of Dissolved Organic Matter and pH on Orthophosphate Removal by Lanthanum-modified Bentonite. American Chemical Society (virtual meeting).
47. Horgan, M., Hsain, A., **Grieger, K**., Jones, J. 2021. Risk Screening As an Efficient Approach for Responsible Development of lead-Free HfO2-Based Piezoelectric Materials, ISAF-ISIF-PFM (virtual meeting).
48. **Grieger, K**. 2020. Updating Best Practices for Responsible Innovation of Nanotechnology in Food and Agriculture. Society for Risk Analysis (SRA) (virtual meeting).
49. **Grieger**, **K**. 2020. Treating eutrophication with advanced materials: Key considerations for the responsible development of lanthanum-based materials? Society for Risk Analysis (SRA) (virtual meeting).
50. **Grieger, K**. 2019. Transferring Knowledge from the Field of Nanomaterial Risk Analysis for Other Emerging Technologies. Society for Risk Analysis (SRA), Arlington, VA.
51. **Grieger, K**., Kuzma, J. 2019. Responsible Innovation of Nanotechnology in Food and Agriculture Sectors. Society for Risk Analysis (SRA), Arlington, VA.
52. **Grieger, K**. 2019. Transferring Best Practices from Nano-Risk Analysis to Other Emerging Technologies. NanoSafetyCluster Conference, Copenhagen, DK.

53. **Grieger, K.** 2018. Application and testing of risk screening tools for nanomaterial risk analysis. Society for Risk Analysis (SRA), New Orleans, LA.
54. **Grieger, K.** 2018. Governance strategies for emerging risks of solar radiation management. Society for Risk Analysis (SRA), New Orleans, LA.
55. **Grieger, K**. 2018. Sustainable development of engineering nanomaterials. Carolina Science Symposium, North Carolina State University, Raleigh, NC.
56. **Grieger, K**. 2018. Application and testing of risk screening tools for nanomaterial risk analysis. 13th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Durham, NC.
57. **Grieger, K.** 2018. NEXUS 2018: Water, Food, Energy and Climate, Chapel Hill, NC.
58. **Grieger, K.** 2017. Moving from risk assessment to risk governance and decision support for nanomaterials: Lessons learned from select case studies. Society for Risk Analysis (SRA), Arlington, VA.
59. **Grieger, K.** 2017. Nanomaterials in Select Consumer and Military Applications. Genetics and Environmental Mutagenesis Society Spring Meeting, Environmental Protection Agency (EPA) headquarters, Research Triangle Park, NC.
60. **Grieger, K.**., Berube, D., Jones, J**.** 2017. Ensuring Sustainable Development of Water Treatment Technologies. Water Resources Research Institute (WRRI), Raleigh NC.
61. **Grieger, K.** 2015. A qualitative risk-benefit assessment for nanomaterials in food. Society for Risk Analysis (SRA), Arlington, VA.
62. **Grieger, K.** 2015. A Risk Ranking Approach for Nano-Enabled Applications for the US Army. Sustainable Nanotechnology Conference, Venice, Italy.
63. **Grieger, K..** 2014. Sustainable development and use of nZVI for environmental remediation. 9th International Conference on Environmental Effects of Nanoparticles and Nanomaterials, Columbia, SC.
64. **Grieger, K**., Laurent, A., Miseljic, M., Christensen, F., Baun, A. 2013. Complementary use of life cycle assessment and risk assessment for engineered nanomaterials: Lessons learned from chemicals? Society for Risk Analysis (SRA), Baltimore, MD.
65. Bates, M., **Grieger, K**. D., Trump, B., & Linkov, I. 2013. Nanoparticles and Health Case studies II. Environmental Health 2013 Science and Policy to Protect Future Generations, Boston, MA.
66. **Grieger, K**., Linkov, I., Hansen, S.F., Baun, A. 2011. Assessing the environmental risks of nanomaterials: Critical review of risk analysis frameworks. Society of Environmental Toxicology and Chemistry (SETAC), 14-17 November 2011, Boston, USA.
67. **Grieger, K**., Andersen, H.B. 2011. Emerging nanotechnologies and risk perception. Integ-Risk and Society for Risk Analysis (SRA) conference, 6-8 June 2011, Stuttgart, Germany.
68. **Grieger, K**., Markert, F. 2011. Practical applications of life cycle assessment and risk analysis: Lessons learned from PlasmaNice. Safety issues of Nanomaterials along their life cycle, 04-05 May 2011, Barcelona, Spain.
69. **Grieger, K**., Linkov, I., Hansen, S.F., Baun, A. 2011. Critical analysis of frameworks and approaches to assess the environmental risks of nanomaterials. NanoImpact Net, 14-17 February 2011, Lausanne, Switzerland.
70. **Grieger, K**., Hansen, S.F., Linkov, I., Baun, A. 2010. A Review of Frameworks and Approaches for Assessing Environmental Risks of Nanomaterials. Society for Risk Analysis (SRA), 5-8 December 2010, Salt Lake City, USA.
71. **Grieger, K**., Grieger, K., Baun, A., Owen, R. 2010. Assessing the Environmental Risks of Nanomaterials: A Comparison of Risk Assessment Frameworks. Environmental Decisions: Risks and Uncertainties, 25-29 April 2010, Monte Verita, Switzerland
72. **Grieger, K**., Baun, A., Owen, R. 2010. Redefining risk research priorities for nanomaterials. NanoImpact Net, 09-12 March 2010, Lausanne, Switzerland.
73. **Grieger, K**., Fjordbøge, A., Hartmann, N.B., Eriksson, E., Bjerg, P.L., Baun, A. 2009. Environmental benefits and risks of zero-valent iron nanoparticles (nZVI) for in situ remediation: risk mitigation or trade-off? American Geophysics Union (AGU), 14-18 December, San Francisco, USA.
74. **Grieger, K**., Baun, A., Owen, R. 2009. Redefining risk research priorities for nanomaterials. Environmental Effects of Nanoparticles and Nanomaterials, 06-09 September 2009, Vienna, Austria.
75. Hansen, S.B., Clausen, A., **Grieger, K**., Baun, A. 2009. Environmental risks and benefits of cerium oxide nanoparticles. Environmental Effects of Nanoparticles and Nanomaterials, 06-09 September 2009, Vienna, Austria.
76. **Grieger, K**., Baun, A., Owen, R. 2009. Nanomaterial risk research needs: Time to re-evaluate? International Workshop "Nanotechnology Governance Compared", 17-18 June 2009, Vienna, Austria.
77. **Grieger, K**., Hansen, S.F., Baun, A. 2009. Quality assurance for risk assessment of nanomaterials. NanoImpact Net conference, 24-25 March 2009, Lausanne, Switzerland.

78. **Grieger, K**., Hansen, S.F., Baun, A. 2008. Analyzing uncertainty within environmental, health, and safety risks of nanomaterials. Symposium for US Environmental Protection Agency, 11 December 2008, RTP, NC, USA.
79. **Grieger, K**., Hansen, S.F., Baun, A. 2008. Analyzing uncertainty within environmental, health, and safety risks of nanomaterials. Society for Risk Analysis (SRA), 7-10 December 2008, Boston, USA.
80. Baun, A., Hartmann, N., **Grieger, K**., Foss Hansen, S. Engineered nanoparticles - environmental contaminants and carriers? NanoDTU Day, December 2008, Technical University of Denmark.
81. **Grieger, K**., Hansen, S.F., Baun, A. 2008. Identifying and mapping parameters influencing EHS risks of nanomaterials: Comparing research gaps, recommendations and government funding. NanoRisk 2008, 21-24 October 2008, Paris, France.
82. **Grieger, K**., Hansen, S.F., Baun, A. 2008. Uncertainty and Sensitivity Analysis of Environmental and Health Risks of Nanomaterials: Ensuring that EHS Research Prioritization and Efforts Transform into Short-term Decision-making Processes. Risk Trace, 27-30 May 2008, Faro, Portugal.
83. **Grieger, K**., Hansen, S.F., Baun, A. 2008. The known "knowns" and known "unknowns": Mapping uncertainty in regard to the potential human and environmental health risks of manufactured nanoparticles. NanoEco: Nanoparticles in the Environment- Implications and Applications, 2-7 March 2008, Ascona, Switzerland.
84. Mikkelsen, P.S., **Grieger, K**., Ledin, A., Rasmussen, B., Revitt, M., Scholes, L., Verdonck, F., Benedetti, L., Castillo, L., Lecloux, A., Kompare, B., Banovec, P., Bessat, C., Trouve, J., Sörme, L., Jonsson, A. & Vanrolleghem, P. 2007. SCOREPP - Source Control Options for Reducing Emissions of Priority Pollutants. Abstract MO PC7-7. SETAC Europe 17th Annual Meeting "Multiple stressors for the environment and human health - present and future challenges and perspectives", 20-24 May 2007, Porto, Portugal.
85. **Grieger, K**. and Trapp, S. 2006. Pesticide residues in drinking water versus other beverages: a case of an unjustified discrepancy? Ethics and the politics of food- Preprints of the 6$^{th}$ Congress of the European Society for Agricultural and Food Ethics, EurSAFE 2006, June 22-24 2006, Oslo, Norway.
86. **Grieger, K**. and Trapp, S. 2006. Setting standards: water versus wine. Controversies and solutions in environmental sciences, SETAC Europe 16th annual meeting, May 7-11 2006, The Hague, Netherlands.

## CONFERENCE AND SEMINAR PRESENTATIONS

Invited Talks (*N=36*)

1. The Global Forum for Plant-Based and Alternative Proteins, NC Biotech Center, Research Triangle Park, NC. Panelist, 2025.
2. SETAC Annual Meeting, Nano and Advanced Materials Safety: Research Progress, Applications and Challenges, Portland, OR. Oral Presentation, 2025.
3. NC State University, Department of Food, Bioprocessing and Nutrition Sciences, Industry Partners Advisory Council (IPAC). Oral Presentation, 2025.
4. NC State University, Academic Nutrition Departments Programs (ANDP) and Council of Food Science Administrators (CFSA). Oral Presentation, 2025.
5. NC State University, Bezos Center Undergraduate Research Scholars Program (SPURS). Oral Presentation, 2025.
6. NC State University, STEPS ExPlorers program. Oral Presentation, 2025.
7. INFRAMES, NSF AccelNet, Greensboro, NC. Oral Presentation, 2025.
8. NC State University, Emerging Research Showcase, Oral Presentation, 2025.
9. NC State University, Sustainable Protein Undergraduate Research Scholars, Oral Presentation, 2025.
10. NC State University, Community of Practice, Outreach and Engagement Quarterly Meeting. Oral Presentation, 2025.
11. NC State University, Department of Civil, Construction, and Environmental Engineering. Oral Presentation, 2024.
12. National Nanotechnology Initiative, Washington DC. Oral Presentation, 2024.
13. Material Sciences & Technology (MS&T) conference, Pittsburgh, PA. Oral Presentation, 2024.
14. Case Western Reserve University, Role of Materials for Energy and Sustainability (EMSE 349) (virtual). Oral Presentation, 2024.
15. NC State University, University Research Symposium; Oral Presentation, 2024.
16. NC State University, Department of Forestry and Environmental Resources; Oral Presentation, 2024.
17. Center of Excellence for Regulatory Science in Agriculture (CERSA). Workshop on Genome-Edited Microbial Products for Agricultural Use, NC State. Oral Presentation, 2023.
18. Technical University of Denmark (DTU), Department of Sustainability Engineering, Kgs. Lyngby, Denmark. Oral Presentations (2), 2023.

19. EngageINFEWs - Lightning Talks. NSF-Research Coordination Network. Oral Presentation, 2023.
20. Critical Nanotechnology Opportunities for Addressing Climate Change (virtual). Oral Presentation, 2023.
21. Gordon Research Conference (GRC): Convergence in Nanoscale Science and Engineering for Agriculture and Food Systems, Manchester, NH. Oral Presentation, 2022.
22. NC State University, AgBioFEWS student retreat presentation, Plymouth, NC. Oral Presentation, 2022.
23. EngageINFEWs - Lightning Talks. NSF-Research Coordination Network. Oral Presentation, 2022.
24. Symposium on Environmental Governance and Ecological Restoration (virtual), College of Environment and Ecology, ChongQing University, China. Oral Presentation, 2021.
25. NC State University, Biology, Ecology, and Evolution Seminar Series (BEESS); Oral Presentation, 2022.
26. Gordon Research Conference (GRC) Connects: Nanoscale Science and Engineering for Agriculture and Food Systems. Keynote Speaker, Oral Presentation, 2021.
27. NC State University, Department of Biological and Agricultural Engineering; Seminar Presentation, 2021.
28. EngageINFEWs - Lightning Talks. NSF-Research Coordination Network. Oral Presentation, 2021.
29. Center for Human Health and the Environment (CHHE). Seminar Series. Oral Presentation, 2021.
30. Society for Risk Analysis (SRA), Annual Meeting (virtual), Career Path Breakout: Environmental Engineering and Public Health, Oral Presentation, 2020.
31. US FDA, Office of Food Additive Safety (OFAS) Seminar Series. Oral Presentation, 2020.
32. NC State, Sea Grant, WRRI seminar series. Oral Presentation, 2020.
33. European Commission, Joint Research Centre (JRC), Workshop on Safe and Sustainable Smart Nanomaterials (virtual). Oral Presentation, 2020.
34. North Carolina A&T State University, Joint School of Nanoscience & Nanoengineering (virtual). Oral Presentation, 2020.
35. Baylor University, Department of Environmental Science, Waco, TX. Oral Presentation, 2019.
36. Genetic Engineering and Society Seminar Presentation, North Carolina State University, Raleigh, NC. Oral Presentation, 2019.

Conference, Seminar, and Workshop Presentations

1. American Geophysics Union (AGU), New Orleans. Oral Presentations (2) (co-author), 2025.
2. Society for Risk Analysis (SRA) Annual Meeting, Washington DC. Session Chair, Oral Presentation, Co-author Oral Presentation.
3. Cluster Conversations, with the Genetic Engineering and Society (GES) Center, NC State University. Panelist, 2025.
4. International Society for Biosafety Research (ISBR), Ghent, BE. Poster Presentation (co-author), 2025.
5. Annual Summit Meeting for Bezos Center for Sustainable Proteins at NC State, Raleigh, NC. Oral Presentation, Poster Presentation (co-author), 2025.
6. Sustainable Phosphorus Summit (SPS) 8, Accra, Ghana. Poster Presentation (co-author), 2025.
7. Bezos Center Undergraduate Research Scholars Program (SPURS), NC State University. Student Poster Presentation (co-author), 2025.
8. European Environmental Agency (EEA), Copenhagen, Denmark. Oral Presentation, 2025.
9. Society for Risk Analysis (SRA)- Europe Annual Meeting, Stavanger, Norway. Session Chair, Oral Presentation, Co-author Oral Presentation, 2025.
10. Governance of Emerging Technologies Conference (GETS). Oral Presentation (co-author), 2025.
11. Sustainable Phosphorus Alliance Webinar, Monitoring Phosphorus in the Environment, Co-author Oral Presentation, 2025.
12. Center for Human Health and the Environment (CHHE) Symposium, NC State. Poster Presentation (co-author), 2025.
13. American Association for the Advancement of Science (AAAS) Annual Meeting, Boston, MA. Session Chair, Oral Presentation, 2025.
14. Society for Risk Analysis (SRA) Annual Meeting, Austin, TX. Session Chair, Oral Presentations (2), Co-author Oral Presentations (3), 2024.
15. American Geophysics Union (AGU), Washington DC. Oral Presentation (co-author), Poster presentation (co-author), 2024.
16. US-EU Nano-EHS Communities of Research (COR) Workshop, Zurich, Switzerland. Oral Presentation, 2024.
17. Sustainable Agri-Food Technology Summit (SAFTS), NC State. Poster Presentation (co-author), 2024.
18. Governance of Emerging Technologies and Science (GETS), Phoenix, AZ. Oral Presentation, 2024.

19. American Society of Agricultural and Biological Engineers Annual International Meeting, Anaheim, CA. Oral Presentation (co-author), 2024.
20. NC Water Resources Research Institute Annual Conference, Raleigh, NC. Oral Presentation (co-author), 2024.
21. USDA/NIFA Project Directors Meeting, Program Area A1642, Duke University. Oral Presentation, 2024.
22. NC State Extension Summer Internship Program, N.C. Plant Science Building. Student Poster Presentation, 2024.
23. Society for Risk Analysis (SRA), Annual Meeting, Washington DC. Session Chair, Oral Presentation and Poster Presentations (2), 2023.
24. American Geophysics Union (AGU), San Francisco. Poster Presentation (co-author), 2023.
25. Society for Risk Analysis (SRA), Research Triangle Regional Organization (virtual). Oral Presentation, 2023.
26. Society of Environmental Toxicology and Chemistry (SETAC), Dublin, Ireland. Oral Presentation, 2023.
27. Governance of Emerging Technologies Conference (GETS). Oral Presentation (co-author), 2023.
28. Extension Summer Internship Program, N.C. Plant Science Building. Student Poster Presentation, 2023.
29. Marquette University, Oral Presentation (co-author), 2023.
30. Society for Risk Analysis (SRA), Annual Meeting, Tampa, FL. Session Chair, Oral Presentations (2), Poster Presentations (2), 2022.
31. Sustainable Phosphorus Summit, Raleigh, NC. Poster Presentations (3), 2022.
32. Society for Risk Analysis (SRA), Research Triangle Regional Organization (virtual). Oral Presentation, 2022.
33. Society for Risk Analysis (SRA) Annual Meeting (virtual). Session Chair, Oral and Poster Presentations, 2021.
34. 10$^{th}$ Sustainable Nanotechnology Organization (SNO) Conference. Oral Presentation, 2021.
35. Society for Risk Analysis (SRA), Annual Meeting (virtual). Session Chair, Oral Presentations (3), 2020.
36. US-EU Nano-EHS Communities of Research (COR) Workshop: Bridging Insights and Perspectives (virtual). Oral Presentation, 2020.
37. Society for Risk Analysis (SRA), Annual Meeting, Arlington, VA. Oral Presentations (2), 2019.
38. NanoSafetyCluster Conference, Copenhagen, DK. Oral Presentation, 2019.
39. Society for Risk Analysis (SRA), Annual Meeting, New Orleans, LA. Oral Presentations (2), 2018.
40. Carolina Science Symposium, NC State University, Raleigh, NC. Oral Presentation, 2018.
41. 13$^{th}$ International Conference on the Environmental Effects of Nanomaterials, Durham, NC. Oral Presentation, 2018.
42. NEXUS 2018: Water, Food, Energy and Climate, Chapel Hill, NC. Poster Presentation, 2018.
43. Society for Risk Analysis (SRA), Annual Meeting, Arlington, VA. Oral Presentation, 2017.
44. International Society of Exposure Science, Research Triangle Park, NC. Oral Presentation, 2017.
45. Genetics and Environmental Mutagenesis Society, RTP, NC. Oral Presentation, 2017.
46. Water Resources Research Institute (WRRI), Raleigh, NC. Oral Presentation, 2017.
47. Society for Risk Analysis (SRA), Annual Meeting, Arlington, VA. Oral Presentation, 2015.
48. Sustainable Nanotechnology Conference, Venice, Italy, Poster Presentation, 2015.
49. 9th International Conference on Environmental Effects of Nanomaterials, Columbia, SC, Oral Presentation, 2014.
50. Society for Risk Analysis (SRA), Annual Meeting, Baltimore, MD. Oral Presentation, 2013.
51. Society of Environmental Toxicology and Chemistry (SETAC), Boston, MA. Oral Presentation, 2011.
52. Integ-Risk: Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related Risks and Society for risk analysis, Stuttgart, Germany. Oral Presentation and Session Chair, 2011.
53. Safety Issues of Nanomaterials along their Life Cycle, Barcelona, Spain. Poster Presentation, 2011.
54. NanoImpact Net, EU FP7 project, Lausanne, Switzerland. Poster Presentation, 2011.
55. Society for Risk Analysis (SRA), Annual Meeting, Salt Lake City, UT. Oral Presentation, 2010.
56. Environmental Decisions: Risks and Uncertainty, Acona, Switzerland. Oral Presentation, 2010.
57. NanoImpact Net, EU FP7 Project, Lausanne, Switzerland. Oral and Poster Presentations, 2010.
58. American Geophysics Union (AGU), San Francisco, USA. Oral Presentation (received student award on presentation), 2009
59. Nanotechnology Risk Governance, Vienna, Austria. Poster Presentation, 2009.
60. NanoImpact Net, EU FP7 project, Lausanne, Switzerland. Oral Presentation, 2009.
61. Society for Risk Analysis (SRA), Annual Meeting, Boston, MA. Poster Presentation, 2008.
62. NanoRisk 2008: Determining occupational, environmental, health impacts, Paris, France. Oral Presentation, 2008.
63. Third Workshop of the RISKBRIDGE FP 6 Coordination Action: Building bridges in risk governance, Gorizia, Italy. Co-presenter, 2008.
64. US Environmental Protection Agency, Research Triangle Park, NC, USA. Oral Presentation, 2008.
65. Nanomaterials: Environmental Risks and Benefits of Nanomaterials, Faro, Portugal. Poster Presentation, 2008.
66. Nanoparticles in the Environment- Implications and Applications, Ascona, Switzerland. Oral Presentation, 2008.

67. Second International Advanced Course Public Communication & Applied Ethics of Nanotechnology - Learning from the GM debate, Oxford, UK. Oral Presentation, 2007
68. Second Workshop of the RISKBRIDGE FP 6 Coordination Action: Exploring the Interface between Science and Policy making, Bentivoglio, Italy. Oral Presentation, 2007.
69. Society Environmental Toxicology and Chemistry (SETAC), Porto, Portugal. Poster Presentation, 2007.
70. Sixth Congress of the European Society for Agricultural and Food Ethics, Oslo, Norway. Poster Presentation, 2006.
71. Society of Environmental Toxicology and Chemistry (SETAC), The Hague, Netherlands. Poster Presentation, 2006.
72. Use of Precautionary Principle in Nordic Countries, Oslo, Norway, 2005.
73. Annual conference of Michigan Academy of Science, Arts, and Letters, Holland, Michigan. Oral Presentation, 2003.

## EXTENSION ACTIVITIES AND OUTCOMES

### Stakeholder engagement activities through NC State Extension

- Extension Agent Training: Understanding and Addressing PFAS in our Communities.
    - Virtual: Extension Agent Web-based Monthly Trainings, July 2023 – December 2025. Total participant attendance = 112
    - In-person: NC State Extension Conference Agent Training, January 6, 2025. Participant attendance = 15.
    - In-person: Cumberland County Center, Fayetteville, June 12, 2023. Participant attendance =12.
    - In-person: Walking Our Talk on Main Street: Community Development Conference, Oxford, November 2, 2023. Participant attendance = 10.
- Extension Agent Training: Guide to Engaging Stakeholders and Community Members.
    - Extension Agent Web-based Monthly Trainings, July 2023 – December 2025. Total participant attendance = 140.
    - Wake County Water Partnership Education and Outreach Subcommittee, May 19, 2023. Participant attendance = 13.
    - Virtual: Extension Agent Training, Strategies and Activities for Conducting Engagement, July 15, 2025. Participant attendance = 15.
    - In-person: NC State Extension Annual Conference. Greensboro, October 2022. Participant attendance = 20.

Extension Field Days:

- Field Day Poster presenter, NC Sweetpotato Field Day, Clinton, October 5, 2023. Stakeholders engaged = 50.
- Field Day Poster presenter, NC Sweetpotato Field Day, Kinston, October 2022. Stakeholders engaged = 50.
- Field Day Poster presenter, NC Sweetpotato Field Day, Clinton, October 2021. Stakeholders engaged = 75.

Extension Presentations and Outreach:

- Public outreach and oral presentation. Careers in Environmental Science. March 13, 2025. West Cary Middle School, Cary, NC. Participant attendance = 80 students in 8$^{th}$ grade.
- Co-organizer and public outreach. Beyond the Tap: PFAS in Your Home and Garden. Extension Public Meeting on PFAS contamination. March 13, 2025. Fayetteville, NC. Participant attendance = 90.
- Extension Presentation. Understanding and addressing PFAS. NC Society of Farm Managers and Rural Appraisers. March 11, 2025. Raleigh, NC. Participant attendance = 25.
- Extension Presentation. Environmental Health and Risk Priorities for North Carolina: Survey of NC State Extension Agents. Virtual conference, October 2021. Available to all Extension conference participants.
- Oral presentation. Webinar on Needs Assessment survey, May 2021. https://ncsu.zoom.us/rec/share/wNZJAoH81kpOSJXu4VDPGYwsOp-5X6a80XJL-fcImU-PCVE7YGGIu281W3LqjoXT. Webinar participants = 15.
- Podcast. PFAS Exposure, NC State University. May 30, 2024. https://news.ncsu.edu/podcast/podcast-pfas-exposure/
- Public outreach and oral presentation. The Women's Club of Clayton, April 2024. Participants = 17.
- Public outreach and oral presentation. Citizen's Climate Lobby, September 2024. Participants = 35.
- Public outreach, Genetic Engineering, Agriculture, and Sustainability, High School Students at Springfield School, Indonesia. April 20, 2023. Participants = class of 30.
- Co-organizer, NC State GRIP4PSI Sweet-APPS project, Sweetpotato Grading Training Workshops, NC State, January and March 2023. Stakeholders engaged = 35.

- Oral presentation, Master Gardener Webinar on Glyphosate with Joe Neal, July 2020. Webinar participants = 313.

Extension Internships:

- Faculty advisor for Extension intern, Plant Science Initiative internship program, Iredell County, summer 2023. Developed needs assessment for Iredell Extension agents and community members on environmental sustainability priorities. Stakeholders engaged = 81.
- Faculty advisor for Extension intern, Plant Science Initiative internship program, Lee County, summer 2024. Characterizing and mapping the growth of small farms and local food production in Lee County. Stakeholders engaged = 50.

Extension Committees:

- Member of N.C. Plant Science Initiative (PSI) Extension Agent Network; March 2025 - present
- Member of Wake County Well Water Outreach Team; NC State Extension and Wake County; Oct. 2024 - present
- Extension Strategic Plan Task Force Goal 2.2 Member; Resulting report: Jakes, Ward, Grieger, Extension Strategic Plan Task Force Report (Goal 2.2, KI1)
- Member of NC State Extension Water Quality Working Group; January 2022 – Fall 2023

Needs Assessment:

- Conducted Extension Needs Assessment survey, spring 2021. Survey participants = 90.
- Conducted survey of Wake Co. well-water users, with Wake Co. and NC State faculty, Nov.-Dec. 2025. Survey participants = 40

Extension Publications – Peer Reviewed:

- Koivusaari, K., Aimutis, W.R., Sanders, K., Schroeder-Moreno, M., Hill, D., Consavage Stanley, K., Shirwaiker, R., **Grieger, K.** 2025. An Extension Guide to Alternative Proteins. https://content.ces.ncsu.edu/an-extension-guide-to-alternative-proteins.
- Boyette, M., Simmons, C., Merck. A. **Grieger, K**., 2025. Introduction to the Postharvest Engineering for Fresh Fruits and Vegetables: A Practical Guide for Growers, Packers, Shippers, and Sellers. NC State Extension (AG-989). https://content.ces.ncsu.edu/introduction-to-the-postharvest-engineering-for-fresh-fruits-and-vegetables
- **Grieger, K.,** Loschin, N., Barnhill, K., Gould, F. 2024. Let's Talk about Genetic Engineering: A Guide to Understanding Genetic Engineering and Its Applications in Food, Agriculture, and the Environment. NC State Extension publication (AG-967). https://content.ces.ncsu.edu/lets-talk-about-genetic-engineering
- **Grieger, K.**, May, K. 2024. Guide to Understanding and Addressing PFAS in our Communities. NC State Extension Publication (AG-955). https://content.ces.ncsu.edu/Guide-to-Understanding-and-Addressing-PFAS-in-our-communities.
- **Grieger, K.,** Horgan, M. Cummings, C. 2023. Let's Talk About Risk: A Guide to Identifying, Assessing, Managing, and Communicating Risk. NC State Extension Publication. https://content.ces.ncsu.edu/lets-talk-about-risk-a-guide-to-identifying-assessing-managing-and-communicating-risk
- **Grieger**, **K**., Horgan, M., Merck, A. 2022. Let's Work Together in Addressing Environmental and Societal Issues: Guide to Engaging Stakeholders and Communities. NC State Extension Publication, https://content.ces.ncsu.edu/lets-work-together-in-addressing-environmental-and-societal-issues-guide-to-engaging-stakeholders#section_heading_16962

Extension Publications – Non-Peer Reviewed

- Branan, R.A. **Grieger, K.** 2025. Addressing PFAS Biosolid Contamination on Farmland: An Update. Southern Ag Today. https://southernagtoday.org/2025/02/07/addressing-pfas-biosolid-contamination-on-farmland/
- Branan, R.A. **Grieger, K.** 2025. PFAS: Concerns Mount Regarding Biosolid Applications. NC State Extension Factsheet. https://farmlaw.ces.ncsu.edu/2025/02/pfas-concerns-mount-regarding-biosolid-applications/
- Nelson, N.G., Harris, A., Anarde, K., Hino, M., **Grieger, K.** 2023. Exercise Caution: Tidal Floods May Contain Pollutants. North Carolina Sea Grant. https://ncseagrant.ncsu.edu/exercise-caution-tidal-floods-may-contain-pollutants/.
- **Grieger, K**., May, K. 2023. Guide to Understanding and Addressing PFAS in our Communities. NC State Extension FactSheet. https://content.ces.ncsu.edu/Guide-to-Understanding-and-Addressing-PFAS-in-our-communities

**Stakeholder workshops and seminars**:

- Organizer: Society for Risk Analysis- Research Triangle Regional Organization. Quarterly meetings and seminars, February, March, May, August, November, and December 2024. Participant attendance = 64.
- Organizer: Interdisciplinary Perspectives on the U.S. Executive Order on Biotechnology. Society for Risk Analysis meeting, Washington DC, December 2023. Participant attendance = 50.
- Organizer: Evaluating Risks of Novel Food and Agriculture Technologies through Interdisciplinary Approaches. Society for Risk Analysis meeting, Tampa, FL, December 2022. Participant attendance = 35.
- Co-organizer: US-EU Nano-EHS Communities of Research Workshop. National Nanotechnology Coordination Office, Zurich, Switzerland, October 2024. Participant attendance = 45.
- Co-organizer: Sustainable Agri-Food Technology Summit (SAFTS), NC State, May 2024. Details: https://ges.research.ncsu.edu/research/safts-workshop-2024/. Participant attendance = 62 (including from industry, academia, government, Extension, and other groups).
- Co-organizer: US-EU Nano-EHS Communities of Research Workshop. National Nanotechnology Coordination Office, Washington DC, November 2023. Details: https://us-eu.org/2023-u-s-eu-nanoehs-communities-of-research-workshop/. Participant attendance = 75.
- Co-organizer: Gene Drives in Agriculture: Workshop on Risk Assessment and Research Prioritization. Funded by USDA/NIFA; Virtual workshop, June 2022. Details: https://research.ncsu.edu/ges/research/usda-nifa-gene-drive-risk-workshop/. Participant attendance = 50.
- Keynote speaker: Workshop on Critical Nanotechnology Opportunities for Addressing Climate Change. Funded by Research Triangle Nanotechnology Network (RTNN); Virtual meeting, February 2023. Participant attendance = 80.
- Presenter: Responsible Development, Social Science, and the National Nanotechnology Initiative (NNI): A Workshop to Explore Future Intersections, July 2024. Attendance = 35.
- Presenter: North Carolina Sweetpotato Commission, Research Committee, August 2023. Attendance = 23.
- Presenter: SynBio Teacher Training Workshop. NC State, July 2023. Attendance = 25.
- Presenter: N.C. Plant Science Initiative Extension Summer Internship Program, Identifying Environmental Sustainability Needs in Iredell County, Poster Presentation. July 2023. Attendance = 95.
- Presenter: Genome-Edited Microbial Products for Agricultural Use, Center of Excellence for Regulatory Science in Agriculture (CERSA), NC State, June 2023. Attendance = 40.
- Presenter: Lessons Learned in Using an Online Stakeholder Engagement Platform. EngagINFEWS funded by NSF; Virtual meeting, April 2023. Details: https://doi.org/10.7923/es5c-6m41. Participant attendance = 10.
- Presenter: Gordon Research Conference on Convergence of Nanotechnology with Food and Agriculture. Manchester, NH, June 2022. Participant attendance = 100
- Presenter: Lessons Learned from Engaging Stakeholders in Food and Agriculture Systems. EngagINFEWS funded by NSF; Virtual meeting, May 2022. Details: https://data.nkn.uidaho.edu/story/engageinfews-lightning-talks-2022. Participant attendance = 15.
- Presenter: Stakeholder Engagement within Risk Governance Contexts. Funded by Society for Risk Analysis – Research Triangle Regional Organization; Virtual meeting, April 2022. Participant attendance = 12.
- Presenter: "Train the Trainer" on Responsible Research and Innovation (RRI); Funded by NIH; Virtual workshop, April 2022. Participant attendance = 20.
- Presenter: Sweetpotato Analytics for Produce Provenance and Scanning (Sweet-APPS). NC State Extension Annual Conference. Virtual conference, October 2021. Participant attendance = 15.
- Participant: Workshop to Identify Convergent Nanotechnology Approaches for Precision Delivery of Active Agents in Plants. Funded by USDA/NIFA and NSF; Carnegie Mellon University, September 2022. Participant attendance = 50.
- Participant: Workshop on Ensuring Environmental Sustainability of Emerging Technologies. Resulting reports: https://www.epfl.ch/research/domains/irgc/eset/. International Risk Governance Council (IRGC); Virtual meeting, October 2021. Participant attendance = 75.
- Participant: Workshop on Systemic Risks: Concepts, Methods, and Governance. Funded by Institute of Advanced Sustainability Studies (IASS); Virtual meeting, October 2021. Participant attendance = 40.

## Stakeholder engagement activities through the STEPS Center:

- Co-lead of stakeholder meeting, Biological Phosphorus Removal at Wastewater Treatment Facilities, October 29-30, 2024. Participant attendance = 8, operators and managers associated with 7 wastewater treatment plants and facilities. Project lead = Call.
- Co-lead of stakeholder meeting, Biological Phosphorus Removal at Wastewater Treatment Facilities, October 10-11, 2023. Participant attendance = 12, operators and managers associated with 11 wastewater treatment plants and facilities. Project lead = Call.
- Extension in Service Training, Univ. of Florida, Presentation on stakeholder engagement, April 5, 2023. Attendance = UF Extension agents, faculty, students, and staff. Participant attendance = 35.
- Organizer for external speaker, Dr. James Elser of University of Montana, NC State, April 4-5, 2024. Participant attendance = 45.
- Organizer for external speaker, Dr. Jason White of the Connecticut Agricultural Experiment Station, Plant Science Building, NC State, March 2, 2023. Participant attendance = 50.
- Speaker for visit by White House Office of Science Technology Policy (OSTP) Director, Dr. Prabhakar, Plant Science Building, NC State, February 10, 2023. Participant attendance = 30.
- Presenter for 5$^{th}$ grade educational activity on nutrient pollution, December 21, 2022. Weatherstone Elementary, Cary, NC. Participant attendance = 80.
- Co-lead for Phosphorus Forum and Sustainable Phosphorus Summit (collectively termed as Phosphorus Week), November 1-4, 2022. Participant attendance = 220, including stakeholders from industry, government, academia, and other stakeholder groups focused on phosphorus sustainability
- Speaker and co-lead of Knowledge Transfer, STEPS Industry Breakfast, September 2022. Participant attendance = 80.
- Co-lead of Knowledge Transfer, Engagement with wastewater treatment facilities (PI=Doug Call), spring/summer 2022. Participant attendance = 20.
- Speaker and co-lead of Knowledge Transfer, Emerging Research Showcase, April 2022. Participant attendance = 85.
- Co-lead of Knowledge Transfer, Earth Day event at NC State, April 2022. Participant attendance = 50
- Co-lead of public survey on perceptions of phosphorus sustainability, Florida, January 2022. Survey participants = 68.
- Speaker and co-lead of Knowledge Transfer, STEPS Open House, November 2021. Participant attendance = 46.

## Stakeholder engagement through the Genetic Engineering and Society (GES) Center:

- Co-Organizer: Sustainable Agri-Food Technology Summit (SAFTS), May 21, 2024. Participant attendance = 62 (including from industry, academia, government, Extension, and other groups). Details: https://ges.research.ncsu.edu/research/safts-workshop-2024/.
- Organizer: Roundtable Panel Session lead on U.S. Executive Order on Biotechnology and Bioeconomy; Society for Risk Analysis Annual Meeting, December 2023. Participant attendance = 50 (including from USDA, former OSTP, US Army Corp, and other federal agencies).
- Organizer: Stakeholder meetings with biotechnology industry; June 2022. Stakeholders engaged = 5.

## Stakeholder engagement activities through the Town of Cary, NC:

- Engaging Town officials in Cary, NC through variety of activities (e.g. monthly meetings, guiding Town surveys on sustainability initiatives, developing Town plans for reducing carbon emissions, participating in working group for citizen's engagement award), October 2018 – October 2024.
- Engaging public participants at Arbor Day Festival, April 6, 2024. Stakeholders engaged = 50.
- Communication working group and development of citizen survey, Town of Cary, 2022 –2024.
- Engaging wastewater treatment facility managers, Town of Cary, 2022. Stakeholders engaged = 10.
- Engaging public participants at My Tree, Our Tree events, October 2021 and March 2022. Stakeholders engaged = 400.
- Engaging public participants and Town staff at Annual Spring Event, April 2022. Stakeholders engaged = 150.

## ADVISING, MENTORING, AND TEACHING

### Advising & Mentoring

NC State University

- Graduate Faculty Status in 4 Graduate Programs:
  - *Biology:* 2020 – present
  - *Biological & Agricultural Engineering:* 2023 – present
  - *Forestry and Natural Resources*: 2023 – present
  - *Civil, Construction, and Environmental Engineering*: 2025 – present
- *Advising and mentoring for graduate students*
  - Faculty advisor for PhD student, Madison Horgan — 2025 – present
  - Faculty advisor for PhD student, Nick Loschin — 2022 – present
  - Faculty co-advisor for PhD student, Christopher Oates — 2023 – present
  - Faculty advisor for MS student, Corie Griebel — 2023 – 2025
  - Faculty advisory for MS student, Mumtahina Riza — 2021 – 2023
  - Graduate student committee member, Jill Ferguson — 2024 - present
  - Graduate student committee member, Ben Therrien (Carnegie Mellon) — 2023 - present
  - Graduate student committee member, Ilaria Cimadori (Yale Univ.) — 2022 – present
  - Graduate student committee member, Josephine Geraghty — 2024 - 2025
  - Graduate student committee member, Corrado Harper — 2022 – 2023
  - Graduate student committee member, Sandy Ethridge — 2021 – 2023
  - Mentor, Rachel Broughton — 2022 – 2023
  - Graduate Student Representative, GSR for Courtney Deviney — Sept. 2024, 2025
  - Graduate Student Representative, GSR for Corrado Harper — Dec. 2022
  - Graduate Student Representative, GSR for Corey Ship — March 2021
- *Advising and mentoring for undergraduate students*
  - Faculty advisor for Syeda Yasha Abid, REU student through Bezos Center — summer 2025
  - Faculty advisor for Jenna Taylor, undergraduate intern, NC State PSI and Extension internship — summer 2024
  - Faculty advisory for Jordan Staph, undergraduate intern, NC State PSI and Extension internship — summer 2023
  - Faculty advisory for 4 undergraduate students, ES400 — spring 2023
  - Faculty advisor for undergraduate research project, Cheyana Bassham — spring 2021
  - Co-advisor for undergraduate student, Madison Horgan — 2020 – 2021
- *Advising and mentoring for postdocs and employees*
  - Faculty Advisor for GES Center staff members — Dec. 2025 - present
    - Patti Mulligan, Communications Director
    - Sharon Stauffer, Assistant Program Manager
    - Wendy Roa, Program Manager
    - Dr. Katie Barnhill, Senior Research Scholar
  - Faculty Advisory Dr. Katariina Koivusarii — 2025 - present
  - Faculty Advisor for Dr. Christopher Cummings, Senior Research Scholar — 2020 – present
  - Co-Advisor for Dr. Nourou Barry, Postdoctoral Researcher — 2023 - present
  - Mentor for Dr. Kimberly Bourne, Postdoctoral Researcher — 2023 - 2025
  - Faculty Advisor for Madison Horgan, Research Assistant — 2021 – 2025
  - Faculty Advisor for Dr. Ashton Merck, Postdoctoral Researcher — 2021 – 2024
  - Faculty Advisor for Dr. Wei Wei, Research Associate — 2022 – 2023
  - Faculty Advisor for David Glas, Research Assistant — 2020 – 2021
  - Faculty Advisor for Rebecca Michael, Research Assistant — 2020 – 2021
  - Faculty Advisor for Lakshmi Tharuni Sivakumar, Research Assistant — 2023 – 2024
  - Co-Advisor for Dr. Adam Kokotovich, Postdoctoral Researcher — 2019 – 2021
  - Faculty Advisor for Mr. Anthony Dimeglio, Research Assistant — 2020 – 2021

RTI International 2014 – 2018
- Mentor to two junior staff and students

Technical University of Denmark 2017
- External supervisor for special student project
- Supervisor for two undergraduate student bachelor research projects 2010-2011

Michigan State University 2002-2003
- Supervisor for four undergraduate student bachelor research projects

## Teaching & Guest Lectures

North Carolina State University
- Guest Lecturer for Intro to Manufacturing of Sustainable Food Proteins (ISE 489/589) 2025
- Guest Lecturer for Honors Forum (HON 111) 2024
- Guest Lecturer for Population Medicine Forum (CBS 650) 2024
- Guest Lecturer for Environmental Toxicology (TOX 715) 2023, 2025
- Guest Lecturer for Sustainable Living Course (IPGE 295) 2023
- Guest Lecturer for Interdisciplinary Approaches in Environmental and Agricultural Systems (ENT 510) 2022
- Guest Lecturer for NIH MBTP T32 Training grant, Responsible Innovation 2022
- Guest Lecturer, Wicked Problems, Wolfpack Solutions 2022
- Guest Faculty to review student presentations, Environmental Toxicology (AEC 715) 2021
- Guest Faculty Panelist on Career Development, Field Ecology (AEC 460) 2021, 2023, 2024
- Guest Lecturer, Principles of Collaboration and Team Science (CVM 810, CBS 561) 2020-2025
- Guest Lecturer, Department of Material Science and Engineering 2020
- Guest Lecturer, Department of Civil and Environmental Engineering 2013, 2016
- Guest Lecturer, College of Natural Resources 2017, 2019

Duke University
- Guest lecture, Senior Sustainability Engagement Certificate Capstone Project Seminar 2019
- Guest lecture, Bass Connections: Decisions on Complex Interdisciplinary Problems of Health and Environmental Risk 2017-2018
- Course Instructor: Introduction to Environmental Health course 2015, 2016

Meredith College 2014-2014
- Adjunct Professor, Environmental Science, Plant Biology, Plant Biology Lab

Technical University of Denmark 2005-2011
- Teaching Assistant: Environmental Management & Ethics, Nanotechnology and the Environment
- Guest lectures: Introduction to Nanotechnology, Mapping Controversies

Michigan State University 1999-2003
- Teaching Assistant: Ecology, Ecology Laboratory, Introductory Plant Biology Laboratory, Plant Ecology, Plants of Michigan, Tropical Biology

## NEWS AND MEDIA

MEDIA COVERAGE
- 2025, Leading GES into the Future: A Conversation with Khara Grieger, NC State: https://ges.research.ncsu.edu/2025/11/khara-grieger-leading-ges-into-the-future/
- 2025, News and media on Oates et al. *Nature Water* (2025) article:
  - Science Magazine. Nutrient Monitoring Lags in Vulnerable South Atlantic Waters (https://scienmag.com/nutrient-monitoring-lags-in-vulnerable-south-atlantic-waters/#google_vignette)
- 2023, News and media on Grieger et al. *Environment Systems and Decisions* (2023) article:
  - Ambrook Research. We Can't Keep Using Phosphorus Fertilizers — Just Ask Industry Stakeholders (https://ambrook.com/research/supply-chain/phosphorus-sustainability-fertilizer-commodity-crops)
  - National Science Foundation (NSF). Is our Phosphorus Use Sustainable? (https://new.nsf.gov/news/our-phosphorus-use-sustainable#image-caption-credit-block)
  - AAAS. Is our phosphorus use sustainable? Most stakeholders doubt it. (https://www.eurekalert.org/news-releases/994609)

  - Phys.org. Is our phosphorus use sustainable? Most stakeholders doubt it. (https://phys.org/news/2023-07-phosphorus-sustainable-stakeholders.html)
  - 2023, NC State News. Is Our Phosphorus Use Sustainable? Most Stakeholders Doubt It. (https://news.ncsu.edu/2023/07/phosphorus-and-sustainability/)
- 2020-2021, News and media on Kuzma & Grieger *Science* (2020) article:
  - Progressive Farmer. Gene Revolution Turns 25 – 1. (https://www.dtnpf.com/agriculture/web/ag/crops/article/2021/02/19/gene-altered-attitudes )
  - Science Daily. Researchers recommend more transparency for gene-edited crops. (https://www.sciencedaily.com/releases/2020/11/201119141714.htm)
  - WRAL TechWire. Gene-editing of crops requires greater transparency, NCSU researchers say. (https://www.wraltechwire.com/2020/11/23/gene-editing-of-crops-requires-greater-transparency-ncsu-researchers-say/)
  - Seed World. Researchers recommend more transparency for gene-edited crops. (https://seedworld.com/researchers-recommend-more-transparency-for-gene-edited-crops/)
  - Lab Manager. Researchers recommend more transparency for gene-edited crops. (https://www.labmanager.com/news/researchers-recommend-more-transparency-for-gene-edited-crops-24441)
  - Laboratory Equipment. Researchers: More Transparency Needed for Gene-edited Crops. (https://www.laboratoryequipment.com/570686-Researchers-More-Transparency-Needed-for-Gene-edited-Crops/)
  - 2020, NC State News. More Transparency Recommended for Gene-Edited Crops. (https://news.ncsu.edu/2020/11/gene-editing-transparency/)
- 2024, STEPS Joins Forces with Water Resource Recovery Facilities to Develop Innovative Data-Driven Management Solutions, https://steps-center.org/2024/11/18/steps-wrrf-twg/
- 2024, Small-scale Science with Big Results: Using Nanotechnology to Improve Agricultural Sustainability, https://cals.ncsu.edu/applied-ecology/news/small-scale-science-with-big-results-using-nanotechnology-to-improve-agricultural-sustainability/
- 2024, New STEPS Publications on Urine Diversion for P Recovery, https://steps-center.org/2024/07/10/new-steps-publications-on-urine-diversion-for-p-recovery/
- 2024, Khara Grieger named co-Director of Outreach and Advocacy for the Bezos Center for Sustainable Protein, Applied Ecology News, June: https://cals.ncsu.edu/applied-ecology/news/khara-grieger-named-co-director-of-outreach-and-advocacy-for-the-bezos-center-for-sustainable-protein/
- 2024, Sustainable Agri-Food Technology Summit Gathers a Variety of Voices, College of Agriculture and Life Sciences (CALS), NC State University: https://cals.ncsu.edu/intranet/news/sustainable-agri-food-technology-summit-gathers-a-variety-of-voices/?utm_source=CALS+Employees&utm_campaign=7dccfcaef2-INSIDE_CALS_CAMPAIGN&utm_medium=email&utm_term=0_39c557266b-7dccfcaef2-692930380
- 2024, Grieger awarded STEPS Center Broadening Participation Metal, Applied Ecology News, NC State: https://cals.ncsu.edu/applied-ecology/news/grieger_awarded_steps_center_broadening_participation_metal/
- 2024, PFAS Exposure, NC State: https://news.ncsu.edu/podcast/podcast-pfas-exposure/
- 2022, NC State CALS news article, Sweet-APPS Yielding Sweet Success: https://magazine.cals.ncsu.edu/sweet-apps/
- 2022, NC State receives USDA/NIFA grant to evaluate societal impacts and foster sustainability of GE and nanotech in agriculture: https://research.ncsu.edu/ges/2022/02/nc-state-receives-usda-nifa-grant-on-societal-impacts-of-ge-and-nanotech/
- 2021, NC State Faculty Member to Co-Lead Knowledge Transfer Efforts for New $25M Phosphorus Research Center, CALS News, October: https://cals.ncsu.edu/news/nc-state-faculty-member-to-co-lead-knowledge-transfer-efforts-for-new-25-million-phosphorus-research-center/

PODCASTS AND INTERVIEWS

- 2025, Let's Talk Risk: Narrowing in on Nanotechnology. Society for Risk Analysis. https://societyriskanalysis.libsyn.com/narrowing-in-on-nanotechnology
- 2025, The Science that Feeds Us Podcast. PFAS in Our Food: What the Science Says About "Forever Chemicals." https://podcasts.apple.com/us/podcast/pfas-in-our-food-what-the-science-says-about-forever/id1830363595?i=1000731148436

- 2025, AgTech360 Podcast. Tiny Particles, Huge Potential: Assessing Benefits and Risks of
- Nanotech in Ag: https://open.spotify.com/episode/1PklZyrNy3qKYtP7tix5up?si=DZF5PO8gRGqRe6igAad9Mg&nd=1&dlsi=042463b6586b4143.
- 2024, WIRED magazine. Gene-Edited Salad Greens Are Coming to US Stores This Fall: https://www.wired.com/story/gene-edited-salad-greens-fall-pairwise-bayer-crispr-gmo/
- 2023, Finding Genius Podcast. Nanomaterials Are In Our Food – Are They Safe? | An Expert Explains: https://podcasts.apple.com/us/podcast/nanomaterials-are-in-our-food-are-they-safe-an/id1169016854?i=1000612166467
- 2020, The Measure of Everyday Life: The Unseen World of Food Nanotechnology. Podcast interview, released September 2, 2020: https://measureradio.libsyn.com/the-unseen-world-of-food-nanotechnology
- 2020, Society for Risk Analysis Podcast on "COVID-19 Impacts on Risk Research," Panelist, Released May 28: https://hwcdn.libsyn.com/p/6/f/c/6fc5852237b9c67e/SRA_Podcast_Episode_4.m4a?c_id=74151341&cs_id=74151341&expiration=1590690445&hwt=4b54d1359b41f4ea2ff835ba49ec23f4

SERVICE WEBINARS AND ONLINE PRESENTATIONS

- 2022, Society for Risk Analysis, Research Triangle Regional Organization, Co-hosted webinar with Dr. Mark Borsuk: https://ncsu.zoom.us/rec/share/JdRB39tV82Ao0QJrD-EkIc8A7iqhVFJrtR5-KUVxxJc4F_hp_AKSWOoooizF2f-6.53UkaoYOZTZ8m4tF
- 2022, Engaging stakeholders in sustainable phosphorus management. EngageINFEWS Lightning Talks: https://data.nkn.uidaho.edu/story/engageinfews-lightning-talks-2022
- 2021, GRC Connects: Nanoscale Science and Engineering for Agriculture. Oral Presentation. https://www.youtube.com/watch?v=pG6-gFTK0GY
- 2021, Society for Risk Analysis, Research Triangle Regional Organization, Hosted webinar with Dr. Christie Sayes.
- 2020, US FDA, Office of Food Additive Safety (OFAS) Seminar Series. Oral Presentation.
- 2020, US-EU Nano-EHS Communities of Research Workshop: Bridging Insights and Perspectives. Oral Presentation on Evaluating Governance Frameworks to Make Risk-Based Decisions of Nanomaterials: http://tvworldwide.com/events/nanotech/200824/default.cfm?id=17738&type=flv&test=0&live=0
- 2020, The Secondary Risk Society: Risk & Decision-Making in the 21st Century, co-sponsored by the Society for Risk Analysis, GES Center, and RTI International. Webinar host, August 14, 2020: https://research.ncsu.edu/ges/videos/
- 2020, Joint School of Nanoscience & Nanoengineering, at North Carolina A&T State University, Webinar: Ensuring Responsible Innovation of Engineered Nanomaterials: https://www.youtube.com/watch?v=ZjqQG9WNvMU&feature=youtu.be), March 9, 2020.
- 2020, Society for Risk Analysis and Genetic Engineering and Society Center Colloquium on "Careers in Risk Science," Panel moderator: https://mediasite.wolfware.ncsu.edu/online/Play/bff379c57b564b2cb2933a009b8822451d?catalog=436ff975eab64dc5a5646e7812c6877521
- 2024, NC State University Research Symposium, Interdisciplinary Approaches and Responsible Innovation for Developing Real-World Solutions: https://vimeo.com/showcase/11054433/video/926283646
- 2023, STEPS to Tackle Our Phosphorus Paradox. WickedProblems, WolfPack Solutions, NC State: https://www.youtube.com/watch?v=_gatnk0fOQI
- 2023, Future of Genetic Engineering: Broad Transgenic Landscape. Office of Senior Vice Provost for University Interdisciplinary Programs at NC State: https://vimeo.com/gescenterncsu/longview-ge-nature
- 2021, Extension Webinar: Exploring NC State Extension Needs in Environmental Health and Risk. Oral Presentation. https://ncsu.zoom.us/rec/share/OBliNeo9jTtAOaI3jx2LbDKhHK-PDQ-UV7KI-IhVl0RW8HxfXrBdNDbAZ-tzh-cJ.VCHCTYJodSi7CgMy?startTime=1621612344000
- 2021, Center for Human Health and the Environment, NC State. Seminar Series and Career Exposures. Oral Presentation. https://ncsu.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=1bee199b-e4c5-4663-9526-ad5600e00775&start=3812.22984
- 2020, NC State, Department of Applied Ecology, Meet the New Faculty of 2020! (https://cals.ncsu.edu/applied-ecology/news/video-meet-the-new-faculty-of-2020/)
- 2020, NC State Extension Continuing Ed Webinar: Glyphosate: Can we separate fact and fiction? And, how do we control weeds without it? Panelist, July 7, 2020.

- 2020, GES Center Webinar on Perspectives on the new USDA rules for GM crops, Panelist, June 5, 2020: https://mediasite.wolfware.ncsu.edu/online/Play/dfb1f865e8e84f108a29c915b94116cc1d
- 2019, Genetic Engineering and Society Colloquium Seminar on Governance Strategies for Emerging Risks of Solar Radiation Management: https://www.youtube.com/watch?v=YYGEuu4Ks4Q

## SERVICE EXTERNAL TO NC STATE

Committees and Advisory Boards

- Board Member, Society for Risk Analysis (SRA), December 2023 - present
- President, SRA- Research Triangle Regional Organization, 2024
- Advisory Council Member, SRA- Advanced Materials and Technologies Specialty Group, 2021 - present
- Councilor, SRA- Research Triangle Regional Organization, 2023 to 2024
- Judge for Best Poster Award, Sustainable Phosphorus Summit, Raleigh, NC, 2022
- Engagement Committee Member, SRA- Research Triangle Regional Organization, 2021 to 2023
- Advisory Board Member, European Commission-funded project, SusNanoFab, 2021 to 2023
- Advisory Board Member, European Commission-funded project, RiskGONE, 2020 to 2023
- Advisory Board Member, European Commission-funded project caLIBRAte, 2019 to 2020
- Co-Chair for Risk Management & Control Community of Research (COR), EU-US consortia on nano-environmental, health, and safety research, 2019 to present
- Environmental Advisory Board Member, Town of Cary, NC, 2018 to 2024
- Leader of Nanotechnology Workforce, International Union for Conservation of Nature (IUCN), Lausanne, Switzerland, 2014-2017

Chair / Co-Chair for Conference Symposia

- Chair for Society for Risk Analysis (SRA) Annual Meeting, RoundTable on Balancing Innovation and Oversight of Alternative Proteins, 2025.
- Chair for Society for Risk Analysis (SRA) - Europe Annual Meeting, Symposium on Food Safety, 2025.
- Co-organizer for American Association for the Advancement of Science (AAAS) Annual Meeting, Symposium on Enhancing Risk Governance for Emerging Biotechnologies, 2025.
- Chair for Society for Risk Analysis (SRA) Annual Meeting, Symposium on Risk-Benefit Evaluations of Novel Agrifood Technologies Based on Diverse Stakeholder Views, 2024.
- Chair for Society for Risk Analysis (SRA) Annual Meeting, Symposium on Solar Climate Engineering: Risks, Governance and Monitoring, 2024.
- Chair for Society for Risk Analysis (SRA) Annual Meeting, RoundTable on Executive Order on Bioeconomy, 2023.
- Chair for SRA Annual Meeting, Symposium on Risks of Novel Food and Agriculture Technologies through Interdisciplinary Approaches, 2022.
- Co-chair for Phosphorus Forum and Sustainable Phosphorus Summit (Phosphorus Week), November 1-4, 2022.
- Chair for SRA, Symposium on Perceptions and Risks of Advanced Materials and Technologies, 2021.
- Chair for SRA, Symposium on Sustainable Innovation and Development of Advanced Materials, 2020.
- Co-Chair of Symposium NanoSafetyCluster Conference, Copenhagen, DK, 2019.
- Co-Chair of Symposium, From Nanotechnology Risk Management to Innovative Governance: Developing Reliable and Trustable Framework and Tools, Society for Risk Analysis Annual Meeting, 2017.
- Co-Chair of Symposium, Strategic Research Planning for MWCNTs, Society for Risk Analysis, Annual Meeting 2013, Baltimore, MD.
- Conference Session Chair, Integ-Risk and Society for Risk Analysis Annual Meeting, Stuttgart, Germany, 2011.
- Conference Session Chair, Foundational Issues in Philosophy and Ethics, 6th Congress of the European Society for Agricultural and Food Ethics, Oslo, 2006

## SERVICE INTERNAL TO NC STATE

Committees

- Chair for GES Cluster Hire Search Committee, 2025 - present
- Chair for Committee on Well-Being, Dept. of Applied Ecology, NC State, 2025-present
- Research Misconduct Inquiry Committee, Office of Research and Innovation (ORI), 2025
- Outreach Committee Member, Dept. of Applied Ecology, NC State, 2025 - present

- Co-lead for R. L. Rabb Science and Society Symposia Series, NC State, 2024 - present
- Committee on Well-Being (formerly Belonging), Dept. Applied Ecology, NC State, 2020 to 2023, 2024-present
- Executive Assistant Search Committee Member, Depart. of Applied Ecology, NC State, 2024
- Program Associate Search Committee Member, Genetic Engineering and Society (GES) Center, 2024
- Associate Director in Policy and Engagement, Search Committee Member, Genetic Engineering and Society (GES) Center, 2023 to 2024
- Novo Nordisk Foundation (NNF) Program Director Search Committee Member, NC State, 2022 to 2023
- Department Head Search Committee Member, Dept. of Applied Ecology, NC State, 2022 to 2023
- Organizer of Dept. of Applied Ecology Fall Faculty Seminar Series, NC State, 2022

Task Forces and Strategic Planning

- Strategic Task Force Member, Extension Priority 2, Goal 2.2, NC State Extension, 2023
- Sustainability Strategic Planning Task Force Member, College of Agriculture and Life Sciences, NC State, 2023

Panelist and Advisory Roles

- Panel Speaker for Outreach & Engagement Community of Practice, NC State, 2025
- Career Faculty Panelist for STEPS Center, Research Experience for Undergraduates (REU), NC State, 2022, 2025
- Judge for NanoDays 2022 Video competition; College of Engineering, NC State, 2022
- Career Faculty Panelist, Center for Human Health and the Environment, NC State, 2021
- Advisory Board Member, NC State University Analytical Instrumentation Facility (AIF), 2019 to 2020

## JOURNAL AND PROPOSAL SERVICE

Reviewer of Manuscripts and Book Chapters:

*ACS Book, Symposium Series Chapter*
*ACS Applied Materials & Interfaces*
*Advances in Water Resources*
*Agriculture and Human Values*
*BMJ*
*Chemical Papers*
*Chemosphere*
*Computational and Structural Biotechnology Journal*
*Critical Reviews in Toxicology*
*Critical Public Health*
*Critical Public Health*
*Elsevier books*
*Environment International*
*Environmental Modeling & Software*
*Environmental Pollution*
*Environmental Science: Nano*
*Environmental Science & Technology*
*Environmental Systems and Decisions*
*Environmental Science and Pollution Research*
*Environmental Science & Technology Letters*
*Food Research International*
*Journal of Environmental Management*
*Journal of Nanoparticle Research*
*Journal of Occupational Medicine and Toxicology*
*Journal of Zhejiang University-SCIENCE B*
*Management Decision*
*NanoImpact*
*Nature Nanotechnology*
*Nano Today*
*Next Research*
*npj Science of Food*
*Risk Analysis*
*RTI Press*
*Science of the Total Environment*
*Science and Public Policy*
*Science, Technology, and Human Values*
*Technology in Society*

Reviewer of Research Proposals:

- USDA/NIFA AFRI Grant Review Panel member, 2024-2025
- USDA/NIFA conference grant proposals reviewer, 2024
- Institute of Advanced Studies, University Mohammed VI Polytechnic, Morocco, 2024
- R.L. Rabb Science and Society Symposia, NC State 2024
- Mitacs Elevate Proposal, Canada, 2024
- Mitacs Elevate Proposal, Canada, 2022
- USDA/NIFA AFRI Grant Review Panel member, 2020
- NC State, Center for Human Health and the Environment, 2020 Pilot Award
- NC State, Undergraduate Research Awards, 2020
- ETH Zurich Research Commission

- Israel Science Foundation

Editorial Roles for Journals and Scientific Papers:
- Editorial Board Member for *Environment Systems and Decisions*, 2025 to present
- English Editor, Technical University of Denmark, 2005 – 2011
- Ad hoc reviewer for more than 35 journals, 2006 to present

## PROFESSIONAL COURSEWORK & TRAINING
- 2022, 2025: CITI, Human Research - Group 2: Social-Behavioral-Educational Researchers - HSR Basic
- 2022, 2025: CITI RCR Gradebook - CITI Responsible Conduct of Research
- 2022, 2025: CITI Conflicts of Interest
- 2022: NC State Search Committee Training
- 2021 – 2022, 2025 – 2026: NC State Faculty LEAD Program (Leadership Development)
- 2021: NC Water Resources Association Forum; A Hotter, Wetter, More Humid NC; 1 PDH credit hour
- 2021: Center for the Improvement of Mentored Experiences in Research (CIMER) Mentoring Training
- 2020 – 2022: NC State Diversity, Equity, and Inclusion Training
- 2020: Community Engagement Fundamentals Community of Practice through Campus Compact
- 2019: Introduction to NVivo, NC State University
- 2017: International Society of Exposure Science Annual Meeting; Assessing Exposure to Chemicals in Consumer Products for Alternatives Assessment, Life Cycle Assessment, and High-throughput Risk Screening – the Product Intake Fraction Framework Theory and Practical Examples

## PROFESSIONAL MEMBERSHIP
- American Chemical Society (ACS), 2025-present
- American Association for the Advancement of Science (AAAS), 2024-present
- Society for Risk Analysis, 2008-present
- Society of Environmental Toxicology and Chemistry (SETAC), 2005-2011, 2023-present
- American Geophysical Union (AGU), 2009-2010
- European Society for Agriculture and Food Ethics, 2006-2008
- Phi Kappa Phi Honor Society, 1998-1999
- Golden Key National Honor Society, Michigan State University, 1998