

Scott Curtis Merrill

Research Assistant Professor. Pronouns: He/Him
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Education

Ph. D., Ecology, Colorado State University, 2007
B.S., Mathematics, University of Oregon, 1994
B.S., Psychology, University of Oregon, 1994

Professional Appointments

2011-present	Research Assistant Professor , Department of Plant and Soil Science, University of Vermont
2014-present	Managing Director , Social Ecological Gaming and Simulation Laboratory, University of Vermont. http://www.uvm.edu/~segs
2018-present	Gund Fellow , Gund Institute for Environment, University of Vermont
2017-present	Adjunct Professor , Food Systems Program, University of Vermont
2011-present	Faculty Affiliate , Bioagricultural Sciences and Pest Management. Colorado State University
2015	Acting Policy and Governance Team Leader , Research on Adaptation to Climate Change. VT EPSCoR (Track 1)
2015	Acting Social Dimensions Team Leader , North East Water Resources Network. VT EPSCoR (Track 2)
2007-2011	Post-Doctoral Research Fellow , Department of Bioagricultural Sciences and Pest Management, Colorado State University
2005-2007	Research Associate , Department of Bioagricultural Sciences and Pest Management, Colorado State University
2000-2007	Ph.D. Graduate Student , Graduate Degree Program in Ecology, Colorado State University

Professional Interests

Systems ecology, climate change, serious games, data simulation, human behavior and decision-making, risk communication, spatial modeling, landscape ecology, plant-insect interactions, Integrated Pest Management (IPM), biological control, and agent-based modeling

Key Recent Funded Projects and Proposals

USDA NIFA Smith, J., Merrill, S.C., Wolf, C. and Clark, E. 2022-2025. (Co-PI) A systems approach to securing the New England milk supply in the event of a foot-and-mouth disease outbreak. \$1,000,000.

USDA NIFA Niles, M., Merrill, S.C., Schattman, R., Laurent, J., Bertmann, F., Belarmino, E., Yerxa, K., Malacarne, M., McCarthy, A., 2022-2025. (Co-PI) Rural experiences with food insecurity and health during COVID-19 and strategies for future resilience. \$650,000.

USDA FANE. Kleinman, S., Lewins, S., Merrill, S.C., et al. 2022-2024. AgroTek Innovation \$645,856.

Robert Woods Johnson Foundation. Trubek, A., Merrill, S.C., and Morgan, C. 2021-2023. Assessing policy and intervention strategy to improve food security and access to nutritious foods. \$396, 918.

NSF EEID. Zia, A., Koliba, C., Nowak, S., Hanley, J., Merrill, S.C., Hébert-Dufresne, L., Smith, J., Cheney, N., and Shrum, T. 2021-2026. National scale modeling of biosecurity and human behavior. \$2,500,000. 22% FTE

USDA NADPRP. 2021-2023. Smith, J., Merrill, S.C., Cummings, J., Clark, E., and Myers, M. (Co-PI) Secure Food Supply—New England Style. \$263,716.

Gund Institute for Environment UVM. 2020-2021. Koliba, C., Zia, A., Merrill, S.C., Shrum, T., Cheney, N., Nowak, S., and Hanley, J. (Co-PI) COVID-19 Outbreak Behavior Experimental Simulation Game and Survey: Accounting for the Heterogeneity of Human Behavior to Prevent Infection Spread Due to Pro-Environmental Attitudes and Behaviors. \$10,000.

NSF FW-HTF-RL. 2020-2023. Zia and others. (Co-PI) Testing a responsible innovation approach for integrating precision agriculture (PA) technologies with future farm workers and work. \$2,997,792.

UVM Center for Food Systems Research. 2020. Trubek, Tobin, Ament, Morse and Merrill (Co-PI) Embeddedness, Regional Food Systems, and Measures of Social Sustainability. \$41,124.

NSF EPSCoR. 2016-2021. Senior Personnel. Lake Champlain Basin Resilience to Extreme Events. \$20,000,000

USDA-NIFA Agriculture and Food Research Initiative. 2015-2021 (Co-PI) A human behavioral approach to reducing the impact of livestock pest or disease incursions of socio-economic importance. \$7,400,000

Professional and Teaching Activities

Graduate Faculty, Graduate College, University of Vermont
Adjunct Professor, Food Systems Program, University of Vermont

Courses taught:

- Quantitative Thinking in the Life Sciences (Fall 2012-2020). Teaching a quantitative foundation including probability, statistics, modeling, and data simulation.
- Ecological Gaming (Spring 2013-2015, 2019, 2020 and Fall 2013). An examination of the fundamental principles of ecology through the lens of simulation game platforms.
- Experimental Economics: Gaming and Simulation (Fall 2014). Facilitating a team-taught course studying classic experimental economic games and relevant literature
- Guest Lectures: Agroterrorism and Biopiracy

Advising and mentoring:

- Graduate Committees: Stephen Peters-Collaer, Ph.D., Liam Farley, M.S., Andrea Swan, M.S., Jenny Bower Ph.D., Edward Marques Ph.D., Janica Anderzen, Ph.D., Elizabeth-Ann Jamison (2021), Rachel Mason M.S. (Advisor, 2019), Luke Trinity M.S. (Advisor 2019), Alexandra Neidermeier M.S. (2019), Elisabeth Hodgdon Ph.D. (2019), Eric Clark Ph.D. (2018), Chase Stratton, Ph.D. (2018), Kyle Motley M.S. (2017), Rachel Schattman, Ph.D. (2017), Alison Adams M.S. (2016), Sam Talbot, M.S. (2016) and Jamie Ervin M.S. (2016)
- North East Water Resources Network Intern mentor: Luke Trinity (2016), William Nupp (2016), Nour El-Naboulsi (2015), Arkiya Wynn (2015), Sophia Earll (2014) and Roberta Molokandov (2014).
- Honors Thesis: Sophie Kogut (Committee: 2020), Jessica Savage (Advisor: 2018-19), Sam Tuckerman (Committee: 2016) and Ryan Tartre (Committee: 2016)
- Social Ecological Gaming and Simulation undergraduate mentor: Jonas O'Mara (2022-Present), Sam Gusick (2021-Present), Robert Beattie (2018 -Current), Jackie Urbani (2019-Current), Luke Fredrickson (2020-Current), Aislinn O'Keefe (2020-Current), Luke Trinity (2016-2019), Evan Reilly (2017-2019), Yongyi He (2018) and Caitlin Danehy (2015-2016).

Reviewer: *Plos One, Global Change Biology, Pest Management Sciences, Journal of Integrative Agriculture, Journal of Economic Entomology, Elementa, Insect Science, Environmental Entomology, Computers and Electronics in Agriculture, Journal of Pest Science, Journal of Environmental Management, Crop Protection*

External Proposal Reviewer: *Gund Institute Catalyst Awards (2018, 2019), Vermont Genetics Network*

Publications (*Refereed, +Outreach, *Book Section or White Paper)

Ament, J., Tobin, D., Merrill, S.C., Morgan, C., Morse, C., Liu, T., and Trubek, A. (Submitted) From Polanyi to Policy: A tool for measuring embeddedness and designing sustainable economic policies. *Socio-Economic Review*

Shrum, T., Hanley, J., Nowak, S., Zia, A., Koliba, C. J., and Merrill, S.C. (Submitted) Pro-Environmental Attitudes, Altruism, and COVID-19 Risk Management Behavior. *Perspectives on Environmental Health*. <https://osf.io/preprints/socarxiv/fm29j>

Koliba, C. J., Merrill, S. C., Zia, A., Wiltshire, S., Bucini, G., Clark, E., Trinity, L., Shrum, T. and Smith, J. M. (Revise and Resubmit) Synthesizing Micro-Macro Scales in Public Administration through Experimental Simulation Platforms: Assessing Strategic, Tactical and Operational Risk in a Livestock Production Chain.

Zia, A., Delgado, A. H., Bucini, G., Merrill, S.C., Del Rossi, G., Norby, and Smith, J. M. (Submitted) Socio-Psychological Determinants of Cattle Producers' Intent to Comply with Animal Disease Control Measures: A Structural Equation Modeling Approach. *Risk Analysis*

Merrill, S. C., and Schattman, R. E. (Revise and Resubmit) Shifts in geographic vulnerability of U.S. corn crops to pests under four climate change scenarios.

+ Laurent, J., Bertmann, F., Alpaugh, M., Belarmino, E., Bliss, S., Malacarne, J., McCarthy, A. C., Merrill, S. C., Schattman, R. E., Yerxa, K., Niles, M. T. (2022) Change in Food Security and Health Outcomes Since the COVID-19 Pandemic in Northern New England. NFACT National Food and Covid Research Team. *Scholarworks.uvm.edu*. <https://t.co/giVnS8fzWc>

*Niles, M., et al. (Accepted) A Multi-Site Analysis of the Prevalence of Food Security in the United States, before and during the COVID-19 Pandemic. *Current Developments in Nutrition*

*Merrill, S. C., Trinity, L., Clark, E., Shrum, T., Koliba, C. J., Zia, A., Clark, E., Bucini, G., Sellnow, T., Sellnow, D. and Smith, J. M. (2021) Message delivery strategy influences willingness to comply with biosecurity. Journal: *Frontiers in Veterinary Science* Vol. 8. June 2021 . DOI: 10.3389/fvets.2021.667265

*Merrill, S.C., Bucini, G., Clark, E.M., Koliba, C.J., Trinity, L., Zia, A., Langle-Chimal, O., Cheney, N., Shrum, T.R., Sellnow, T., Sellnow, D.D., and Smith, J.M. (2021). Why we need to account for human behavior and decision-making to effectively model the non-linear dynamics of livestock disease. Proceedings of the International Crisis and Risk Communication Conference, Volume 4 (pp. 23-28). Orlando FL: Nicholson School of Communication and Media. <https://doi.org/10.30658/icrcc.2021.06>

+ Niles, M. et al (2021) Food Insecurity Prevalence Across Diverse Sites During COVID-19: A Year of Comprehensive Data. NFACT: National Food Access and COVID Research Team. Research Brief. March 2021. <https://scholarworks.uvm.edu/calrfac/178/>

* Ament, J., Tobin, D., Merrill, S.C., Morgan, C., Morse, C., Liu, T., and Trubek, A. (2021) Operationalizing Embeddedness for Sustainability in Local and Regional Food Systems. White paper submitted to UVM-ARS Center for Food Systems Research. Food Systems Metrics and Data Integration Project. Jan 14, 2021. <https://scholarworks.uvm.edu/arsfoodsystems/6/>

*Schattman, R., Trinity, L., Clark, E., and Merrill, S.C. (2021) Awards: Untapped motivation for agricultural conservation behavior. *Elementa: Science of the Anthropocene*. 9 (1): 00120. <https://doi.org/10.1525/elementa.2021.00120>

*Mason, R., Merrill, S.C., Gorres, J., Faulkner, J., and Niles, M. (2021) Using agricultural models to inform policy: discussion points for researchers and policymakers. Section A. *Journal of Soil*

and Water Conservation. *Journal of Soil and Water Conservation* 76 (1), 10A-14A. DOI: <https://doi.org/10.2489/jswc.2021.0917A>

*Clark, E., Merrill, S. C., Trinity, L., Bucini, G., Cheney, N., Langle-Chimal, O., Koliba, C. J, Zia, A., Shrum, T. and Smith, J. M. (2021) Emulating Agricultural Disease Management: Comparing Risk Preferences Between Industry Professionals and Online Participants Using Experimental Gaming Simulations and Paired Lottery Choice Surveys. *Frontiers in Veterinary Science*. 18 January 2021. <https://doi.org/10.3389/fvets.2020.556668>

*Mason, R., Merrill, S.C., Gorres, J., Faulkner, J., and Niles, M. (2021) Agronomic and environmental performance of dairy farms in a warmer, wetter climate. *Journal of Soil and Water Conservation* 76 (1), 76-88. <https://doi.org/10.2489/jswc.2021.00169>

*Mason, R., Mendez, E. White, A., Anderzen, J., Bucini, G., and Merrill, S.C. (2020) The Evolving Landscape of Agroecological Research. *Agroecology and Sustainable Food Systems*. 4 (45) pp. 551-591. <https://www.tandfonline.com/doi/full/10.1080/21683565.2020.1845275>

*Anderzen, J., Guzmán Luna, A., Gonzalez, D.V.L., Merrill, S.C., Caswell, M., Mendez, E., Jonapá, R.H., and Mier y Terán, M. (2020) Effects of on-farm diversification strategies on smallholder coffee farmer food security and income sufficiency in Chiapas, Mexico. *Journal of Rural Studies* 77: 33-46. DOI: 10.1016/j.jrurstud.2020.04.001

*Mason, R., Gorres, J., Niles, M., Faulkner, J., and Merrill, S.C. (2020) Calibrating the APEX model for simulations of environmental and agronomic outcomes on dairy farms in the northeast US: A step-by-step example. *Applied Engineering in Agriculture*. 36(3): 281-301. doi: 10.13031/aea.13679

*Clark, E., Merrill, S. C., Trinity, L., Bucini, G., Cheney, N., Langle-Chimal, O., Koliba, C. J, Zia, A., Shrum, T. and Smith, J. M. (2020) Using experimental gaming simulations to elicit risk mitigation behavioral strategies for agricultural disease management. *PLoS One* 15(3): e0228983. <https://doi.org/10.1371/journal.pone.0228983>

*Trinity, L., Merrill, S. C., Clark, E., Bucini, G., Koliba, C., Zia, A., and Smith, J. (2020) Effects of Social Cues on Biosecurity Compliance in Livestock Facilities: Evidence from Experimental Simulations. *Frontiers in Veterinary Science*. 7(130). doi: 10.3389/fvets.2020.00130

*Zia, A., Ding, S., Messer, K., Miao, H., Suter, J., Fooks, J., Guilfoos, T., Trandafir, S., Uchida, E., Tsai, Y., Merrill, S., Turnbull, S., Koliba, C., (2020) Characterizing Heterogeneous Behavior of Non-Point Source Polluters in a Spatial Game under Alternate Sensing and Incentive Designs. *Journal of Water Resources Planning and Management*. DOI: 10.1061/(ASCE)WR.1943-5452.0001242.

*Merrill, S. C., Koliba, C. J., Moegenburg, S., Zia, A., Parker, J., Sellnow, T., Wiltshire, S., Bucini, G., Danehy, C. and Smith, J. M. (2019) Decision-making in Livestock Biosecurity Practices amidst Environmental and Social Uncertainty: Evidence from an Experimental Game. *Plos One*. 14(4) doi: 10.1371/journal.pone.0214500. <http://arxiv.org/abs/1811.01081>

*Merrill, S. C., Moegenburg, S. M., Koliba, C. J., Zia, A., Trinity, L., Clark, E., Bucini, G., Wiltshire, S., Sellnow, T., Sellnow, D., and Smith, J. M. (2019) Willingness to comply with biosecurity in

livestock facilities: evidence from experimental simulations. *Frontiers in Veterinary Science*. Vol. 6 (156) <https://doi.org/10.3389/fvets.2019.00156>

*Bucini, G., Merrill, S.C., Clark, E., Moegenburg, S.M., Zia, A., Koliba, C.J., Wiltshire, S., Trinity, L. and Smith J. M. (2019). Risk Attitudes Affect Livestock Biosecurity Decisions With Ramifications for Disease Control in a Simulated Production System. *Frontiers in Veterinary Science* 6(196). doi: 10.3389/fvets.2019.00196.

*Wiltshire, S., Zia, A., Koliba, C., Bucini, G., Clark, E., Merrill, S.C., Moegenburg, S., and Smith, J. (2019) Network Meta-Metrics: Using Evolutionary Computation to Identify Effective Indicators of Epidemiological Vulnerability in a Livestock Production System Model. *Journal of Artificial Societies and Social Simulation*. Vol. 22(2), pages 1-8. <https://ideas.repec.org/a/jas/jasssj/2018-45-2.html>

*Deutsch, C. A., J. J. Tewksbury, S. C. Merrill, R. B. Huey, D. S. Battisti, and R. L. Naylor. (2018) Model vs. experiment to predict crop losses—Response. *Science* 07 DEC 2018 : 1122-1123

*Deutsch, C. A., J. J. Tewksbury, M. Tigchelaar, D. S. Battisti, S. C. Merrill, R. B. Huey, and R. L. Naylor. (2018) Insect metabolic and population growth rates predict increasing crop pest pressure under climate warming. *Science*. Vol. 361 (6405) 916-919. DOI: 10.1126/science.aat3466

*Adams, A., Pontius, J., Galford, G., Merrill, S.C. and Gudex-Cross, D. (2018) Modeling carbon storage across a heterogeneous mixed temperate forest: the influence of forest type specificity on regional-scale carbon storage estimates. *Landscape Ecology*. doi.org/10.1007/s10980-018-0625-0

*Koliba, C.J., Zia, A., and Merrill, S. C. (2018) Using Agent-Based Models to Study Network and Collaborative Governance. Voets, J., Keast, R., and Koliba, C. J. (editors). *Researching Networks and Collaboration in the Public Sector: A Guide to approaches, methodologies, and analytics* (Routledge) Pp. 210-231.

*Sellnow, T. L., Parker, J., Sellnow, D. D., Littlefield, R. S., Helsel, E., Getchell, M. C., Smith, J. M. and Merrill, S. C., (2017) Improving Biosecurity through Instructional Crisis Communication: Lessons Learned from the PEDv Outbreak. *Journal of Applied Communications*. Vol. 101 (4) DOI: 10.4148/1051-0834.1298

** Winner of the 2018 Journal of Applied Communications Article of the Year

*Schattman, R., Mendez, V. E., Merrill, S. C. and Zia, A. (2017) A mixed methods approach to understanding farmer and technical service provider perceptions of climate change and adaptation in Vermont, United States. *Agroecology and Sustainable Food Systems*. 42(2). DOI: 10.1080/21683565.2017.1357667

*Scheinert, S., Zia, A., Koliba, C., and Merrill, S. C. (2017) Growing Collaborations: Forecasting Growth in Partnership Networks Using a Bottom-Up Approach. *Journal on Policy & Complex Systems* 3 (1) DOI: 10.18278/jpcs.3.1.1

- *Merrill, S. C. and F. B. Peairs (2017) Temperature variability is a key component to accurately forecast the effects of climate change on pest phenology. *Pest Management Sciences*. 73 (2) 380-388. DOI: 10.1002/ps.4320
- †Merrill, S. C., Schattman, R. E., (2016) Corn Flea Beetle & Stewarts Wilt in Corn: Shifts in Geographic Vulnerability of U.S. Corn Crops under Different Climate Change Scenarios. United States Department of Agriculture. Climate Hubs.
https://www.climatehubs.usda.gov/sites/default/files/NEClimateHub_Newsletter_July2016_part2_508-2.pdf
- *Merrill, S. C., T. O. Holtzer, F. B. Peairs, and P. J. Lester (2015) Validating spatiotemporal predictions of an important pest of small grains. *Pest Management Science*. 71 (1): 131–138. DOI 10.1002/ps.3778.
- *Merrill, S. C., F. B. Peairs, T. L. Randolph, G. J. Michels Jr. and C. B. Walker (2014) Examining the competitive advantage of *Diuraphis noxia* (Hemiptera: Aphididae) biotype 2 over biotype 1. *Journal of Economic Entomology*. 107 (4): 1471-1475.
- *Merrill, S. C., Walter, S. M., F. B. Peairs, and E. M. Schleip (2013) The distribution of European corn borer moths in sprinkler irrigated corn. *Journal of Economic Entomology*. 106(5):2084-92
- *Kerzicnik, L.M., F.B. Peairs, P.E. Cushing, M. Draney, and S.C. Merrill (2013) Spider Fauna of Semiarid Eastern Colorado Agroecosystems: Diversity, Abundance, and Effects of Crop Intensification. *Environmental Entomology*. 42(1):131-42
- *Merrill, S. C., and F. B. Peairs (2012) Quantifying Russian wheat aphid pest intensity across the Great Plains. *Environmental Entomology*. 41 (5): 1505-1515
- *Pucherelli, S. F., F. B. Peairs, S. C. Merrill, and T. L. Randolph (2012) Russian Wheat Aphid (Hemiptera: Aphididae) Reproduction and Development on Five Noncultivated Grass Hosts. *Arthropod-Plant Interactions*. 6(1): 67-73
- *Merrill, S. C., Walter, S., F. B. Peairs, and J. A. Hoeting (2011) Spatial variability of Western bean cutworm populations in irrigated corn. *Environmental Entomology*. 40(3):654-660
- *Merrill, S. C., A. Gebre-Amlak, J. S. Armstrong, and F. B. Peairs (2010) Degree day prediction models for Sunflower stem weevil (Curculionidae: Coleoptera) development and adult emergence. Pages 9-11 in A. Gebre-Amlak, D. A. Kaan, and J. Deering, editors. Colorado State University Golden Plains Area 2010 Agricultural Handbook. Cooperative Extension, Colorado State University Fort Collins, CO.
- *Merrill, S. C., A. Gebre-Amlak, J. S. Armstrong, and F. B. Peairs (2010) Nonlinear Degree-Day Models of the Sunflower Stem Weevil (Coleoptera: Curculionidae). *Journal of Economic Entomology* 103(2): 303-307

- *Merrill, S. C., T. O. Holtzer, and F. B. Peairs (2010) Examining spatial correlation between fall and spring population densities of the Russian wheat aphid (Hemiptera: Aphididae). *Colorado State Univ. Agric. Exp. Sta. Tech. Rep.* TR10-15
- *Merrill, S. C. and T. O. Holtzer (2010) Estimating Russian wheat aphid (Homoptera: Aphididae) overwintering success using weather data. *Colorado State Univ. Agric. Exp. Sta. Tech. Rep.* TR10-14
- *Merrill, S. C., T. O. Holtzer, F. B. Peairs, and P. J. Lester (2009) Modeling Spatial Variation of Russian Wheat Aphid Overwintering Population Densities in Colorado Winter Wheat. *Journal of Economic Entomology* 102(2): 533-541 DOI: 10.1603/029.102.0210
- *Merrill, S. C., T. O. Holtzer, and F. B. Peairs (2009) Russian Wheat Aphid, *Diuraphis noxia* (Kurdjumov), Reproduction and Development with a Comparison of Intrinsic Rates of Increase to Other Important Small Grain Aphids: A Meta-analysis. *Environmental Entomology* 38(4): 1061-1068 DOI: 10.1603/022.038.0413
- *Merrill, S. C., C. B. Walker, F. B. Peairs, T. L. Randolph, S. D. Haley, and R. W. Hammon (2009) Displacement of Russian wheat aphid, *Diuraphis noxia* (Kurdjumov), Biotype 1 in Colorado by Russian wheat aphid biotypes virulent to the wheat resistance gene *Dn4*. *Colorado State Univ. Agric. Exp. Sta. Tech. Bull.* TB09-01, 19 pp.
- *Randolph, T. L., S. C. Merrill, and F. B. Peairs (2008) Reproductive Rates of Russian Wheat Aphid (Hemiptera: Aphididae) Biotypes 1 and 2 on a Susceptible and a Resistant Wheat at Three Temperature Regimes. *Journal of Economic Entomology* 101 (3): 955-958.
- *Merrill, S. C., T. Randolph, C. B. Walker, and F. B. Peairs (2008) 2007 Russian wheat aphid biotype survey results for Colorado. Pp. 43 - 44 in Johnson, J. J., ed. 2008. Making better decisions: 2007 Colorado wheat variety performance trials. *Colorado State Univ. Agric. Exp. Sta. Tech. Rep.* TR08-08, 47 pp.
- *Merrill, S. C., F. B. Peairs, H. R. Miller, T. L. Randolph, J. B. Rudolph, and E. E. Talmich (2008) Reproduction and Development of Russian Wheat Aphid Biotype 2 on Crested Wheatgrass, Intermediate Wheatgrass, and Susceptible and Resistant Wheats. *Journal of Economic Entomology* 101 (2): 541-545.
- *Peairs, F. B., J. B. Rudolph, T. L. Randolph, and S. C. Merrill (2008) 2007 Colorado field crop insect management research and demonstration trials. *Colorado State Univ. Agric. Exp. Sta. Tech. Rep.* TR08-06, 34 pp.
- +Merrill, S. C., T. L. Randolph, C. B. Walker, and F. B. Peairs (2007) 2007 Russian wheat aphid biotype survey results released. *High Plains Journal*. November.
<http://www.hpj.com/archives/2007/nov07/nov26/2007Russianwheataphidbiotyp.cfm>

*Merrill, S. C., T. L. Randolph, C. B. Walker, and F. B. Peairs (2007) 2006 Russian wheat aphid biotype survey results for Colorado. *High Plains Journal*. April.
<http://www.hpj.com/archives/2007/apr07/apr30/2006Russianwheataphidbiotyp.cfm>

*Randolph, T. L., F. B. Peairs, S. Merrill, M. Koch, and C. B. Walker (2007) Yield Response to Russian Wheat Aphid (Homoptera: Aphididae) in Mixtures of Resistant and Susceptible Winter Wheats. *Southwestern Entomologist*. March. 32 (1): 7-15.

Manuscripts in Revision or Preparation

Merrill, S.C., Nowak, S., Shrum, T., Clark, E., Hanley, J., Koliba, C. J., Zia, A., Fredrickson, L., Beattie, R., Liu, T., and O'Keefe, A. (In preparation) Linking perceptions to simulated behavior: A mixed methods approach using survey instruments and serious games to understand Covid-19 risk mitigation behavior.

Ode, P. J., Cockrell, D., Randolph, T.L., Merrill, S. C., Walker, C. B., Kerzicnik, L.M., Koch, M., & Peairs, F.B. (In Preparation) Effects of the Native Natural Enemy Complex on Russian Wheat Aphid. Target Journal: *Biological Control*

Merrill, S. C., Koliba, C. J., Zia, A., Clark, E., Bucini, G., Wiltshire, S and Smith, J. M. (In Preparation) Decision making under uncertainty: determining strategy heuristics in the domain of animal biosecurity. Target Journal: *Journal of Behavioral Decision Making*

Clark, E., Merrill, S. C., Shrum T., Trinity, L., Bucini, G., Koliba, C., Zia, A., and Smith, J. (In Preparation) Effects of personality and risk attitude on compliance with livestock biosecurity protocols.

Clark, E., Schattman, R., Trinity, L., and Merrill, S.C. (In Preparation) Decision making under uncertainty: Flood and drought effects on planting decisions

Koliba, C. J, Zia, A., Merrill, S. C., Wiltshire, S., Bucini, G., Trinity, L and Smith, J. M. (Submitted) Synthesizing Micro-Macro Scales in Public Administration Through Experimental Simulation Platforms: Assessing Strategic, Tactical and Operational Risk in a Livestock Production Chain. *Journal of Behavioral Public Administration*

Workshop/Symposium Organizer

- Merrill, S. C., Trinity, L., Schattman, R., Clark, E., Koliba, C., Zia, A., Bucini, G., Faulkner, J. and Smith, J. (2019) *Serious games: Agriculture, Climate Change and Water Quality*. Workshop for the Basin Resilience to Extreme Events High School Students and Teachers Training Week. June 18, 2019. Saint Michael's College, Colchester, VT
- Koliba, C. and Merrill, S. C. (2019) Faculty Activity Network. Social Ecological Games and Simulation Laboratory FAN. May 6th, 2019. Office of the Vice President for Research. University of Vermont.
- Merrill, S.C., Bucini, G., Clark, E., and Bass, T. (2018) Webinar. Intersections of Environmental Management and Biosecurity in Animal Agriculture. eXtension.org. December 14, 2018. <https://articles.extension.org/pages/74783/intersections-of-environmental-management-and-biosecurity-in-animal-agriculture>

- Sellnow, D., Merrill, S. C., Sellnow, T., Bucini, G., Clark, E., Smith, J. (2018) Tackling the Risk of Swine Disease - Biosecurity Compliance. Communication Workshop at Holden Farms, Northfield, MN. August 1, 2018
- Koliba, C., Merrill, S. C., Bucini, G., Zia, A., Clark, E., Moegenburg, S. M., and Smith J., (2018) *ADB-CAP Game and Simulation Tuning and Scenario Development Workshop*. University of Central Florida, Orlando, FL. January 10, 2018
- Merrill, S. C., Koliba, C., and Zia, A. (2017) *Addressing Wicked problems: What tools are in the toolbox? Data gathering, data analysis and system simulation*. Symposium. North East Conference on Public Administration. Burlington, VT. November 3rd, 2017
- Merrill, S. C., Bucini, G., and Moegenburg, S. (2017) *Data collection and usage for the study of Social Ecological Systems*. Workshop for Methods in Ecological Economics. Burlington, VT. October 10th, 2017
- Merrill, S. C., and Kujawa, R. (2017) *Interventions and environmental policy in the Lake Champlain Watershed: Adaptation and Resilience in a complex system*. EPSCoR June 26th 2017. Basin Resilience to Extreme Events Intern Professional Development.
- Smith, J., Merrill, S. C., Bucini, G., and Koliba, C., (2017) Presentation and Mediated-Modeling Workshop for USDA stakeholders. *Building towards an Understanding of the Impacts of Human Behavior on Disease in the Swine Industry*. Washington DC, 2017. Part of the USDA supported Animal Disease Biosecurity – CAP grant.
- Koliba, C., Smith, J., Merrill, S. C., Bucini, G., and Moegenburg, S. S., (2016) Mediated-Modeling Workshop. *Building towards an Understanding of the Impacts of Human Behavior on Disease in the Swine Industry*. Mankato, Minnesota 2016. Part of the USDA supported Animal Disease Biosecurity – CAP grant.
- Merrill, S. C., and Kujawa, R. (2016) *Research Outcomes: Experimental Gaming and governance structures*. EPSCoR July 5th 2016. Research on Adaptation to Climate Change and North East Water Resources Intern Professional Development. Co-organizer Richard Kujawa
- Merrill, S. C. Three-Day Writing Challenge. University of Vermont: January 2021, June 2019, August 2018, January 2017, August 2016 and January 2015
- Merrill, S. C. The Art of the Introduction. Ecology, Evolution, and Environmental Biology seminar series. University of Vermont. February 14, 2018

Oral Presentations

Merrill, S.C., Eric Clark, Gabriela Bucini, Christopher Koliba, Luke Trinity, Nick Cheney, Ollin D. Langle-Chimal, Asim Zia, Trisha Shrum, Robert Beattie, Jackie Urbani, Tung-lin Lui, Aislinn O’Keefe, Serge Wiltshire and Julia M. Smith (2021) A modeler’s dilemma: should we include irrationality and human vagaries in model predictions? *University of Vermont Extension CALSX Cells to Society*, Burlington, Vermont. Invited talk December 2021.
<https://www.uvm.edu/extension/calsx-cells-society>

Clark, E. M., G. Bucini, S. C. Merrill, O. Langle-Chimal, C. Koliba, L. Trinity, N. Cheney, T. Shrum, A. Zia, and J. M. Smith (2021) Linking experimental games with agent based models to quantify agricultural outbreak dynamics. *Conference of Research Workers in Animal Disease (CRWAD)*. December 2021. Chicago, IL.

Merrill, S.C., Schattman, R., Trinity, L., and Clark, E. (2021) Motivators of agricultural conservation practice adoption. Vermont EPSCoR Annual Meeting. August 2021. Burlington, Vermont.

Trubek, A., Merrill, S.C., Morgan, C. (2021) Invited talk: Race Against Rot: Supplying Food Deserts. Middlebury College panel discussion. Virtual. May 4, 2021

Merrill, Scott C., Gabriela Bucini, Eric M. Clark, Christopher J. Koliba, Luke Trinity, Asim Zia, Ollin Langle-Chimal, Nicholas Cheney, Timothy Sellnow, Deanna Sellnow, and Julia M. Smith (2021) Why we need to account for human behavior and decision-making to effectively model the non-linear dynamics of livestock disease. International Crisis and Risk Communication Conference (March 2021) Online – Orlando Florida March 8-10, 2021. Oral poster presentation

Merrill, S.C., (2021) An introduction to R: Opening the door to a friendly and useful software package. American Dairy Science Association Graduate Student Division Statistics Webinar Series. March 2021

Merrill, S. C. (2021) *Why should you use R?* University of Vermont Food Systems Brownbag lunch series. January 2021

Merrill, S. C., Clark, E., Bucini, G., Koliba, C., Trinity, L., Cheney, N., Langle-Chimal, O. D., Sellnow, T., Sellnow, D., Zia, A., Shrum, T., Beattie, R., Urbani, J., Wiltshire, S., and Smith J. M. (2020) Invited Talk: *Systems Approach to Understanding Biosecurity Decision-Making*. ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show, July 2020

Koliba, C.J. and Merrill, S.C., (2020) Playing Games to Prevent Diseases on Farms?! An introduction to the serious games and simulations of the SEGS Lab. QuarantEEN Virtual Science Café. University of Vermont Extension. June 3, 2020. <https://youtu.be/jTvwaaUotIQ>

Bucini, G., Clark, E., S. C. Merrill, A. Zia, C. Koliba, L. Trinity, N. Cheney, O. Langle, T. Shrum, R. Schattman, R. Beattie, J. Urbani, S. Wiltshire and J. M. Smith (2020) Digital Tools for Risk mitigation: The intriguing side of human behavior. Plant and Soil Science Department Raymond Series Seminar. January 31, 2020. Burlington, VT

Clark, E., S. C. Merrill, S. Moegenburg , L. Trinity, G. Bucini, C. Koliba, A. Zia, and J. M. Smith. Simulating Outbreak Scenarios For Distinguishing Risk Mitigation Behavioral Strategies Across Agricultural Production Networks. The International Society for Economics and Social Sciences of Animal Health (ISESSAH). Atlanta, Georgia, USA. July 2019.

Bucini, G., E. Clark, S.C. Merrill, A. Zia, C.J. Koliba, S. Wiltshire, S.M. Moegenburg, G. Tonsor, L.L. Schulz, L. Trinity and J.M. Smith. Risk messages, biosecure behaviors and economic effects: connecting livestock disease to human decision-making. The International Society for Economics and Social Sciences of Animal Health (ISESSAH). Atlanta, Georgia, USA. 21 July, 2019.

Merrill, S. C., L. Trinity, C. J. Koliba, S. M. Moegenburg, T. Sellnow, E. M. Clark, A. Zia, G. Bucini, S. Wiltshire, and J. M. Smith (2019) Serious Games and Decision Making. *Symposium: Animal Disease Biosecurity Coordinated Agricultural Project*. Washington D.C., May 15th, 2019

Zia, A., A. Delgado, G. Bucini, S. Merrill, C. Koliba, G. Del Rossi, B. Norby, S. Moegenburg, J. Smith. March 7, 2019. Socio-Psychological Determinants of Cattle Producers' Intent to Comply with Animal Disease Control Practices: A Structural Equation Modeling Approach. American Society for Public Administration (ASPA) 2019 Annual Conference, Washington, DC

Zia, A., S. Merrill, C. Koliba, E. Clark, G. Bucini, G. Del Rossi, N. Cheney, O. Chimal, T. Shrum, S. Moegenburg, J. Smith. May 1, 2019. Identifying leverage points for biosecurity risk management using massive online games and agent-based models. Netsci 2019, Burlington, VT

Merrill, S. C., E. Clark, O. Langle, C. J. Koliba, S. M. Moegenburg, A. Zia, N. Cheney, T. Sellnow, S. Wiltshire, G. Bucini, L. Trinity, and J. M. Smith (2019) Willingness to Invest in Livestock Biosecurity. Evidence from Digital Field Experiments. *Symposium: Animal Disease Biosecurity Coordinated Agricultural Project*. Washington D.C., May 15th, 2019

Bucini, G., E. Clark, O. Langle, S. C. Merrill, A. Zia, C.J. Koliba, S. Wiltshire, S.M. Moegenburg, G. Tonsor, L.L. Schulz, L. Trinity, N. Cheney and J.M. Smith (2019) A Simulated Production System for Strategic Decisions on Disease Control. *Symposium: Animal Disease Biosecurity Coordinated Agricultural Project*. Washington D.C., May 15th, 2019

Trinity, L., S. C. Merrill, G. Bucini, E. Clark, C. Koliba, A. Zia, S. Wiltshire, S. Moegenburg, T. Sellnow, D. Sellnow and J. M. Smith. (2019) Effects of Message Delivery Method on Biosecurity Compliance: Evidence from an Experimental Game. International Crisis and Risk Communication Conference, Orlando, FL. March 2019

Merrill, S.C. and Hall, R. (2018) How to prepare for growing crops and food security when the climate is changing. Compression Institute. Invited conversation. December 18, 2018 Pre-talk recording: https://zoom.us/recording/play/XV48Bl6wcOxFODtonS_pojb3lc9ZSy1gwLINA_Z1aF-uvDTKWQaq5oXIf7UIhvju?continueMode=true

Bucini G., E. Clark, S. C. Merrill, C. J. Koliba, A. Zia, S. Wiltshire, L. Trinity, S. M. Moegenburg, and J. M. Smith. (2018) The role of human behavior in biosecurity adoption: interactive tools for intervention strategies. Oral presentation. PIC Health Assurance Annual Fall Meeting, 28-29 Nov. 2018, Cerdanyola del Vallés, Spain.

Merrill, S. C. (2018) Climate change will affect insect metabolism, population growth rates and spatial distributions with direct consequences for plant hosts. Marvin Seminar Series. Plant Biology. University of Vermont. September 6, 2018 Burlington, VT

Koliba, C. J., Merrill, S. C., Zia, A. (2018) *Influence of risk communication on livestock biosecurity protocol adoption across two gaming platforms: Implications for tactical and operational decision making*. XXII International Research Society for Public Management Conference. Edinburgh, Scotland

Koliba, C. J., Zia, A., Merrill, S. C. (2018) *Using Agent-Based Models to Prototype Governance and Policy Designs*. XXII International Research Society for Public Management Conference. Edinburgh, Scotland

Bucini G., E. Clark, S. C. Merrill, S. M. Moegenburg, S. Wiltshire, A. Zia, C. J. Koliba, and J. M. Smith. (2018) Perceptions and risk attitudes affect biosecurity investment and compliance decisions with ramifications for disease control and economics at the hog production supply chain level. Oral presentation. Allen D. Lemay Swine Conference, Saint Paul, MN. September 15-18.

Moegenburg, S. M., Merrill, S. C., Koliba, C. J., Zia, A., Trinity, L., Clark, E., Bucini, G., Wiltshire, and Smith, J. M. (2018) Effects of disease risk, information certainty, and messaging on biosecurity practices on livestock facilities: evidence from experimental simulations. Oral presentation. IESSAH-InnovSur 2018 Conference, Montpellier, France. May 14- 18.

Bucini G., S. Wiltshire, E. Clark, S. C. Merrill, C. Koliba, A. Zia, L. Trinity, S. Moegenburg, and J. M. Smith. (2018) Inter-active model-based tools for animal disease simulation and intervention strategies. Oral presentation. IESSAH-InnovSur 2018 Conference, Montpellier, France. May 14-18.

Zia A., C. Koliba, S. Merrill, G. Bucini, E. Clark, S. Wiltshire, S. Moegenburg, J. Smith. September 23, 2018. Identifying leverage points for biosecurity risk management using massive online games and agent-based models. Conference on Complex Systems, Thessaloniki, Greece

Bucini G., E. Clark, J. M. Smith, S. C. Merrill, A. Zia, C. Koliba, S. Moegenburg, S. Wiltshire, L. Trinity, and E. Reilly. (2018) Interactive tools for simulation of biosecurity adoption and animal disease control. Seminar. Animal and Veterinary Science Dept., University of Vermont, Burlington, VT. February 16.

Merrill, S. C., Koliba, C., Moegenburg, S., Clark, E., Bucini, G., Zia, A. and Smith, J. M. (2017) *Serious Games: Data gathering, complex systems analysis and nudging*. North East Conference on Public Administration. Burlington, VT. November 3.

Koliba, C. J., Zia, A., and Merrill, S. C. (2017) Utilization of Computer Simulation and Serious Games to Inform Livestock Biosecurity Policy and Governance. Conference on Complex Systems. September.

Bucini, G, S Wiltshire, E Clark, S Merrill, A Zia, C Koliba, S Moegenburg, L Trinity, J Smith. (2017) Protecting herd health: Interactive agent-based modeling used to reduce the impact of disease. Larner College of Medicine 2017 Celebration of Excellence in Research. Burlington, Vermont. November.

Koliba, C, A Zia, S Merrill, S Wiltshire, G Bucini, S Moegenburg, J Smith. (2017) Gamification of decision support tools. Conference on Complex Systems, Cancun, Quintana Roo, Mexico. September.

Bucini, G., S. Wiltshire, S. Merrill, A Zia, C. Koliba, E. Clark, L. Trinity, S. Moegenburg, J. Smith. (2017) Regional U.S. Hog Production Chain Biosecurity Model. Agent-based Modeling - ABM17- A Symposium that advances the science of ABMs. San Diego, California. April

Bucini, G., S. Wiltshire, S. Merrill, A. Zia, C. Koliba, E. Clark, L. Trinity, S. Moegenburg, J. Smith. (2017) "Where will the Infection Spread? Effects of Movement Networks and Human Risk Attitude on Spread of Swine Disease." Agent-based Modeling - ABM17- A Symposium that advances the science of ABMs. San Diego, California. April

Zia, A., Merrill, S. C., Koliba, C. J., Moegenburg, S., Wiltshire, S., Clark, E., Bucini, G. and Smith, J. M. (2017) Are Human Agents Myopic or Far-Sighted Under Differential Conditions of Risk and Ambiguity? A Bayesian Network Model of Biosecurity State Transitions in a Sequential Decision Experiment. Conference on Complex Systems. September 2017

Koliba, C, A. Zia, S. Merrill, S. Wiltshire, J. Smith, G. Buccini, S. Moegenburg. (2017) Utilization of computer simulation and serious games to inform livestock biosecurity policy and governance. Public Management Research Conference, Washington, DC. June 8-10, 2017.

Bucini, G., S. Merrill, C. Koliba, A. Zia, S. Wiltshire, E. Clark, L. Trinity, S. Moegenburg, and J. Smith. (2017) Hog production chain biosecurity model. Northeast Conference on Public Administration. November 3, 2017, Burlington, Vermont.

Koliba, C., A. Zia, S. Merrill, G. Bucini, E. Clark, S. Moegenburg, and J. Smith. (2017) Addressing wicked problems: What tools are in the toolbox? Serious gaming and system simulation. Northeast Conference on Public Administration. November 3, 2017, Burlington, Vermont.

Zia, A, C Koliba, S Merrill, E Clark, G Bucini, J Smith, S Moegenburg. (2017) Using Agent-based Models to address wicked problems. North East Conference on Public Administration. Burlington, Vermont. November

Merrill, S.C., Zia, A., Koliba, Wiltshire, S., Smith, J., and Moegenburg, S. (2016) Innovation in ABM calibration: Using experimental gaming data to inform agent rule sets. Swarmfest 2016. Agent-based Modeling. Burlington, Vt

Turnbull, S., Tsai, Y., Zia, A., and Merrill, S.C (2016) A Method for Defining Drainage Basins and Water Sensors within a Water Quality Modeling ABM. Swarmfest 2016. Agent-based Modeling. Burlington, Vt

Merrill, S. C. (2016) Experimental Gaming Research, gathering data to understand Social-Ecological Systems. Plant and Soil Science Departmental Seminar. Burlington, VT

Merrill, S. C. (2016) Experimental gaming research: the next step in data gathering and complex systems analysis. Research on Adaptation to Climate Change Retreat. Burlington, VT.
http://epscor.w3.uvm.edu/2/node/2202?URL=http://www.uvm.edu/~epscor/jwplayer.php?video=video/2_6_2016_21_Scott%20Merrill-19.mp4

Zia, A., S. Merrill, C. Koliba, S. Moegenburg, S. Wiltshire, E. Clark, G. Bucini, J. Parker, and J. Smith. Machine Learning. (2016) The Effects of Biosecurity State Transitions in a Sequential Decision Game. Annual BayesiaLab Conference and Advanced BayesiaLab Course, Nashville, TN. September 2016.

Wiltshire, S., Logan, K., Merrill, S. C., Fooks, J. Koliba, C. J. (2015) Policy Implications from a Social Learning Economics Experiment Addressing Dairy Farm Rotational Grazing. American Society for Public Administration, March 6-10, 2015 Chicago IL

Merrill, S. C., (2014) The value of simulations: *Bt* Corn and the European corn borer. Ecology, Evolution, and Environmental Biology Talk. University of Vermont

Merrill, S. C., Tewksbury, J.J., Deustch, C. A., Battisti, D. S., Naylor, R. L. (2012) Using relationships between temperature, metabolism and consumption to predict the effects of climate change on pest pressure. Invited symposium. Entomological Society of America Annual Meeting. November. Knoxville, TN

Merrill, S. C., Tewksbury, J.J., Deustch, C. A., Battisti, D. S., Naylor, R. L. (2012) Using relationships between temperature, metabolism, and consumption to predict damage from pests in our changing climate. Plant and Soil Science Weekly Seminar Series

Merrill, S. C. (2012) Predicting the effects of climate change on agricultural pest incidence: How secure is our food supply? Invited seminar for the Interdisciplinary Climate Change Seminar series. University of Idaho. March 2012. Moscow, ID

Battisti, D. S., Tewksbury, J. J. Deutsch, C. A., Merrill, S. C., and Naylor, R. L. (2012) Heat and Insect Pest Pressures on Global Food Production due to Global Warming. Planet Under Pressure conference. March 2012. London, UK

Merrill, S. C. (2011) A Series of Surprises: Modelling the Pest Agroecosystem Landscape. Commonwealth Scientific and Industrial Research Organization (CSIRO) Brisbane. June 2011. Brisbane, Australia

Merrill, S. C. (2011) Revisiting our assumptions about the pest agroecosystem landscape. NCEAS (National Center for Ecological Analysis and Synthesis) Ecolunch Seminar Series. June 2011. Santa Barbara, CA

Merrill, S. C. (2011) Could Organic Farming Threaten Our Food Supply? Host: Ranganathan, J. on Curiouser and Curiouser. Miller-McCune. Podcast. <http://www.miller-mccune.com/curiouser/could-organic-farming-threaten-our-food-supply-34734/>

Merrill, S. C. (2010) Understanding the link between Precision Agriculture and Landscape Ecology. NCEAS (National Center for Ecological Analysis and Synthesis) Ecolunch Seminar Series. April 2010. Santa Barbara, CA

Merrill, S. C. (2006) Modeling the Spatial and Temporal Variation of Russian Wheat Aphid, *Diuraphis Noxia* (Homoptera: Aphididae) Overwintering Densities in a Colorado Cropping System. Proceedings of the Entomological Society of America. Entomological Society of America Meeting. December 2006. Cincinnati, OH

Merrill, S. C. (2005) Modeling overwintering densities of Russian wheat aphids. Department of Bioagricultural Sciences and Pest Management Seminar series. Colorado State University. November. Fort Collins, CO

Merrill, S. C. (2005) Modeling overwintering Russian wheat aphid densities in a cropping system in Colorado. Proceedings of the International Association of Landscape Ecologists. IALE Meeting March 2005. Syracuse, NY

Merrill, S. C., T. O. Holtzer, F. B. Peairs, and J. E. Cipra (2004) Modeling spatial and temporal densities of the Russian wheat aphid. Proceedings of the Ecological Society of America. Ecological Society of America Meeting 2004. Portland, OR

Poster Presentations

Smith, J. M., T. M. Bass, G. Bucini, N. A. Cheney, E. Clark, J. Cummings, M. C. Getchell, E. A. Greene, L. E. Higgins, K. M. Hiney, J. O. Iverson, S. R. Kerr, C. J. Koliba, E. Kristiansen, R. S. Littlefield, J. M. Martin, J. McDonald, S. C. Merrill, S. Moegenburg, M. Myers, J. S. Parker, J. M. Rankin, L. Schulz, D. Sellnow, T. L. Sellnow, R. Sero, G. Tonsor, and A. Zia (2019) Taking a transdisciplinary approach reveals new insights for protecting food animal health. Conference of Research Workers in Animal Health. Chicago, IL. November 2019

Smith, J.M., Bass, T., Bucini, G., Dritz, S., Kerr, S., Koliba, C., Littlefield, R., McDonald, J., Merrill, S. C., Parker, J., Rankin, J., Schulz, L., Sellnow, D., Sellnow, T., Sero, R., Tonsor, G., and Zia, A., (2017) A human behavioral approach to reducing the impact of livestock pest or disease incursions of socio-economic importance. United States Department of Agriculture, National Institute of Food and Agriculture Project Directors Meeting, Washington D.C.

Mason, R., J. Gorres, and Merrill, S. C. (2017) Resilience & viability of dairy farms in a warmer, wetter Vermont. No-Till & Cover Crops symposium. February 2017. Burlington, VT.

Trinity, L., S. C. Merrill, N. El-Naboulsi, and W. Nupp (2016) A Social-Ecological Experimental Game Examining Farmers' Willingness to Install Vegetative Buffer Strips. North East Water Resources Network Student Symposium. Kingston, RI

Wynn, A., W. Nupp, E. Uchida, S. C. Merrill, H. Miao and L. Trinity (2016) How Farmer's Decisions Change in Response to Weather and Price Uncertainty. North East Water Resources Network Student Symposium. Kingston, RI

El-Naboulsi, N., Merrill, S. C., Wynn, A., Koliba, C. J., Zia, A. (2016) Decision-Making Processes in Relation to Fertilizer Use, Revenue, and Vegetative Buffer Installation. Vermont EPSCoR Student Symposium, Burlington, VT

Wynn, A. and Merrill, S.C. (2015) An experimental game to test the effect of weather forecast uncertainty and sell price uncertainty on manure storage management decision. North East Water Resources Network Student Symposium. Burlington, VT

Scheinert, S., Koliba, C., Zia, A., Tsai, Y., Merrill, S. C., and Coleman, S. (2015) Bridging the Meso and Micro level scales of social complexity with a Socio-Ecological System. NSF EPSCoR National Conference, Portsmouth, NH. November 1-3, 2015. Poster Presentation.

Merrill, S. C. and F. B. Peairs (2011) The perils of linear thinking: modeling the effects of climate change on insect pest dynamics. Entomological Society of America Annual Meeting. November. Reno, NV

Randolph, T. L., C. Walker, S. C. Merrill, M. Koch and F. B. Peairs (2011) Regulation of Russian wheat aphid (*Diuraphis noxia*) populations with natural enemies present in the wheat system. Entomological Society of America Annual Meeting. November. Reno, NV

Merrill, S. C. and F. B. Peairs (2010) How will climate change affect the risk of crop infestation by the Russian wheat aphid. USDA-Agriculture & Food Research Initiative. Arthropods & Nematodes Biology & Management Programs Awardee Workshop. December. San Diego, CA

Merrill, S. C. and F. B. Peairs (2010) How will climate change affect the risk of crop infestation by the Russian wheat aphid. Entomological Society of America Annual Meeting. December. San Diego, CA

Merrill, S. C. and F. B. Peairs (2010) Developing Outbreak Prediction Models to Improve Russian Wheat Aphid Pest Management Strategy. USDA-Agriculture & Food Research Initiative. Arthropods & Nematodes Biology & Management Programs Awardee Workshop. March. Washington, DC

Merrill, S. C. (2006) Developing Site-Specific Insect Management Zones, Loss Factors, and Economic Injury Levels for Economically Important Pests of Corn in Colorado. Proceedings of the Eighth International Conference on Precision Agriculture and Other Precision Resources Management. Eighth International Conference on Precision Agriculture and Other Precision Resources Management. July. Minneapolis, MN

Merrill, S. C., P. J. Lester, T. O. Holtzer, J. E. Cipra, F. B. Peairs and J. Norman (2003) Modeling overwintering success of the Russian wheat aphid. Proceedings of the International Association of Landscape Ecologists. IALE Meeting April 2003. Banff, Canada

Media

Scientia global. Outreach publication describing the Animal Disease Biosecurity project.

- ADBCAP: A Human Approach to Improving Biosecurity.
<https://www.scientia.global/adbcap-a-human-approach-to-improving-biosecurity/>
<https://www.scientia.global/wp-content/uploads/ADBCAP/ADBCAP.pdf>
- Audiobook: <https://www.scipod.global/adbcap-a-human-approach-to-improving-biosecurity/>

Associated with the Social Ecological Gaming and Simulation lab

- Across the Fence WCAX. https://www.youtube.com/watch?v=N-TeBfKe7j8&feature=youtu.be&list=PLJoQQE_ygD_uUv7toBtYG8O1V1O25c6mo

Associated with Deutsch et al 2018 “Insect metabolic and population growth rates predict increasing crop pest pressure under climate warming”. *Science*:

- EurekAlert! Global warming: More insects, eating more crops
https://eurekaalert.org/pub_releases/2018-08/uov-wcw082718.php
- <https://www.mynbc5.com/article/study-says-climate-change-brings-more-insects-hungrier-for-crops/23060736> . Reporter: Pascale, Jackie
- <https://www.nytimes.com/aponline/2018/08/30/science/ap-us-sci-warming-hungry-bugs.html>
- <https://apnews.com/90f113cd1c6a40cba71930d77e0148c7/Global-warming-could-spur-more-and-hungrier-crop-eating-bugs>
- <https://www.reuters.com/article/us-global-climatechange-crops/hotter-climate-means-hungrier-insects-will-munch-millions-more-tons-of-crops-idUSKCN1LF2BU>
- <https://www.theguardian.com/environment/2018/aug/30/crop-losses-to-pests-will-soar-as-climate-warms-study-warns>
- <https://www.nbcnews.com/health/health-news/global-warming-may-cause-insects-gobble-more-crops-study-finds-n905186>
- <https://www.yahoo.com/news/global-warming-insects-hungrier-eating-key-crops-study-182427531.html>
- <https://www.cbc.ca/news/technology/insects-climate-change-1.4805183>
- <https://www.bbc.co.uk/news/science-environment-45358643>
- https://www.lemonde.fr/climat/article/2018/08/30/le-rechauffement-favorise-le-ravage-des-recoltes-par-les-insectes-nuisibles_5348257_1652612.html
- Seed Today (2018) Q4. Crop Research: More Insects, Eating More Crops. Pgs 114-115
<http://edition.pagesuite.com/launch.aspx?pbid=5e77f606-60e2-4fd9-9f38-92a132864061>

Climate change: Farmers and foresters confront new pests, fear the ‘next thing’. Vermont Digger. 2019.

- <https://vtdigger.org/2019/09/19/climate-change-farmers-and-foresters-confront-new-pests-fear-the-next-thing/>

Regarding Basin Resilience to Extreme Events project

- Emmy award winning PBS special “Saving our waters”
<https://www.vermontpbs.org/water/> . Episode 3. 2017

Regarding Climate Change UN Special Report 2018 1.5C:

- Neliana Ferraro (2018) WCAX Climate Change. How will 1.5C impact us?
<https://www.wcax.com/content/news/Researchers-Climate-change-predictions-will-have-local-impact-495973541.html>

Regarding Animal Disease publications from Spring/summer 2019

- Seven Days - <https://www.sevendaysvt.com/vermont/uvm-researchers-use-video-games-to-help-pigs-from-getting-sick/Content?oid=28218583>
- WCAX, “You Can Quote Me”, Cat Viglienzoni reporting:
<https://www.wcax.com/content/news/YCQM-July-14-2019-512704071.html>

- WCAX, Cat Viglienzoni reporting: <https://www.wcax.com/content/news/How-video-games-could-help-protect-the-agriculture-industry-512271911.html>
- USDA NIFA website: <https://content.govdelivery.com/accounts/USDANIFA/bulletins/24f4150>
- University of Vermont - https://www.uvm.edu/cals/news/video-games-offer-clues-help-curb-animal-disease-outbreaks?utm_source=CALS&utm_medium=email&utm_campaign=SEGS
- Voice of America - <https://www.voanews.com/silicon-valley-technology/video-game-helps-farmers-fight-disease>. -- syndicated to several online news sites as well (ex: Hawaii Telegraph, AsiaPacificNews.net, Newsgram.com).
- Labroots - <https://www.labroots.com/trending/technology/15090/video-game-reduce-animal-disease-outbreaks>.
- Science Daily - <https://www.sciencedaily.com/releases/2019/06/190625102430.htm>
- ScienMag: Science Magazine (scienmag.org): <https://scienmag.com/video-games-offer-clues-to-help-curb-animal-disease-outbreaks/>
- Feedstuffs.com - <https://www.feedstuffs.com/news/video-games-offer-clues-help-curb-animal-disease-outbreaks>
- Serious Games: Investigating Behavioral Approaches to Biosecurity. <https://agbiosecurityproject.org/serious-games-biosecurity/>
- Phys.org - <https://www.longroom.com/discussion/1536611/video-games-offer-clues-to-help-curb-animal-disease-outbreaks>
- Science Codex - <https://www.sciencecodex.com/video-games-offer-clues-help-curb-animal-disease-outbreaks-628234>
- Newsgroove.co.uk - <https://www.newsgroove.co.uk/video-games-offer-clues-to-help-curb-animal-disease-outbreaks-tri-state-livestock-news/>
- Newscaf - http://www.newscaf.com/technology/video-games-offer-clues-to-help-curb-animal-disease_1137659.html
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