

# EMILY BURCHFIELD

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## RESEARCH AND TEACHING INTERESTS

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Food system sustainability, geospatial programming and analysis

## APPOINTMENTS

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### Emory University

*August 2019 - present*

Associate Professor, May 2025 - present

Assistant Professor, August 2019 - May 2025

Department of Environmental Sciences

Emory College of Arts and Sciences

### Utah State University

*August 2017 - July 2019*

Assistant Professor of Geospatial Analysis

Department of Environment and Society

Quinney College of Natural Resources

## EDUCATION

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### Vanderbilt University

*May 2017*

Ph.D. in Environmental Engineering

### University of Louvain, Belgium

*July 2012*

M.A. in Economics, Grande Distinction

### Clemson University (dual degree)

*May 2010*

B.A. in Economics

Magna Cum Laude, Honors College, Phi Beta Kappa

### University of Louvain, Belgium (dual degree)

*May 2010*

B.S. in Economics and Management

Transatlantic Exchange in Economics Scholar

## 1. RESEARCH

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[Google Scholar profile](#)

### 1.1. PEER-REVIEWED JOURNAL ARTICLES

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\*Graduate or postdoctoral mentee

35. Spangler, K.\*, Rissing A.\*, **Burchfield, E.**, Schumacher, B.\*, Powell, B., Siegel, K. (2025) Nutritious monocultures? Where and how fruits and vegetables are produced in the US. *In press at Global Food Security*.
34. **Burchfield, E.**, Ferro, M., Hüttel, S., Lakes, T., Niedermayr, A., Rissing, A.\*, Seifert, S., Wesemeyer, M. (2024). Towards a comparative analysis of agricultural land systems in the EU and US: A critical comparison of publicly available datasets. *147*(107371). *Land Use Policy*. <https://doi.org/10.1016/j.landusepol.2024.107371>.
33. Ribert Francois, J.\*, Nelson, K., **Burchfield, E.** (2024). Linking Diversity – Productivity Conditions of Farming Systems with the Well-Being of Agricultural Communities. *16*(16), 6826. *Sustainability*. <https://doi.org/10.3390/su16166826>

32. Christman, M.<sup>\*</sup>, Spears, L., **Burchfield, E.**, Pearse, W., Strange, J., Ramirez, R. (2024) Bumble bee responses to climate and landscapes: Investigating habitat associations and species assemblages across geographic regions in the United States of America. *Global Change Biology*, 30, e17380. <https://doi.org/10.1111/gcb.17380>
31. Haycock, S., Bean, B., **Burchfield, E.** (2024). Producing fast and convenient machine learning benchmarks in R with the stressor package. In press at *Journal of Data Science*.
30. **Burchfield, E.**, Crossley, M., Nelson, K. (2024). Rotational complexity across US counties is currently insufficient to observe yield gains in major crops. 19(4). *Environmental Research Letters*. <https://doi.org/10.1088/1748-9326/ad300b>
29. Schnur, S.<sup>\*</sup>, Maki, C.<sup>\*</sup>, **Burchfield, E.** (2024) Farmers Need the Land: Georgia's Agricultural Future in the Patchy Anthropocene. 107, 103259. *Journal of Rural Studies*. <https://doi.org/10.1016/j.jrurstud.2024.103259>.
28. Rissing, A.<sup>\*</sup>, **Burchfield, E.** (2024). Crop diversification as landscape change: Using land systems science to understand agricultural trajectories in North Carolina. 24(3). *Regional Environmental Change*. <https://doi.org/10.1007/s10113-023-02162-8>
27. Briske, D., Archer, S. **Burchfield, E.**, Burnidge, W., Derner, J., Gosnell, H., Hatfield, J., Kazanaski, C., Khalil, M., Lark, T., Nagler, P., Sala, O., Sayre, N., Stackhouse-Lawson, K. (2023). Supplying ecosystem services on US rangelands. *Nature Sustainability*. <https://www.nature.com/articles/s41893-023-01194-6>
26. Rissing, A.<sup>\*</sup>, **Burchfield, E.**, Spangler, K.<sup>\*</sup>, Schumacher, B.<sup>\*</sup> (2023). Implications of U.S. agricultural data practices for sustainable food systems research. 4, 213-217. *Nature Food*. <https://doi.org/10.1038/s43016-023-00711-2>
25. Schumacher, B.<sup>\*</sup>, **Burchfield, E.**, Brennan, B., Yost, M. (2023). Leveraging important covariate groups for corn yield prediction. 13(3), 618. *Agriculture*. <https://doi.org/10.3390/agriculture13030618>
24. Nelson, K. and **Burchfield, E.** (2023). Defining features of diverse and productive agricultural systems: An archetype analysis of U.S. agricultural counties. *Frontiers in Sustainable Food Systems*. 7(76). <https://doi.org/10.3389/fsufs.2023.1081079>
23. **Burchfield, E.** (2022). Where and how to grow food. *Nature Food*. <https://doi.org/10.1038/s43016-022-00663-z>
22. Spangler, K.<sup>\*</sup>, **Burchfield, E.**, Radcliff, C., Jackson-Smith, D., Johnson, R. (2022). Crop diversification in Idaho's Magic Valley: the present and the imaginary. *Agronomy for Sustainable Development*. 42(99). <https://doi.org/10.1007/s13593-022-00833-0>.
21. Christman, M. E., Spears, L. R., Strange, J. P., Pearse, W. D., **Burchfield, E.**, Ramirez, R. A. (2022). Land cover and climate drive shifts in Bombus assemblage composition. *Agriculture, Ecosystems & Environment*. 339, 108113. <https://doi.org/10.1016/j.agee.2022.108113>
20. **Burchfield, E.** (2022). Shifting cultivation geographies in the Central and Eastern US. *Environmental Research Letters*. 17, 054049. <https://doi.org/10.1088/1748-9326/ac6c3d>
19. Spangler, K.<sup>\*</sup>, Schumacher, B.<sup>\*</sup>, Bean, B., **Burchfield, E.** (2022). Path dependencies in US agriculture: Regional factors of diversification. *Agriculture, Ecosystems and Environment*, 333, 107957. <https://doi.org/10.1016/j.agee.2022.107957>.
18. **Burchfield, E.**, Schumacher, B.<sup>\*</sup>, Spangler, K.<sup>\*</sup>, Rissing, A.<sup>\*</sup> (2022). The state of US farm operator livelihoods. *Frontiers in Sustainable Food Systems*, 566. <https://doi.org/10.3389/fsufs.2021.795901>.
17. Nottebrock, H., **Burchfield, E.**, Fenster, C. (2022). Farmers' delivery of floral resources: to 'bee' or not to 'bee.' *American Journal of Botany*. 109(1), 4-8.

<https://doi.org/10.1002/ajb2.1809>

16. Schumacher, B.<sup>\*</sup>, Yost, M., **Burchfield, E.**, Allen, N. (2022). Water in the West: trends, production efficiency, and a call for open data. 306, 114330. *Journal of Environmental Management*. <https://doi.org/10.1016/j.jenvman.2021.114330>
15. Nelson, K., **Burchfield, E.** (2021). Landscape complexity and US crop production. *Nature Food*. 2(5). 330-338. <https://doi.org/10.1038/s43016-021-00281-1>
14. **Burchfield, E.**, Nelson, K. (2021). Agricultural yield geographies in the United States. *Environmental Research Letters*. 16, 054051. <https://doi.org/10.1088/1748-9326/abe88d>
13. **Burchfield, E.**, Schumacher, B.<sup>\*</sup> (2020). Bright spots in US corn production. *Environmental Research Letters*. 15(10), 104019. <https://doi.org/10.1088/1748-9326/aba5b4>
12. Spangler, K.<sup>\*</sup>, **Burchfield, E.**, Schumacher, B.<sup>\*</sup> (2020) Past and current dynamics of US agricultural land use and policy. *Frontiers in Sustainable Food Systems*, 4, 9. <https://doi.org/10.3389/fsufs.2020.00098>
11. **Burchfield, E.**, Matthews-Pennanen, N.<sup>\*</sup>, Stoeber, J., Lant, C. (2019). Changing yields in the Central United States under climate and technological change. *Climatic Change*, 159, 329-346. <https://doi.org/10.1007/s10584-019-02567-7>
10. **Burchfield, E.**, Nelson, K., Spangler, K.<sup>\*</sup> (2019). The impact of agricultural diversification on US crop production. *Agriculture, Ecosystems & Environment*. 285, 106615. <https://doi.org/10.1016/j.agee.2019.106615>
9. Tozier-de-la-Poterie, A., **Burchfield, E.**, Carrico, A. (2018). The implications of group norms for adaptation in collectively-managed agricultural systems: evidence from Sri Lankan Paddy farmers. *Ecology and Society*. 23(3):21. <https://doi.org/10.5751/ES-10175-230321>
8. **Burchfield, E.**, Williams, N., Carrico, A. (2018). Rescaling drought mitigation in rural Sri Lanka. *Regional Environmental Change*. 18(8): 1-14. <https://doi.org/10.1007/s10113-018-1374-y>
7. **Burchfield, E.**, Tozier-de-la-Poterie, A. (2018). Determinants of crop diversification in rice-dominated Sri Lankan agricultural systems. *Journal of Rural Studies*. 61, 206-215. <https://doi.org/10.1016/j.jrurstud.2018.05.010>
6. Nay, J., **Burchfield, E.**, Gilligan, J. (2018). A machine-learning approach to forecasting remotely sensed vegetation health, *International Journal of Remote Sensing*. 39(6), 1800-1816. <https://doi.org/10.1080/01431161.2017.1410296>
5. Nelson, K., **Burchfield, E.** (2017). Effects of the structure of water rights on agricultural production during drought: A spatiotemporal analysis of California's Central Valley. *Water Resources Research*. 53(10), 8923 - 8309. <https://doi.org/10.1002/2017WR020666>
4. **Burchfield, E.**, Gilligan, J. (2016). Agricultural adaptation to drought in the Sri Lankan dry zone. *Applied Geography*. 77, 92-100. <https://doi.org/10.1016/j.apgeog.2016.10.003>
3. **Burchfield, E.**, Nay, J., Gilligan, J. (2016). Application of machine learning to prediction of vegetation health. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. XLI-B2, 465-469, [doi:10.5194/isprs-archives-XLI-B2-465-2016](https://doi.org/10.5194/isprs-archives-XLI-B2-465-2016)
2. **Burchfield, E.**, Gilligan, J. (2016). Dynamics of individual and collective agricultural adaptation to water scarcity. *Winter Simulation Conference 2016 Proceedings*. Available at SSRN: <https://ssrn.com/abstract=2807452>
1. Gunda, T., Benneyworth, L., **Burchfield, E.** (2015). Exploring water indices and associated parameters: A case study approach, *Water Policy*, 17(1), 98 - 111. <https://doi.org/10.2166/wp.2014.022>

## 1.2. ARTICLES UNDER REVIEW

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4. Magliocca, N., **Burchfield, E.**, Busby, E., Brantley, E., Cleveland, O., Ellenburg, L., Kumar, M., Mishra, V., McGuire, D., Nair, U., Pate, A., Pathak, R., Pearl, S., da Silva, A., White, A., Williams, A., Worosz, M. (2025). Leverage points to pathways for transformation of agri-food systems. *Under Review at Environmental Research: Food Systems*.
3. Francois, J.\*, Nelson, K., **Burchfield, E.**, Rissing, A. (2025) Contexts of crop selection decisions shape changing agricultural landscape diversity in the United States. *Revised and resubmitted to Agriculture and Human Values*
2. Francois, J.\*, Nelson, K., **Burchfield, E.** (2025) Core Attributes of Farmers and Contexts Explaining the Consideration of Community Well-Being into Farm Management Decisions. *Under Review at Environment, Development and Sustainability*
1. Che, Y., Aglasan, S., **Burchfield, E.**, Rejesus, R. (2025) Landscape Complexity Mitigates Weather-Related Crop Insurance Losses and Enhances Climate Resilience. *Submitted to European Review of Agricultural Economics*

## 1.3. OTHER PUBLICATIONS

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2. Yost, M., Schumacher, B.\*, Johnson, L., **Burchfield, E.**, Barker, B. (2022). County-Level View of Irrigation Trends in Utah and the West. Public extension report published online at <https://extension.usu.edu/crops/research/county-level-view-of-irrigation>
1. **DATASET: Burchfield, E.**, Nelson, K. (2023). County-level Estimates of Landscape Complexity and Configuration in the Conterminous US. Ag Data Commons. <https://doi.org/10.15482/USDA.ADC/1529163>.

## 1.4. ACTIVE GRANTS

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2024-2025	<i>Integrating predictive modeling and la méthode prospective to support sustainable agricultural transitions in France and the U.S.</i> Villa Albertine Transatlantic Research Program PI, \$20,000 (Emory \$10,000)
2023-2027	<i>DISES: Integrating human and biophysical factors to project future crops</i> NSF Dynamics of Integrated Socio-environmental Systems PI, \$1,597,234 (Emory \$445,876)
2022-2025	<i>HEGS: Migration, rural land use, and resilience in coastal Bangladesh</i> NSF HEGS Co-PI, \$415,617 (Emory \$59,729)

## 1.5. COMPLETED GRANTS

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2022-2027	<i>Quantifying the potential to reduce GHG emissions and increase carbon sequestration by growing and marketing climate-smart commodities in the Southern Piedmont</i> USDA Climate-smart Commodities Co-PI, \$25,000,000 (Emory \$245,473) Partially completed, canceled April 2025.
2022 - 2025	<i>Managing markets: Assessing farmers' direct marketing experiences on economic viability and quality of life</i> USDA Southern SARE Co-PI, \$313,431 (Emory \$238,987)
2022-2024	<i>Drawdown Georgia Phase 3 Collaboration Grant</i> <a href="#">Drawdown Georgia</a> PI, \$20,000

2022-2024	<i>Supporting sustainable agriculture in the EU and US</i> Halle Collaborative Research Grant PI, \$29,980 (Emory \$11,500)
2022 - 2023	<i>Agricultural adaptation to climate change in Georgia</i> Emory URC PI, \$29,500
2020-2023	<i>Agricultural landscape management for improved sustainability</i> USDA NIFA BNRE Program Co-PI, \$499,949 (Emory \$184,813)
2020-2021	<i>Socio-environmental indicators of Great Salt Lake desiccation</i> Utah State University SPARC Program Co-PI, \$34,988
2018-2020	<i>Resilience of agricultural systems to climate stress</i> Utah Agricultural Experiment Station PI, \$42,498
2018-2019	<i>Finding balance: Diversity and agricultural production</i> Utah State University Research Catalyst Grant PI, \$19,938
2018-2019	<i>Local water conservation research and education needs</i> Utah State University Extension Grants Program Co-PI, \$19,401
2016-2017	<i>Data-driven drought effect estimation</i> <a href="#">SESYNC Graduate Pursuit</a> PI, \$25,000 for travel and stipends
2015-2016	<i>Adaptive management in the Sri Lankan dry zone</i> American Institute for Sri Lankan Studies Dissertation Planning Grant PI, \$4,500

## 1.6. GRANTS UNDER REVIEW

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\*Date reflects date of submission

April 2025	<i>Learning in Place: A Student Network for Community-Engaged Sustainability Research</i> AGREC Co-PI, \$20,000
April 2025	<i>Sustainable Futuring: Mapping and Transforming Atlanta's Food Systems</i> AGREC Co-PI, \$20,000
April 2025	<i>It's a SNAP! Improving nutrition and growing vibrant food systems through home delivery of local produce to food insecure families</i> Burroughs Wellcome Fund Co-PI, \$50,000
February 2025	<i>NSF Engine: Advancing Next Generation Agriculture in Southern Georgia</i> NSF Research Engine Co-PI, \$15,000,000 (Emory \$49,541)
January 2025	<i>NSF R2I2: HAREVST-Net - Transformative Adaptation of Deep South Agri-Food Systems to Hydroclimate Extremes</i> NSF R2I2 Phase 1 Co-PI, \$500,000

## 1.7. FELLOWSHIPS, AWARDS, AND HONORS

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Arts and Social Justice Fellow, Emory University ( <a href="#">class project</a> / <a href="#">showcase</a> )	Fall 2021
University Graduate Fellowship, Vanderbilt University	2012 - 2016
Martin Luther King Award for Service Excellence, Clemson University	2009
Duckenfield Scholarship, University of Oxford	2008

## 1.8. MEDIA COVERAGE

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10. [Rethinking food systems: Q&A with Dr. Emily Burchfield](#), TESS Coop.
9. [“Shifting climate could lead to greater change in agricultural industry”](#), Iowa Farmer Today, August 5, 2022.
8. [“Climate change could spell the end for Midwestern corn, study finds”](#), Yahoo News, June 1, 2022.
7. [“The U.S. Corn Belt will take a hard hit from climate change”](#), Earth, May 25, 2022.
6. [“Even as we see the flaws in our food system we aim to force it on the world”](#), CounterPunch, April 22, 2022.
5. [“The U.S. forces its flawed food system on the world”](#), CommonDreams, April 22, 2022.
4. [“New research shows struggles of US farm livelihoods”](#), AgDaily, March 7, 2022.
3. [“First-of-its-kind study shows that diverse landscapes could boost US crop yields by 20 percent”](#), Anthropocene, August 27, 2021.
2. [“Diverse landcover boosts yields for major crops”](#), Oklahoma Farm Report, August 19, 2021.
1. [“Diversity may boost US wheat and corn yields by 20 percent”](#), Futurity, August 12, 2021.

## 1.9. INVITED PRESENTATIONS

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14. *Towards research that transforms in agricultural systems*, presented to the SONYA group at the Université Libre de Bruxelles, Belgium, June 2024.
13. *Growing sustainable agricultural futures in the Anthropocene*, presented to the CERES group at the Ecole Normale Supérieure, France, April 2024.
12. *Moving together towards better: Stakeholder-centered research to catalyze sustainable agricultural transition*, presented to the Earth Life Institute at UCLouvain, Belgium, February 2024.
11. *Growing agricultural transitions*, presented at the [Symposium on Transdisciplinary Research for a Healthy Planet](#) at l'Université de Reims Champagne-Ardenne, France, February 2024. ([video here](#))
10. *Sustainable agricultural futures in the US*, presented to the Department of Environmental Studies, University of Colorado, Boulder, October 2023.
9. *Grand challenges in US food systems*, presented to the Department of Geography, Humboldt University, Germany, June 2023.
8. *Pathways towards sustainable agricultural futures in the US*, presented to the Earth Life Institute at the University of Louvain, Belgium, May 2023.
7. *Agricultural sustainability in the Anthropocene*, presented to the Department of Geography at Indiana University, Bloomington, February 2023.
6. *Sharing data and shaping policies across the EU and US to support sustainable agricultural transitions*, presented at Gottingen University, Germany, June 2022.
5. *Cultivating agricultural sustainability in a changing world*, presented to the Department of Earth and Environmental Sciences at Vanderbilt University, April 2022.



4. *Using mixed methods to understand socio-ecological trajectories of crop diversity*, presented to the Department of Geography at Kansas State University, February 2022.
3. *Socio-environmental implications of changing US landscapes*, presented to the PBEE Program Faculty at Emory University, November 2020.
2. *Agricultural sustainability in the US*, presented to the Emeritus College at Clemson University, October 2020. [Video](#).
1. *Cultivating food security in a changing world*, presented to the PhenoRob Female Talk Series group at University of Bonn, Germany, July 2020. [Video](#).

## 1.10. PAPER PRESENTATIONS

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Selected from submitted abstracts.

21. *Moving towards “better” together: Catalyzing stakeholder-engaged transitions in agricultural land systems*, presented at the AAG Annual Meeting in Detroit, MI, April 2025.
20. *Visioning a transformative research coordination network for the Southeast*, presented at the SOWTH meeting in Atlanta, GA, February 2025.
19. *Moving towards “better” together: Catalyzing stakeholder-engaged transitions in agricultural land systems*, presented at the Global Land Programme Open Science Meeting in Oaxaca, Mexico, November 2024.
18. *Integrating human and biophysical factors to project future agricultural landscapes under climate change in the United States*, presented at the SECU Conference in Leuven, Belgium, April 2024.
17. *Pathways towards sustainable agricultural futures in the southeastern US*, presented at the American Association of Geographers Annual Meeting in Denver CO, March 2023.
16. *The state of US farm operator livelihoods*, presented at the Association for the Study of Food and Society Annual Conference, May 2022.
15. *Agricultural and biophysical drivers of US cultivation geographies*, presented at the American Association of Geographers Annual Meeting, February 2022.
14. *Geographies of US food production*, presented at the Just Food Conference, June 2021.
13. *Geographies of agricultural production*, presented at the Applied Statistics in Agriculture and Natural Resources Annual Conference, held virtually, May 2021.
12. *The future of US crops*, presented at the American Association of Geographers Annual Meeting, held virtually, April 2021.
11. *The impact of agricultural diversification on US crop production*, presented at the International Association of Landscape Ecology Meeting in Fort Collins, CO, April 2019.
10. *Spatiotemporal dynamics of yield-response to climate extremes*, presented at the American Association of Geographers Annual Meeting in New Orleans, LA, April 2018.
9. *Agricultural response to changes in water availability and temperature in the coterminous US*, presented at the American Geophysical Union Annual Meeting in New Orleans, LA, December 2017.
8. *Application of machine learning to the prediction of vegetation health*, presented at the International Society for Photogrammetry and Remote Sensing in Prague, July 2016.
7. *Agricultural adaptation in the Sri Lankan Dry Zone*, presented at the IPWSD Workshop at Columbia University, NY, April 2016.

6. *Application of machine learning to big environmental datasets to predict vegetation health*, presented at the Association for American Geographers Annual Meeting in San Francisco, CA, April 2016. Session organizer, “Human-Environment Interactions: Linking Remote Sensing and the Social Sciences”
5. *The application of PCA for the identification of adaptive agricultural systems in the tropics*, presented at the Workshop on the Use of Remote Sensing for Decision-Making in Agricultural and Water Management in Colombo, Sri Lanka, August 2015.
4. *Institutions and imagery: Mapping water management in rural Sri Lanka*, presented at the Association of American Geographers Conference in Chicago, IL, April 2015.
3. *ADAPT-SL: Agricultural Decision Making and Adaptation to Precipitation Trends in Sri Lanka*, presented at the National Science Foundation Water, Sustainability and Climate PI meeting in Washington, D.C., February 2015.
2. *Patterns of meteorological and agricultural drought in Sri Lankan agricultural areas*, presented at the Gordon Research Seminar on Science, Technology and Policy, in Waterville Valley, NH, August 2014.
1. *Resettlement and coloniality in the Mahaweli Ganga Watershed*, presented at the Annual Dimensions of Political Ecology Conference on Nature/Society in Lexington, KY, February 2013.

#### 1.11. POSTER PRESENTATIONS

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Selected from submitted abstracts.

7. *Landscape complexity and US crop production*, presented virtually at the Landscape 2021 conference in Berlin, Germany, September 2021.
6. *Using R-INLA to understand institutional moderators of drought*, presented at the **user!** Conference in Brussels, Belgium, July 2017.
5. *Dynamics of collective and individual agricultural adaptation to water scarcity*, presented at the American Geophysical Union Conference in San Francisco, CA, December 2016.
4. *Agricultural adaptation to water scarcity in the Sri Lankan dry zone: A comparison of two water management regimes*, presented at the National Science Foundation Water, Sustainability and Climate PI meeting in Washington, D.C., February 2015.
3. *Mapping water management: A case study from Sri Lanka*, presented at the American Geophysical Union Annual Conference in San Francisco, CA, December 2014.
2. *Patterns of meteorological and agricultural drought in the Sri Lankan Dry Zone*, presented at the Gordon Research Conference on Science, Technology and Policy in Waterville Valley, NH, August 2014.
1. *Patterns of agricultural drought in Sri Lankan paddy fields: Spatiotemporal image analysis*, presented at the Borlaug Summer Institute on Global Food Security, Lafayette, IN, June 2014.

#### 1.12. PUBLIC PRESENTATIONS

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5. *Building Healthy Food Systems from the Ground Up, Panel Discussion*, presented at Super South, Atlanta GA, April 2025.
4. *Socioeconomic assessment of organic farming*, presented at SOWTH, Atlanta GA, February 2025.
3. [Panel on Environmental Justice and Climate Anxiety](#) at Unearthing Farm, co-hosted by Sci4GA in Fall 2024.



2. *Ethics at the Center: Sustainable Futures in the Anthropocene*, discussion leader at Emory Center for Ethics in February 2023,
1. *Science ATL STEM career talk*, presented virtually to McGarity Elementary in March 2022.

## 2. TEACHING

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### 2.1. COURSES TAUGHT

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\*Original courses developed by Dr. Burchfield.

#### Emory University - Undergraduate Courses

- **ENVS 323: Sustainable Food Systems\***  
Fall 2022, Fall 2023, Fall 2024
- **IDS 290R: Interdisciplinary Sidecar: Revolution in the Anthropocene\***  
Spring 2022 (co-taught with [Dr. Lynne Huffer](#))
- **ENVS 224: Economy and the Environment\***  
Spring 2021, Spring 2022, Spring 2023, Spring 2025
- **[ENVS 270: Environmental Data Science\\*](#)**  
Fall 2020, Fall 2021, Fall 2022, Fall 2023, Fall 2024
- **ENVS 495R: Honors Research**  
Fall 2021, Spring 2022, Fall 2022, Fall 2024
- **ENVS 498R: Individual Directed Reading\***  
Spring 2022 (Climate and Agriculture)

#### Emory University - Graduate Courses

- **ENVS 585: Environmental Data Science\***  
Fall 2020
- **ENVS 585: Spatial Patterns of Food Insecurity\***  
Spring 2021, reading course for MS student
- **ENVS 599R: Master's Thesis Research**  
Fall 2021, Spring 2022

#### Utah State University

- **[GEOG 3800: Data Visualization\\*](#)**  
Fall 2018
- **USU, ENVS 2000: Natural Resources Professional Orientation\***  
Fall 2018
- **[GEOG 49/6950: Geospatial Analysis\\*](#)**  
Spring 2018, Spring 2019

#### Vanderbilt University

- **[Vanderbilt Programs for Talented Youth](#)**  
Developed and taught geospatial analysis to gifted middle and high school students.  
Summer 2015, Summer 2016
- **[Certificate in College Teaching](#)**  
Spring 2014

### 2.2. GUEST LECTURES

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- Spring 2024, *Transitions rurales aux USA*. Rural Geography class at UCLouvain, Belgium.
- Fall 2023, *Everything you every wanted to know about US food and farming*. Emory Sustainable Food Fair class.
- Fall 2022, *An introduction to US food systems*. Emory Sustainable Food Fair class.
- Spring 2021, *Agriculture and climate change 101*. Emory Climate Organization student organization.
- Spring 2021, *How to R: An introduction to programming*. ECAST student organization.
- Spring 2021, *Data visualization: The good, bad, and ugly*. HLTH 385 Storytelling for Scientists, Dr. Amanda Freeman
- Fall 2019, *US Agricultural Policy*. ENVS/POLS 227 Environmental Policy, Dr. Tracy Yandle
- Fall 2019, *An Introduction to US Agriculture*. ENVS 399 Agroecology, Dr. John Wegner

### 2.3. TEACHING AWARDS AND GRANTS

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- Fall 2023, Fall 2024, Emory CDFE Community-Engaged Learning Grant (\$3000 to partner with [Sci4GA](#))

## 3. STUDENT MENTORING

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### 3.1. CURRENT GRADUATE AND POSTDOCTORAL MENTEES

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Dr. Lokendra Rathore (**Postdoctoral Researcher**, 2024 - present)  
 PhD. Civil and Environmental Engineering, U. Alabama, 2024  
*Crop suitability modeling and integrated agricultural futuring*

Britta Schumacher (Committee Member)  
 PhD Plants, Soils & Climate, Utah State University, 2026  
*Water in the west*

### 3.2. PAST GRADUATE MENTEES

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Jean Ribert Francois (Committee Member)  
 PhD Geography, Kansas State University, 2025  
*Rural well-being in agricultural communities*

Milon Barmon (Graduate Mentee)  
 PhD Population Biology, Ecology and Evolution Rotation, Spring 2023

[Jared Gingrich](#) (**Primary Advisor**)  
 MS ENVS, Emory University, 2022  
*Food access in rural Appalachia*

Dr. Mo Christman (Committee Member)  
 PhD Biology, Utah State University, 2022  
*Landscape ecology of beneficial insects in agronomic crops of Utah*

[Dr. Kaitlyn Spangler](#) (**Primary Advisor**)  
 PhD Environment and Society, Utah State University, 2021  
*Cultivating agrobiodiversity in the US: Barriers and bridges at multiple scales*

Britta Schumacher (**Primary Advisor**)  
 MS Ecology, Utah State University, 2020  
*Trends in US agricultural production*

Jenna Keaton (Committee Member)  
MS Watershed Sciences, Utah State University, 2019  
*The vulnerability of littoral structures under multiyear drought conditions*

Neil Matthews-Pennanen (Committee Member)  
MS Environment and Society, Utah State University, 2019  
*Assessment of potential changes in crop yields in the Central US under climate change regimes*

### 3.3. PAST POSTDOCTORAL MENTEES

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Dr. Scott Schnur (**Postdoctoral Researcher**, 2022-2024)  
PhD Anthropology, Emory University, 2022  
URC-funded qualitative fieldwork with agricultural stakeholders in Georgia.

Dr. Heidrun Leonhardt (**Visiting Postdoctoral Researcher**, Spring 2023)  
PhD. Ecological Economics, University of Natural Resources and Life Sciences, Vienna

[Dr. Andrea Rissing](#) (**Postdoctoral Researcher**, 2021-2022)  
PhD Anthropology, Emory University, 2019  
USDA-funded qualitative fieldwork in rural N.C.

### 3.4. CURRENT UNDERGRADUATE MENTEES

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### 3.5 PAST UNDERGRADUATE MENTEES

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Anisha Johnson (**Honors Thesis Advisor**, Research Mentee)  
ENVS BS 2026, Fall 2023 - Spring 2025  
[SOWTH Conference Attendee](#)  
Attended 2025 AAG Conference, presented poster as Lester Grant Recipient

Kylie Hansen (Honors Thesis Committee Member)  
Fall 2024 - Spring 2025

Catherine Wang (Honors Thesis Committee Member)  
Fall 2024 - Spring 2025

Isabel Staton (Honors Thesis Committee Member)  
ANTH BS 2024, Fall 2023 - Spring 2024  
*Farming in the Storm: Exploring Alternative Risk Management Strategies Amid Winter Storm Elliot*

Kaegan Ortlund (Research Mentee)  
ENVS BS 2024, Fall 2023

Caroline Maki (Research Mentee)  
ENVS BS 2023, Spring 2022 - Spring 2023

Ilana Fischer ([SIRE Mentee](#), **Honors Thesis Advisor**)  
ENVS BS 2023, Spring 2021 - present  
*Crop insurance and climate change*

Jesus Palenzuela (Research Mentee)  
ENVS/ECON BS 2023, Spring 2023

Jackson Pentz (Honors Thesis Committee Member)  
ENVS/ECON BS 2023, Fall 2022 - Spring 2023  
*Estimating the county-level effects of the Tennessee Valley Test Farm Program on U.S. agriculture (1935-1950)*

Shivam Saram (Honors Thesis Committee Member)  
QSS/Physics BS 2023, Fall 2022 - Spring 2023

*Jailbirds: A Machine-Learning Approach to Measuring Racial and Ethnic Disparities in Monetary Bail Setting*

Jack Miklaucic (Honors Thesis Committee Member)

ENVS BS 2023, Fall 2022 - Spring 2023

*Going Beyond Carbon: Mitigating Nitrogen Pollution from Agriculture in the U.S.*

Emily Isaac (**Honors Thesis Advisor**)

ENVS BS 2022, Spring 2021 - Spring 2022

*On the Fence: Role of the attitude-behavior gap in residential landscaping decisions*

Dading Shi (QTM Undergraduate Fellow)

QTM BS 2022, Fall 2019

### 3.7. STUDENT GRANTS AND AWARDS

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Anisha Johnson (Undergraduate), Lester Research Grant and Lester Travel Grant, Fall 2024

Jared Gingrich (MS), Lester Research Grant, Fall 2021

Jared Gingrich (MS), Lester Travel Grant, Fall 2021

Emily Isaacs (Undergraduate), Lester Research Grant, Fall 2021

Kaitlyn Spangler (PhD), Presidential Doctoral Research Fellow, Fall 2019

Britta Schumacher (MS), Ecology Center Graduate Research Grant, Spring 2019

## 4. SERVICE

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### 4.1. DEPARTMENTAL SERVICE

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Spring 2022 - Spring 2024

ENVS Diversity, Equity and Inclusion Committee (Chair)

Fall 2020 - Spring 2022

ENVS Diversity, Equity and Inclusion Committee (member)

Fall 2023 - Spring 2024

ENVS Faculty Search Committee (member)

Fall 2020 - Spring 2024

ENVS Honors Coordinator

Fall 2022 - Spring 2023

ENVS Faculty Search Committee (member)

### 4.2. COLLEGE SERVICE

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Fall 2024 - present

Graduate Curriculum Coordinator, Environmental Sciences and Society PhD

Spring 2022 - Spring 2025

ECAS Education Abroad Committee (elected member)

### 4.3. UNIVERSITY SERVICE

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Spring 2021 - present

Emory Sustainable Food Committee (President-appointed member)

Fall 2022 - present

Emory Center for Ethics [Senior Faculty Fellow](#)

Fall 2022 - Fall 2023

Emory Climate Action Task Force

### 4.4. PROFESSIONAL SERVICE

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**Article reviews for academic journals including:**

*Climatic Change*

*International Journal of Disaster Risk Reduction*

*Environmental Research Letters*

*International Journal of the Commons*

*Environmental Management*

*Weather, Climate and Society*

*Agricultural, Ecosystems and Environment*

*Journal of Environmental Management*

*Nature Food*

*Nature Sustainability*

*One Earth*

*Global Environmental Change*

**Grant reviews for the following agencies:**

NSF Geospatial Sciences

Emory URC

**Conference session chair:**

- Convener: *Integrated futuring approaches for transformative socioenvironmental change*, AAG, Spring 2025
- Convener: *Visioning a transformative research coordination network for Southeast agri-food systems*, SOWTH, Spring 2025
- Convener: *Supporting transformative adaptation in agricultural landscapes*, Global Land Programme Open Science Meeting, Fall 2024
- Convener: *Sustainable agricultural landscapes*, Association of American Geographers Annual Meeting, Spring 2023
- Convener: *Agricultural landscape transitions*, Association of American Geographers Annual Meeting, Spring 2022
- Convener: *Geographies of climate impacts*, Association of American Geographers Annual Meeting, Spring 2018

**Expert Panels:**

- NICHD/NIH Agriculture and Diet: Value Added for Nutrition, Translation and Adaptation in a Global Ecology: ADVANTAGE Project, Spring 2023-Spring 2025
- Contributing Author, USGS Biodiversity and Climate Change Assessment (Chapter 5), Spring 2024 - Spring 2025

**4.5. COMMUNITY SERVICE**

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[Drawdown Georgia, Climate-Smart Agriculture Team Lead](#)

Fall 2022 - present

**LANGUAGE PROFICIENCIES**

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<b>English</b>	Native speaker
<b>French</b>	Fluent written and spoken

*\*Last updated on May 30, 2025.*