

# DR. SARAH GRAJDURA

Civil & Environmental Engineering ◊ University of Vermont  
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## EDUCATION

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### University of California, Davis

Ph.D. Civil & Environmental Engineering: concentration in Transportation 2022

### University of Illinois Urbana-Champaign

M.S. Applied Economics: concentration in Environmental Economics 2016

B.S. Civil & Environmental Engineering 2011

## RESEARCH INTERESTS

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Transportation equity & justice, disaster resilience, evacuation modeling, wildfires and human behavior, climate change adaptation, accessibility, rural travel behavior, engineering education

## PROFESSIONAL EXPERIENCE

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### University of Vermont, Burlington, VT

2022-Present

Postdoctoral Associate, Department of Civil & Environmental Engineering

### University of California, Davis, CA

2017-2022

Research Assistant, Department of Civil & Environmental Engineering

### University of Illinois, Urbana-Champaign, IL

2014-2016

Research Assistant, Department of Agricultural & Consumer Economics

### EN Engineering, Chicago, IL

2012-2014

Design Engineer, Pipeline Integrity

## JOURNAL PUBLICATIONS

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**1** Grajdura, S., Niemeier, D. (2023) State of Programming and Data Science Preparation in Civil Engineering Undergraduate Curricula. *Journal of Civil Engineering Education*, 149(2), 04022010.

**2** Grajdura, S., Borjigin, S., & Niemeier, D. (2022) Fast-Moving Dire Wildfire Evacuation Simulation. *Transportation Research Part D: Transport and Environment*, 104, 103190.

**3** Grajdura, S., Qian, X., & Niemeier, D. (2021). Awareness, departure, and preparation time in no-notice wildfire evacuations. *Safety Science*, 139, (September 2020): 105258.

Under Review

LanzDuret-Hernandez, J.<sup>†</sup>, Grajdura, S., & Rowangould, D.. “We have the right and we need better transportation”: Mobility, Community, and Connection of Latin American migrant workers in Vermont. *Journal of Transport Geography*.

Palm, M., Raynor, K., Grajdura, S.. My neighbourhood, my family, and my life: How transit access and walkability shape life satisfaction through neighbourhood-supported capabilities. *Transportation Research Part A*.

In Preparation (descendent order of progress)

Grajdura, S., Sun, R., Barbour, E., Handy, S., & Circella, G.. Post-COVID Scenario Futures: a California Case Study. Planned submission to *Transportation Research Record*.

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<sup>†</sup>undergraduate student author

**Grajdura, S.** & Rowangould, D.. When the Stakes are High: Measuring Evacuation Quality and Safety in Wildfire Evacuations. Planned submission to *Transportation Research Interdisciplinary Perspectives*.

**Grajdura, S.**, Espeland, S.<sup>‡</sup>, LanzDuret-Hernandez, J.<sup>†</sup>, Barajas, J., & Rowangould, D.. Limited Car Access and Rural Mobility: Evidence from Vermont and California. Planned submission to *Transportation Research Part A: Policy and Practice*.

**Grajdura, S.**, Fulton, L., Kendall, A. *A Review of the Global Secondhand Vehicle Trade and its Environmental Impacts*.

## PEER-REVIEWED CONFERENCE PAPERS

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**4 Grajdura, S.**, Beddoes, K. (2022). A Systematic Literature Review of the Research on Gendered Socialization in Graduate Engineering Education. *American Society for Engineering Education Annual Conference*.

**5 Grajdura, S.**, Beddoes, K. (2022). What Early Career Civil Engineers Wish They Had Done Differently: Lessons For Students and Faculty. *American Society for Engineering Education Annual Conference*.

**6 Grajdura, S.**, Borjigin, S., & Niemeier, D. (2020). Agent-Based Wildfire Evacuation with Spatial Simulation: A Case Study. *Proceedings of the 3rd ACM SIGSPATIAL International Workshop on GeoSpatial Simulation, GeoSim 2020*, (November), 56–59.

## PEER-REVIEWED REPORTS

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**7 Grajdura, S.** & Niemeier, D. (2022). Improving Our Understanding of Fire Displacement Effects. *National Center for Sustainable Transportation*

Under Review

Espeland, S. <sup>‡</sup>, LanzDuret-Hernandez, J.<sup>†</sup>, **Grajdura, S.**, Rowangould, D. (2023). Evaluation of Rural Travel Constraints and Travel Burdens in the U.S. and in Rural Zero-Car Households. *National Center for Sustainable Transportation*

Barbour, E., **Grajdura, S.**, Sun, R., Circella, G., Barajas, J., Jaller, M., D’Agostino, M., Handy, S. (2023). Post-Covid Transportation Scenarios: Evaluating the Impact of Policies. *California Air Resources Board*

## GRANTS

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Advancing equitable electric vehicle adoption: Addressing home charging barriers and costs (2023). *National Center for Sustainable Transportation*. D. Rowangould (PI), **S. Grajdura (co-PI)**

Rural Mobility, Housing, and Infrastructure: Flood Resilience and Equitable Recovery in Vermont. (2023). *Vermont Flood Event Rapid-Response Grant Awards, University of Vermont*. **S. Grajdura (PI)**, D. Rowangould (co-PI).

Transportation Equity Working Group Seed Grant. (2019). *Feminist Research Institute, University of California Davis*. **S. Grajdura**, S. Erasmus.

Improving Our Understanding of Fire Evacuation and Displacement Effects. (2019-2021). *National Center for Sustainable Transportation*. D. Niemeier (PI), **S. Grajdura (co-PI)**.

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<sup>‡</sup>graduate student author

<sup>†</sup>undergraduate student author

## CONFERENCE PRESENTATIONS

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**Grajdura, S.**, Espeland, S.<sup>‡</sup>, LanzDuret-Hernandez, J.<sup>†</sup>, Rowangould, D. (2024). “Having your own vehicle...it changes everything”: Limited Car Access and Rural Mobility in Vermont. *Transportation Research Board Annual Meeting*.

LanzDuret-Hernandez, J.<sup>†</sup>, **Grajdura, S.**, Rowangould, D. (2024). Mobility, Community, and Connection: Transportation Experiences of Rural Latinx Migrant Workers. *Transportation Research Board Annual Meeting*.

Wong, S., Alam, M.D., **Grajdura, S.**, Anderson, W. (2023). A Guidebook for Community-Based and Equitable Transportation Response in Disasters. *Transportation Resilience 2023: International Conference on Extreme Weather and Climate Change Challenges*.

**Grajdura, S.**, Sun, R., Barbour, E., Handy, S., Circella, G.(2023) Post-COVID Scenario Futures: a California Case Study. *Transportation Research Board’s 102nd Annual Meeting*.

Erasmus, S., **Grajdura, S.** (2020). Bringing Mobility Justice Research to UC Davis. *California Higher Ed Sustainability Conference*.

**Grajdura, S.**, Niemeier, D. (2020). Agent-based Model for Wildfire Evacuation. *Production and Operations Management Society Annual Conference*, cancelled due to COVID-19.

**Grajdura, S.**, Zhang, Y., Liang, Z., & Maheshwari, S. (2019). Perceived Health Status and Travel Patterns: NHTS Data Challenge. *Transportation Research Board 98th Annual Meeting*.

Under Review

**Grajdura, S.**, LanzDuret-Hernandez, J.<sup>†</sup>, & Rowangould, D.. Flood Resilience for Small and Rural Communities: Mobility, Accessibility, and Displacement. *Conference on Advancing Transportation Equity*.

Pezechknejad, P.<sup>‡</sup>, **Grajdura, S.**, & Rowangould, D.. Advancing equitable electric vehicle adoption: Addressing home charging barriers and costs. *Conference on Advancing Transportation Equity*.

## INVITED ORAL PRESENTATIONS

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Panelist, Building Resilience in Community Public Health in Response to Natural Disasters. Resilient Vermont Conference, Norwich University (2024).

**Grajdura, S.**(2023). Vulnerability and Equity: Wildfire Evacuation Perspective. *Transportation Research Board Webinar: Community-Based and Equitable Transportation in Disasters*.

**Grajdura, S.**(2023). Engineering Transportation Systems to Meet Essential Travel Needs. *Civil & Environmental Engineering Department Seminar, University of Vermont*.

**Grajdura, S.**(2023). Evacuation, Accessibility, & Equity. *Postdoc Showcase, University of Vermont*.

**Grajdura, S.**, Fulton, L. (2022) Modeling the Global Trade in Used Vehicles. *STEPS Research Symposium, Institute of Transportation Studies, UC Davis*.

**Grajdura, S.**, Fulton, L. (2021) Analysis of the Global Secondhand Vehicle Trade: Data and Future Steps. *STEPS Seminar, Institute of Transportation Studies, UC Davis*.

**Grajdura, S.**(2021). Fire in Paradise: Climate Change and Aging Infrastructure, *American Society of Civil Engineers, Region 2 Assembly Webinar*.

**Grajdura, S.**(2021). Transportation Equity and Wildfires in California. *Transportation Research Board, Standing Committee on Women and Gender in Transportation Young Scholars Webinar*.

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<sup>‡</sup>graduate student author

<sup>†</sup>undergraduate student author

**Grajdura, S.**(2021). Agent-based Modeling with NetLogo. *UC Davis DataLab*

**Grajdura, S.**(2021). Equity and Wildfires in California: the 2018 Camp Fire, *Pacific Southwest Region University Transportation Center, Emerging Scholars Symposium.*

## POSTER PRESENTATIONS

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**Grajdura, S.** (2024). Measuring Feelings of Safety in Wildfire Evacuations. *Transportation Research Board Annual Meeting 2024.*

LanzDuret-Hernandez, J.<sup>†</sup>, Wuthrich, C.<sup>†</sup>, **Grajdura, S.**, Rowangould, D. (2023). “We have the right and we need better transportation”: Mobility, Community, and Connection of Latinx migrant workers in Vermont. *Chittenden Area Transportation Management Association Summit.*

Espeland, S.<sup>‡</sup>, **Grajdura, S.**, LanzDuret-Hernandez, J.<sup>†</sup>, Rowangould, D. (2023). Evaluation of Rural Travel Burdens in the U.S. and in Rural Zero-Car Households in Vermont. *Chittenden Area Transportation Management Association Summit.*

**Grajdura, S.**, Rowangould, D. (2023). When the Stakes are High: Evacuation Quality and Safety. *48th Annual Natural Hazards Research and Applications Workshop.*

Foster, H.<sup>†</sup>, **Grajdura, S.**, Rowangould, D. (2023). Rural Travel Needs Assessment: Transportation Equity in the Northeast Kingdom, Vermont. *Institute of Transportation Engineers Northeastern District Annual Meeting.*

LanzDuret-Hernandez, J.<sup>†</sup>, **Grajdura, S.**, Rowangould, D. (2023). Community and Isolation Among Latinx Migrant Workers in Vermont: Achieving Connection through Mobility, Personal Networks, and Language and Culture. *Institute of Transportation Engineers Northeastern District Annual Meeting.*

**Grajdura, S.**, Qian, X, Niemeier, D. (2020). Awareness, Departure, and Communication in the 2018 Camp Fire. *Transportation Research Board 99th Annual Meeting.*

**Grajdura, S.**, Zhang, Y., Liang, Z., & Maheshwari, S. (2018). Perceived Health Status across Rideshare Use. *3 Revolutions Research Symposium.*

## ACADEMIC SERVICE & ACTIVITIES

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**Graduate Teaching Program**, Center for Teaching & Learning, University of Vermont (2023).

**Volunteer**, Northeast Kingdom Organizing (NEKO), Vermont (2023).

**Alliance Graduate Summer School: Inequality & the Environment**, Columbia U. (2021).

**Asking Different Questions Research Training Series**, Feminist Research Inst., UC Davis.(2021).

**Pro Bono Spatial Data Analyst**, California Rural Legal Assistance Foundation. (2021).

**Volunteer**, Transportation Research Board Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity (AMR20). (2020-Present).

**Co-Organizer**, Transportation Equity Working Group. University of California, Davis. (2019-2021).

**Mentor**, Society of Women Engineers. University of California, Davis. (2019-2020).

**Member**, Mobility Justice Research Network. (2019-2022).

**Co-Organizer**, Heartland Environmental Resource Economics Workshop. U. Illinois. (2014-2015).

**Mentor**, Women in Math, Science, and Engineering. U. Illinois. (2008-2009).

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<sup>‡</sup>graduate student author

<sup>†</sup>undergraduate student author

## Manuscript Review:

*Cartography and Geographic Information Science*  
*Journal of Computational Science*  
*Journal of Transport Geography*  
*Natural Hazards Review*  
*PLOS One*  
*Safety Science*  
*Sustainability Analytics and Modeling*  
*Transportation Research Part D: Transport and Environment*  
*Transportation Research Record*  
*Transportation Research Board Annual Meeting:*  
*Committee on Disaster Response, Emergency Evacuations, and Business Continuity (AMR20)*  
*Committee on Equity in Transportation (AME10)*

## TEACHING

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**Guest Lecture**, GIS for Sustainable Transportation course, University of Vermont 2022-2023

**University of California, Davis, Feminist Research Institute** 2021-2022  
*Facilitator*, Asking Different Questions Research Training Series

**Guest Lecture**, STEM for HER- Girls Empowered by Math 2020

**University of California System** 2020-2021  
*Facilitator and Co-Creator*, Dimensions of Transportation Equity Seminar & Discussion Series

**Guest Lecture**, California State Summer School for Mathematics and Science 2019

**University of California, Davis, Department of Economics** 2016  
*Teaching Assistant*, American Economic History

**University of Illinois, Department of Agricultural & Consumer Economics** 2015-2016  
*Teaching Assistant*, Microeconomic Theory I

## MENTORING

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**University of Vermont**

Parsa Pezeshknejad, Ph.D. Research 2024-Present

Danny Callahan, Undergraduate Research 2024-Present

Nat Robtoy, Undergraduate Research 2023-Present

Maisie Melican, Undergraduate Research 2022-Present

Julia LanzDuret-Hernandez, Undergraduate Research 2022-Present

Calvin Wuthrich, Undergraduate Research 2022-Present

Sierra Espeland, Master's Research 2022-2023

Holly Foster, Undergraduate Research 2022-2023

Alvaro Nadal-Alvarez, Undergraduate Research 2022-2023

**University of California, Davis**

Mariam Massoud, Undergraduate Research 2019

Sierra Winter, Undergraduate Honors College Thesis 2019

## HONORS AND AWARDS

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Tim Fleming Memorial Scholarship 2022

Paula Hammond Leadership Legacy Scholarship, Women in Transportation Studies 2022

Outstanding student of the year, National Center for Sustainable Transportation 2021

Nominee, Outstanding student of the year, Pacific Southwest Region UTC 2021

Pacific Southwest Region University Transportation Center Dissertation Award	<i>2020</i>
Helene M. Overly Scholarship, WTS, Sacramento Chapter	<i>2020</i>
UC Davis Institute for Transportation Studies Travel Award	<i>2019</i>
Nico Linesch Legacy Fund Award	<i>2018</i>
Winner, TRB 2017 National Household Travel Survey Data Challenge	<i>2018</i>
Department Fellowship, Ag, Resource, & Environmental Economics, UC Davis	<i>2017</i>
Best Master's Thesis, Department of Ag & Consumer Economics, U. Illinois	<i>2016</i>
Henry Bulta Scholarship, U. Illinois	<i>2016</i>
EPA Campus RainWorks Green Infrastructure Competition, 2 <sup>nd</sup> Place Design	<i>2014</i>
Illinois General Assembly Scholarship	<i>2007</i>

## TECHNICAL SKILLS

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R, Python, SQL, STATA, SAS, ArcGIS/ArcView, QGIS, Dedoose, NVIVO, NetLogo, TransCAD

## LANGUAGE SKILLS

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English-fluent, Spanish-proficient

## REFERENCES

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**Dr. Deb Niemeier** Clark Distinguished Chair, Director Center for Disaster Resilience  
 Professor, Civil & Environmental Engineering  
 University of Maryland College Park, niemeier@umd.edu, 301-405-6266

**Dr. Dana Rowangould** Assistant Professor, Civil & Environmental Engineering  
 University of Vermont, dana.rowangould@uvm.edu, 561-789-4566

**Dr. Susan Handy** Director, National Center for Sustainable Transportation  
 Professor, Environmental Science & Policy, Civil & Environmental Engineering  
 University of California, Davis, slhandy@ucdavis.edu, 530-752-5878