

# Elisa C. Borowski, Ph.D.

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## EDUCATION

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### Northwestern University, Evanston IL

Ph.D. in Civil & Environmental Engineering 2022

*Program:* Transportation Systems Analysis & Planning

*Dissertation:* Accessing Crowdsourced, Social, and Shared Resources: Behavioral Research for Disruption Mobility

*Committee:* Amanda Irini Blomberg Stathopoulos (Advisor), Joseph Schofer, Pablo Durango-Cohen

*Cumulative GPA:* 3.96

M.S. in Civil & Environmental Engineering 2020

*Program:* Transportation Systems Analysis & Planning

*Cumulative GPA:* 3.96

### University of New Mexico, Albuquerque NM

M.S. in Civil & Environmental Engineering 2017

*Program:* Structures & Materials

*Thesis:* Viscoelastic Effects in Carbon Fiber Reinforced Polymer Strain Energy Deployable Composite Tape Springs

*Committee:* Mahmoud Reda Taha (Advisor), Timothy Ross, Thomas Murphey

*Cumulative GPA:* 4.00

B.A. in Anthropology 2010

*Second Major:* English

*Cumulative GPA:* 3.99

## RESEARCH INTERESTS

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**Mobility:** *Ridesharing, on-demand mobility, shared mobility, sharing economy, crowdsourcing*

**Resilience:** *Multi-hazard events, emergency planning, evacuation decision-making, social influence*

**Equity:** *Social identity, intersectionality, marginalization, vulnerability, justice*

## PUBLICATIONS

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### Peer-Reviewed Journals, Published

1. **Borowski, E.** & Stathopoulos, A. (2022). "Protection or peril of following the crowd in a pandemic-concurrent flood evacuation". *Natural Hazards Review*.
2. **Borowski, E.**, Limontitla Cedillo, V., & Stathopoulos, A. (2021). "Dueling emergencies: Flood evacuation ridesharing during the COVID-19 pandemic". *Transportation Research Interdisciplinary Perspectives*, 10, 100352.
3. **Borowski, E.** & Stathopoulos, A. (2020). "On-demand ridesourcing for urban emergency evacuation events: An exploration of message content, emotionality, and intersectionality". *International Journal of Disaster Risk Reduction*, 44, 101406.

4. **Borowski, E.**, Chen, Y., & Mahmassani, H. (2020). “Social media effects on sustainable mobility opinion diffusion: Model framework and implications for behavior change”. *Travel Behaviour and Society*, 19, 170-183.
5. **Borowski, E.**, Soliman, E., Khan, A., & Reda Taha, M. (2018). “Stowage and deployment of a viscoelastic orthotropic carbon-fiber composite tape spring”. *AIAA Journal of Spacecraft and Rockets*, 55(4), 829-840.
6. Khan, A., **Borowski, E.**, Soliman, E., & Reda Taha, M. (2017). “Examining energy dissipation of deployable aerospace composites using matrix viscoelasticity”. *ASCE Journal of Aerospace Engineering*, 30(5), 04017040.
7. **Borowski, E.**, Soliman, E., Kandil, U., & Reda Taha, M. (2017). “Interlaminar fracture toughness of CFRP laminates incorporating multi-walled carbon nanotubes”. *Polymers*, 7(6), 1020-1045.

### Peer-Reviewed Journals, Accepted for Publication

1. **Borowski, E.**, Soria, J., Schofer, J., & Stathopoulos, A. (Revise & Resubmit). “Does ridesourcing respond to unplanned rail disruptions? A natural experiment analysis of mobility resilience and disparity”. *Cities*.
2. **Borowski, E.** & Stathopoulos, A. (Revise & Resubmit). “Nowhere to go? A study of social connection and mental health outcomes for marginalized young adults in the COVID-19 pandemic”. *Journal of Transport & Health*.

### Peer-Reviewed Technical Reports

1. **Borowski, E.** & Stathopoulos, A. (2021). “Resilience of social support networks to social distancing”. *Natural Hazards Center: Quick Response Grant Report*. <https://hazards.colorado.edu/quick-response-report/resilience-of-social-support-networks-to-social-distancing>
2. **Borowski, E.** & Newell, P. (2015). “Numerical Investigation of Fracture in Geomaterials”. *Sandia Technical Report SAND2015-7325*

## PRESENTATIONS

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### Conference Presentations

1. **Borowski, E.**, & Stathopoulos, A. (January 2023). “Third Place Closure Impacts on Social Connection and Mental Health Outcomes for Marginalized Young Adults in the COVID-19 Pandemic”. *Transportation Research Board 102nd Annual Meeting*.
2. Bella, G., **Borowski, E.**, & Stathopoulos, A. (October 2022). “Learning from Late Adopters: Using an Adoption of Innovations Perspective to Study Crowdsourced Food Delivery Participation”. *Transport Chicago*.
3. Stathopoulos, A., Horvat, A., & **Borowski, E.** (May 2022). “Examining Resilience to Overlapping Hazards”. *Northwestern University’s Center for Engineering Sustainability and Resilience*.
4. **Borowski, E.** & Stathopoulos, A. (May 2022). “Satisfaction with Social Support, Public Spaces, and Virtual Socialization During the COVID-19 Pandemic Among LGBTQ Young Adults”. *American Association for Public Opinion Research’s 77th Annual Conference*.
5. **Borowski, E.** & Stathopoulos, A. (January 2022). “Protection or Peril of Following the Crowd in a Pandemic-Concurrent Flood Evacuation”. *Transportation Research Board 101st Annual Meeting*.

6. **Borowski, E.** & Stathopoulos, A. (January 2022). “Changes in Social Support Networks Across Physical and Virtual Spaces During the COVID-19 Pandemic: Exploring the Experiences of Youth and Marginalized Populations”. *Transportation Research Board 101st Annual Meeting*.
7. **Borowski, E.** & Stathopoulos, A. (September 2021). “Virtual Mobility Inequities Experienced by Young Adults”. *Conference to Advance Transportation Equity*.
8. **Borowski, E.** & Stathopoulos, A. (August 2021). “Dueling Emergencies: Flood Evacuation Ridesharing During the COVID-19 Pandemic”. *Bridging Transportation Researchers 3rd Conference*.
9. **Borowski, E.** & Stathopoulos, A. (July 2021). “Social Support Network Changes During the COVID-19 Pandemic”. *Natural Hazards Center’s Researchers Meeting*.
10. **Borowski, E.**, Soria, J., Schofer, J., & Stathopoulos, A. (January 2021). “Ridesourcing Demand During Rail Transit Disruptions: A Multilevel Analysis of Neighborhood Effects in Chicago, Illinois”. *Transportation Research Board 100th Annual Meeting*.
11. **Borowski, E.**, Limontitla Cedillo, V., & Stathopoulos, A. (January 2021). “Willingness to Share During Multi-Hazard Events: An Exploratory Study of Flood Evacuations During the COVID-19 Pandemic in the United States”. *Transportation Research Board 100th Annual Meeting*.
12. **Borowski, E.**, Soria, J., Schofer, J., & Stathopoulos, A. (October 2020). “Ridesourcing Equity for Mobility Resilience to Unplanned Transit Disruptions in Chicago, IL”. *Transport Chicago*.
13. **Borowski, E.** & Stathopoulos, A. (July 2020). “Resilience of Social Capital Networks to Social Distancing During COVID-19”. *Natural Hazards Center’s Researchers Meeting*.
14. **Borowski, E.** & Stathopoulos, A. (June 2020). “The Role of Crowdsourcing Mobility Systems in Urban Resilience”. *Actionable Science for Urban Sustainability*.
15. **Borowski, E.**, Chen, Y., & Mahmassani, H. (January 2020). “Social Media Effects on Sustainable Mobility Opinion Diffusion: Implications for Behavior Change”. *Transportation Research Board 99th Annual Meeting*.
16. **Borowski, E.** & Stathopoulos, A. (January 2019). “On-Demand Rideshare for Emergency Relocation: An Exploratory Analysis of Context and Emotionality”. *Transportation Research Board 98th Annual Meeting*.
17. **Borowski, E.**, Khan, A., & Reda Taha, M. (September 2016). “Identifying Critical Design Variables and Domains for Design Optimization of Deployable Tape Springs for Controlled Deployment”. *American Society for Composites 31st Technical Conference*.
18. Khan, A., **Borowski, E.**, , & Reda Taha, M. (September 2016). “Dynamic Deployment of Composite Tape Springs”. *American Society for Composites 31st Technical Conference*.
19. Taha, E., **Borowski, E.**, Kandil, U., Awadallah, A., Aboul-Enein, A., & Reda Taha, M. (September 2016). “Carbon Nanotubes to Improve Short Glass Fiber Composites”. *American Society for Composites 31st Technical Conference*.
20. **Borowski, E.**, Newell, P., Major, J., & Eichhubl, P. (August 2015). “Fracture Propagation in Geomaterials”. *DOE-NETL 2015 Carbon Storage R&D Project Review Meeting*.
21. **Borowski, E.** & Newell, P. (July 2015). “Numerical Investigation of Fracture in Geomaterials”. *Student Interns Technical Exchange at Sandia National Laboratories*.
22. **Borowski, E.**, Aboubakr, S., Soliman, E., & Reda Taha, M. (September 2014). “Fracture Toughness of Carbon Fiber Laminates Including Carbon Nanotubes”. *American Society for Composites 29th Technical Conference*.

## Invited Talks

1. **Borowski, E.** (October 2022). “Shared, Sourced, and Social Resources: Behavioral Research for Equity-Centered Policy”. *NUTC Seminar Series*, Northwestern University.
2. **Borowski, E.** (October 2022). “Protection or Peril of Following the Crowd in a Pandemic-Concurrent Flood Evacuation”. *NICO Lightning Talks*, Northwestern University.
3. **Borowski, E.** (August 2022). “Nowhere to Go? A Study of Social Connection and Mental Health Outcomes for Marginalized Young Adults in the COVID-19 Pandemic”. *Dr. Michelle Birkett CONNECT Lab*, Northwestern University.
4. **Borowski, E.** (April 2022). “Evacuation Choice Experiment: An Efficient Design Show-and-Tell”. *Civ. Env. 377 Choice Modeling in Engineering*, Northwestern University.
5. **Borowski, E.** (February 2022). “Behavioral Research for Mobility Resilience”. *Department of Civil & Environmental Engineering Graduate Student Virtual Open House*, Northwestern University.
6. **Borowski, E.** (January 2022). “Practicum: Learning How to Access and Visualize Urban Data”. *Civ Env. 201 Engineering Possibilities: Decision Science in the Age of Smart Technologies*, Northwestern University.
7. **Borowski, E.** (January 2022). “Introduction for Data Science Project”. *Stat. 390 Data Science Project / NICO 390 Metropolitan Chicago Data Science Corps Practicum*, Northwestern University.
8. **Borowski, E.** (September 2021). “Mobility and Behavior Lab”. *Department of Civil & Environmental Engineering Retreat Barbecue*, Northwestern University.
9. **Borowski, E.** (August 2021). “Special Libraries Association’s 2021 Annual Conference”. *Library Facilitation of Inclusion and Belonging Among Underrepresented Genders in STEM*, Northwestern University.
10. **Borowski, E.** (March 2021). “Disaster Resilience and Social Equity”. *Civ Eng. 160 Introduction to Civil, Construction, and Environmental Engineering*, University of New Mexico.
11. **Borowski, E.** (February 2021). “The Human Side of Engineering: Mobility Resilience”. *Department of Civil & Environmental Engineering Graduate Student Virtual Open House*, Northwestern University.
12. **Borowski, E.** (February 2020). “The Human Side of Engineering: Mobility Resilience”. *Department of Civil & Environmental Engineering Graduate Student Open House*, Northwestern University.

## RESEARCH GRANTS & PARTICIPATION IN RESEARCH PROJECTS

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### Smart and Connected Communities

2021

*Improving Healthcare Access in Marginalized Communities*

- Principal Investigators: Nie, Y., Zhu, Q., Jacobs, M., Kershaw, K., & Stathopoulos, A.
- Graduate Student Support: Bella, G., **Borowski, E.**, & Edward, D.

### Center for Engineering Sustainability and Resilience

2020

*Community Vulnerability Index: Examining Resilience to Overlapping Hazards*

- Principal Investigators: Stathopoulos, A. & Horvat, E. A.
- Graduate Student Support: **Borowski, E.** & Dambanemuya, H.

- Principal Investigators: **Borowski, E.** & Stathopoulos, A.

## HONORS & AWARDS

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### Funding

- Northwestern University Transportation Center's Dissertation Year Fellowship (2022)
- Northwestern University McCormick School of Engineering's Terminal Year Fellowship (2021)
- National Defense Science and Engineering Graduate (NDSEG) Fellowship (2017 - 2021)
- New Mexico Space Grant Fellowship (2014 - 2015)
- New Mexico Scholar's Scholarship (2006 - 2010)
- Bridge Scholarship (2005)

### Honorary

- Sigma Xi Excellence in Graduate Research Award (2016)
- Summa cum laude (2010)

## MENTORING

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### PhD Students - Mentor

*Center for Engineering Sustainability and Resilience*

Gretchen Bella (2022)

Topic: Learning from Late Adopters: Using an Adoption of Innovations Perspective to Study Crowdsourced Food Delivery Participation

*Stat. 359 Data Science Project & NICO 390 Metropolitan Chicago Data-science Corps Practicum*

Hanyin Wang (2022)

Topic: Mobility Justice: Violence and Enforcement

### Masters Students - Mentor

*Master's Thesis, Northwestern University*

Kenjana Aulia (2022)

Topic: Understanding the Factors Affecting Women in Traveling on the Women-Only Car in Indonesia

### Undergraduate Students - Mentor

*Stat. 359 Data Science Project & NICO 390 Metropolitan Chicago Data-science Corps Practicum*

Riley Harper (2022)

Topic: Mobility Justice: Violence and Enforcement

*Stat. 359 Data Science Project & NICO 390 Metropolitan Chicago Data-science Corps Practicum*

May Nguyen (2022)

Topic: Mobility Justice: Violence and Enforcement

*Stat. 359 Data Science Project & NICO 390 Metropolitan Chicago Data-science Corps Practicum*

Nicole Nixon (2022)

Topic: Mobility Justice: Violence and Enforcement

*Green Briar Equity Transportation Research Fellowship*

Victor Limontitla Cedillo (2020)

Topic: Dueling Emergencies: Flood Evacuation Ridesharing During the COVID-19 Pandemic

## **SERVICE**

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### **Committee Member**

*Standing Committee on Community Resources & Impacts*

Transportation Research Board

Role: Young Member

Spring 2022 - Present

*Social Equity & Racial Justice Committee*

Northwestern University's Department of Civil & Environmental Engineering

Role: Graduate Student Representative

Fall 2020 - Present

*Earthquake Engineering Research Institute Student Chapter*

University of New Mexico

Role: Secretary

2016

*Civil Engineering Structural Faculty Search Committee*

University of New Mexico

Role: Student Representative

Spring 2015

### **Academic Conference Coordination & Planning**

*Natural Hazards Workshop*

Natural Hazards Center

Role: Student Volunteer

Summer 2020

*NSF Sustainable Urban Systems Research Network Workshop*

Northwestern University

Role: Student Scribe

Summer 2019

*First Annual Resilience Colloquium*

University of New Mexico

Role: Co-Organizer

Summer 2017

## Community Engagement & Outreach

*Nature of Magic Walking Series*  
Equiticity Racial Equity Movement  
Role: Participant  
Summer 2022

*Sustained Dialogue Program*  
Northwestern University  
Role: Participant  
Fall 2021

*STEAM-H Student Outreach*  
Earthquake Engineering Research Institute  
Role: Facilitator  
June 2016

*Civil Engineering Department Open House*  
University of New Mexico  
Role: Demonstrator  
September 2015

*STEAM-H Career Exploration Extravaganza Weekend*  
Sandia National Laboratories  
Role: Facilitator  
June 2015

*ASCE Concrete Canoe National Competition*  
University of New Mexico  
Role: Facilitator  
April 2015

*MESA Student Outreach*  
Society of Women Engineers  
Role: Facilitator  
Fall 2014

*Brycon Construction Management Career Expo Day*  
University of New Mexico  
Role: Demonstrator  
February 2014

*Engineering Student Outreach*  
Sandia Prep Middle School  
Role: Demonstrator  
February 2014

## TEACHING EXPERIENCE

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### Adjunct Professor

*Civ. Env. 382-0-1,2: Capstone Design*

Institution: Northwestern University

Winter & Spring 2023

### Teaching Assistant

*Civ. Env. 377: Choice Modeling in Engineering*

Institution: Northwestern University

Instructor: Amanda Blomberg Stathopoulos

Spring 2022

*Civ. Env. 201: Engineering Possibilities: Decision Science in the Age of Smart Technologies*

Institution: Northwestern University

Instructor: Amanda Blomberg Stathopoulos

Winter 2019, Spring 2020, Winter 2021, Winter 2022

*Civ. Eng. 305: Infrastructure Material Science*

Institution: University of New Mexico

Instructor: Mahmoud Reda Taha

Fall 2014, Fall 2016

*Civ. Eng. 305: Infrastructure Material Science*

Institution: University of New Mexico

Instructor: Arup Maji

Fall 2015

### Teaching Certificate Programs

*Inclusive STEM Teaching Project*

Northwestern University

Summer 2022