

Spencer Aeschliman

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EDUCATION

Northwestern University

Ph.D Candidate, Transportation Systems Analysis and Planning. GPA: 3.87/4.00
NSF Graduate Research Fellow

Evanston, IL

Sep. 2021 – Present

Goshen College

Bachelor of Arts in Physics, minor in Mathematics. GPA: 3.94/4.00

Goshen, IN

Aug. 2015 – May 2019

MAJOR AWARDS AND ACHIEVEMENTS

- National Science Foundation Graduate Research Fellow (Sep. 2023 - Present)
- NAIA Men's Soccer Academic All-American (2017, 2018)
- College College Presidential Leadership Award recipient (2015-2019)

PUBLICATIONS AND PRESENTATIONS

Journal Articles

- Huang, E., Aeschliman, S., Hofstra, A., & Stathopoulos, A. (2024), "Examining Riders' Subjective Equity Standards for Transit Service: How will they shape future transit planning and operations?" Under review in *Transport Policy*.
- Said, M., Aeschliman, S., & Stathopoulos, A. (2023), "Robots at your doorstep: acceptance of near-future technologies for automated parcel delivery", *Scientific Reports*.
- Alam, Md.R., Hou, C., Aeschliman, S., Zhou, Y., & Guo, Z. (2022), "Optimization-based trip chain emulation for electrified ride-sourcing charging demand analyses", *Transportation Letters*.
- Zhou, Y., Aeschliman, S., & Gohlke, D. (2021), "Affordability and household transportation fuel costs by region and socioeconomic factors", *Transportation Research Record*.

Conference Papers & Presentations

- Aeschliman, S. & Stathopoulos, A. "The Return to Transit in a Changing Landscape: Telework and Safety Concerns." *TRB 2024*.
- Said, M., Aeschliman, S., & Stathopoulos, A. "Robots at Your Doorstep? Acceptance of Near-Future Modes for Parcel Delivery." *TRB 2023*.
- Aeschliman, S., Zhou, Y., Macal, C., & Zhou, Z., "Agent-based modeling of electric vehicles with time-of-use electricity rates", *EVS 33*, Portland, OR, June 14-17, 2020.
- Hou, C., Guo, Z., Aeschliman, S., Zhou, Y., Afifah, F., & Huang, J., "Energy impact analyses of electrified ride-sourcing services without trip chain data", *TRB 2021*.

Technical Reports

- Zhou, Y., Siddique, N., Mintz, M., Aeschliman, S., & Macal, C. (2022). "Electric Vehicle and Infrastructure Systems Modeling in Washington D.C. and Baltimore" (ANL-22/28). Argonne National Lab. (ANL), Argonne, IL (United States); Exelon, Chicago, IL (United States).
- Zhou, Y., Mintz, M., Stephens, T., Aeschliman, S., & Macal, C., "Electric Vehicle Adoption in Illinois", Energy Systems Division, Argonne National Laboratory, June 2020.
- Zhou, Y., Aeschliman, S., & Gohlke, D., "Affordability and Household Transportation Fuel Costs by Region and Socioeconomic Factors", Energy Systems Division, Argonne National Laboratory, December 2020.

Other Presentations

- "Simulating Forest Fires" (with Luke Rush), Goshen College Academic Symposium, March 15, 2019.

TEACHING

TA: Engineering Analysis II

Northwestern University, McCormick School of Engineering

Winter 2023

PROFESSIONAL RESEARCH EXPERIENCE

Systems Modeling and Software Engineer

May 2020 – Sep. 2021

Argonne National Laboratory, Energy Systems Division

Lemont, IL

- Ran and maintained the agent-based transportation energy analysis model (ATEAM) using the Repast Symphony modeling platform
- Performed data analysis and visualization with Python and R on various transportation energy-related projects for government and corporate sponsors
- Used machine learning techniques such as gradient boosting and deep neural networks for predictions on vehicle miles traveled, freight mobility, and more
- Contributed to technical reports prepared by the group for public access
- Maintained database of alternative fuel vehicle sales data in the U.S.

INTERNSHIPS

Department of Energy Science Undergraduate Laboratory Internship

Sep. 2019 – Apr. 2020

Argonne National Laboratory

Lemont, IL

- Learned Java and its implementation in ATEAM
- Devised and performed a case study on time-of-use electricity rates in ATEAM, which culminated in a conference paper submission and acceptance
- Maintained Argonne's alternative fuel vehicle sales database on a monthly basis

Maple Scholars Research Program

May 2017 – July 2017

Goshen College

Goshen, IN

- Designed and built small, car battery-powered air quality sensors (for Ozone, CO, VOCs, and particulates) with a Raspberry Pi controller
- Programmed the controller's data collection (including communication with sensors), power management, and GPS tracking using Python and C
- Visualized Goshen-area spatial air quality data on a website using the Google Maps API