

Lewis Lehe

ASSISTANT PROFESSOR · CIVIL AND ENVIRONMENTAL ENGINEERING
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

205 N Mathews Ave # 1203, Urbana, IL 61801

✉ lehe@illinois.edu | 🏠 lehelab.com | 📧 lewislehe | 🐦 @lewislehe

Education

UC Berkeley

PHD CIVIL AND ENVIRONMENTAL ENGINEERING

- Advisor: Dr. Carlos Daganzo
- Concentration: Transportation Engineering

Berkeley, CA

2013-2016

UC Berkeley

MS CIVIL AND ENVIRONMENTAL ENGINEERING

- Concentration: Transportation Engineering

Berkeley, CA

2012 - 2013

University of Leeds

MA TRANSPORT ECONOMICS

- Thesis: Income Effects in Discrete Choice Models

Leeds, United Kingdom

2011 - 2012

University of Pittsburgh

B.PHIL. MATHEMATICS-ECONOMICS

Pittsburgh, PA

2005 - 2010

Publications

PUBLISHED

- Pandey, A. and **Lehe, L.J.** (2024) "Bus stop spacing with heterogeneous trip lengths and elastic demand." *Transportation Research Part B: Methodological*, 103022, doi: 10.1016/j.trb.2024.103022
- Devunuri, S. and **Lehe, L.J.** (2024) "A survey of errors in GTFS Static feeds in the United States." *Findings*. doi:10.32866/001c.116694
- Pandey, A. and **Lehe, L.J.** (2024) "Local Stability of Traffic Equilibria in an Isotropic Network." *Transportation Research Part B: Methodological* 179, 102873, doi: 10.1016/j.trb.2023.102873.
- Lehe, L.J.** and Pandey, A. (2024) "A bathtub model of transit congestion." *Transportation Research Part B: Methodological*, 181, 102892, doi:10.1016/j.trb.2024.102892
- Devunuri, S., Qiam, S., and **Lehe, L.J.** (2024) "ChatGPT for GTFS: benchmarking LLMs on GTFS semantics and retrieval." *Public Transport*, doi: 10.1007/s12469-024-00354-x
- Devunuri, S., **Lehe, L.J.**, Qiam, S., Pandey, A. and Monzer, D. (2024) "Bus stop spacing statistics: theory and evidence." *Journal of Public Transportation*, 26, 100083, doi:10.1016/j.jpuptr.2024.100083
- Devunuri, S. and **Lehe, L.J.** (2024) "GTFS Segments: A Fast and Efficient Library to Generate Bus Stop Spacings." *Journal of Open Source Software*, 9(95), 6306, doi:10.21105/joss.06306
- Pandey, A. and **Lehe, L.J.** (2024) "Congestive mode-switching and economies of scale on a bus route." *Transportation Research Part B: Methodological* 183, 102930. doi:10.1016/j.trb.2024.102930
- Liu, H., Devunuri, S., **Lehe, L.J.**, Gayah, VV., (2023) "Scale Effects in Ridesplitting: A Case Study of the City of Chicago." *Transportation Research Part A: Policy and Practice*, 173, 103690, doi: 10.1016/j.tra.2023.103690
- Lehe, L.**, Pandey, A., (2022) "Taxi service with heterogeneous drivers and a competitive medallion market." *Journal of Urban Economics* 131, 103488. doi:10.1016/j.jue.2022.103488
- Lehe, L.J.**, Devunuri, S., (2022) "Large Elasticity at Introduction." *Research in Transportation Economics* 95, 101116. doi:10.1016/j.retrec.2021.101116

Lehe, L.J., Devunuri, S., Rondan, J., Pandey, A., (2021) *Taxation of Ridehailing*. Illinois Center for Transportation. doi:10.36501/0197-9191/21-040

Lehe, L.J., Gayah, V.V., Pandey, A., (2021) “Increasing Returns to Scale in Carpool Matching: Evidence from Scoop.” *Findings*. doi:10.32866/001c.25093

Lehe, L.J. (2020) “Winners and losers from road pricing with heterogeneous travelers and a mixed-traffic bus alternative.” *Transportation Research Part B: Methodological* 139, 432-446. doi:10.1016/j.trb.2020.07.003

Hu, S., Zhou, Q., Li, J., Wang, Y., Roncoli, C., Zhang, L., **Lehe, L.J.**, (2022) “High Time-Resolution Queue Profile Estimation at Signalized Intersections Based on Extended Kalman Filtering.” *IEEE Transactions on Intelligent Transportation Systems* 23, 21274-21290. doi:10.1109/TITS.2022.3173515

Pandey, A., **Lehe, L.J.**, Monzer, D., (2021) “Distributions of Bus Stop Spacings in the United States.” *Findings*. doi:10.32866/001c.27373

Lehe, L.J., Pandey, A., (2020) “Hyperdemand: A static traffic model with backward-bending demand curves.” *Economics of Transportation* 24. doi:10.1016/j.ecotra.2020.100182

Lehe, L.J. (2019). “Downtown congestion pricing in practice.” *Transportation Research Part C: Emerging Technologies* 100, 200-223. doi:10.1016/j.trc.2019.01.020

Lehe, L.J. (2018) “Minimum parking requirements and housing affordability.” *Journal of Transport and Land Use* 11, 1309-1321.

Lehe, L.J. (2017) “Feedback and the use of land for parking.” *Journal of Transport and Land Use* 10, 463-476.

Lehe, L.J., (2017) “Downtown tolls and the distribution of trip lengths.” *Economics of Transportation* 11-12, 23-32. doi:10.1016/j.ecotra.2017.10.003

Daganzo, C.F., **Lehe, L.J.**, Argote-Cabanero, J., (2018) “Adaptive offsets for signalized streets.” *Transportation Research Part B: methodological* 117, 926-934.

Daganzo, C.F., **Lehe, L.J.**, (2016) “Traffic flow on signalized streets.” *Transportation Research Part B: Methodological* 90, 56-69. doi:10.1016/j.trb.2016.03.010

IN REVIEW

Lehe, L.J. “Equilibrium horizontal queues and a tolling paradox” *Transportation Research Part B: Methodological*.

Lehe, L.J., Devunuri, S., Rondan, J., Pandey, A., Vignon, D. “Taxation of ridehailing in the United States” *Transport Policy*. Revisions requested.

Lehe, L.J. (2024) “An equilibrium model of a bus route with application to fare-free public transport” *Economics of Transportation*

Awards, Fellowships, & Grants

2024-2029	NSF CAREER: The Choice of Free vs. Priced for Transportation Systems , National Science Foundation - Civil, Mechanical and Manufacturing Innovation	\$519,000
2021-2024	Economics and Control for Next-Generation Carpooling (w/ Dr. Vikash Gayah at Penn State) , National Science Foundation - Civil, Mechanical and Manufacturing Innovation	\$400,000
2021-2022	Mobility On-demand Lab (w/ Peter Christensen and Adam Osman) , Discovery Partners Institute	\$ 120,000
2021-2022	The Last Mile Problem - a Grand Transportation Challenge (with Peter Christensen and Adam Osman) , National Bureau of Economic Research	\$ 75,000
2020-2021	Taxation of Ridesharing , Illinois Center for Transportation	\$ 160,000

Teaching Experience

2019+	CEE 310: Transportation Engineering,	Every semester
2019+	CEE 419: Transportation Economics,	Every spring

Outreach & Professional Development

SERVICE

- 2024+ **International Transportation Economics Association**, Communications Officer
- 2024+ **International Transportation Economics Association**, Scientific Committee
- 2024+ **Transportation Research Board Economics and Finance Committee**, Member
- 2022+ **Institute for Transportation Engineers Student Chapter**, Faculty Advisor
- 2022-2023 **Graduate Ambassadors Committee**, Chair
- 2020+ **UIUC Faculty Senate**, Senator

PEER REVIEW

Transportation Research Parts A-C, Transportation Research Review, Economics of Transportation, Journal of Urban Economics, Findings, Research in Transportation Economics, Asian Transport Studies, Nature: Scientific Data