

MARGARET L. MCNAMARA, PH.D., P.E.
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EDUCATION

Purdue University	Ph.D. in Civil Engineering (Transportation)	May 2017
	Advisor: Darcy Bullock	
	Dissertation: “Probe Data Dashboards for Interstate Performance Measurement and Winter Operations Management”	
University of Virginia	M.S. in Civil Engineering (Transportation)	May 2014
University of Virginia	B.S. in Civil Engineering, Minor in Computer Science	May 2012

PROFESSIONAL EXPERIENCE

Marquette University	Milwaukee, WI
Assistant Professor	August 2019 - Present
Dept. of Civil, Construction, & Environmental Engineering	
University of Alabama	Tuscaloosa, AL
Postdoctoral Researcher in Transportation Engineering	July 2017 – July 2019
Purdue University	West Lafayette, IN
Graduate Research Assistant in Transportation Engineering	June 2014 – May 2017
University of Virginia	Charlottesville, VA
Graduate Research Assistant in Transportation Engineering	June 2012 – May 2014

PUBLICATIONS

Research mentorship: † - Ph.D. student, ^ - Masters student, * - Undergraduate

Hay, N., Onwuzurike, O., Roy, S.P., McNamara, P., **McNamara, M.L.**, and McDonald, W. “Impact of traffic on air pollution in a mid-sized urban city during COVID-19 lockdowns.” *Air Quality, Atmosphere & Health*. March 2023. DOI: 10.1007/s11869-023-01330-3

^Del Conte, D. E., *A. Locascio, *J. Amoruso, and **M. L. McNamara**. “Modeling Multimodal Access to Primary Care in an Urban Environment.” *Transportation Research Interdisciplinary Perspectives*, Vol. 13, 2022. DOI: 10.1016/j.trip.2022.100550.

Mott, John H., **M. L. McNamara**, and D.M. Bullock, “Accuracy Assessment of Aircraft Transponder-Based Devices for Measuring Airport Operations,” *Transportation Research Record: Journal of the Transportation Research Board*, No. 2626, Transportation Research Board, Washington, D.C., 2017, pp. 9-17.

McNamara, Margaret L., J.H. Mott, and D.M. Bullock, “Leveraging Aircraft Avionics for Fleet and Airport Management,” *Transportation Research Record: Journal of the Transportation Research Board*, No. 2569, Transportation Research Board, Washington, D.C., 2016, pp. 32-41.

- McNamara, Margaret L.**, H. Li, S. Remias, L. Richardson, E. Cox, D. Horton, and D. M. Bullock. "Using Real-Time Probe Vehicle Data to Manage Unplanned Detour Routes." *ITE Journal*, Vol. 85, no. 12, December 2015, pp. 32-37.
- Remias, Stephen M., M.M. Mekker, **M.L. McNamara**, J.R. Sturdevant, E.D. Cox and D.M. Bullock, "Assessment of Speed Limit Locations Using Crowdsourced Probe Vehicle Data," *Transportation Research Record: Journal of the Transportation Research Board*, No. 2484, pp. 10-22, 2015.
- Day, Christopher, M., Remias, S.M., H. Li, M.M. Mekker, **M.L. McNamara**, E.D. Cox and D.M. Bullock, "Performance Ranking of Arterial Corridors Using Travel Time and Travel Time Reliability Metrics," *Transportation Research Record: Journal of Transportation Research Board*, No. 2487, Transportation Research Board of the National Academies, Washington, D.C., pp. 44-54, August 2015. DOI: 10.3141/2487-04

REPORTS

- Hainen, A., Islam, N., **McNamara, M.**, Jones, S. and Smith, R. (2020) Using AlgoTraffic Data to Improve Incident Management. Technical Report. University Transportation Center of Alabama, Tuscaloosa, AL. Report No. SPR 930-967.
<https://rosap.nhtl.bts.gov/view/dot/63561>
- Mekker, M.M., Remias, S.M., **McNamara, M.L.** and Bullock, D.M. (2020) Characterizing Interstate Crash Rates Based on Traffic Congestion Using Probe Vehicle Data. *JTRP Affiliated Reports*, Paper No. 31. DOI: 10.5703/1288284317119
- Mekker, M. M., Remias, S., M., **McNamara, M. L.**, Bunnell, W. A., Krohn, D. W., Sturdevant, J. R., Cox, E. D., & Bullock, D. M. (2016). Identifying effects and applications of fixed and variable speed limits (Joint Transportation Research Program Publication No. FHWA/IN/JTRP-2016/31). West Lafayette, IN: Purdue University.
- Day, C. M., **McNamara, M. L.**, Li, H., Sakhare, R. S., Desai, J., Cox, E. D., Horton, D. K., & Bullock, D. M. (2016). "2015 Indiana mobility report and performance measure dashboards." *Indiana Mobility Reports*, West Lafayette, IN: Purdue University. DOI: 10.5703/1288284316352
- Day, Christopher, S.M. Remias, H. Li, M.M. Mekker, **M.L. McNamara**, E.D. Cox, D.K. Horton and D.M. Bullock, "2013–2014 Indiana Mobility Report: Full Version," 2014. *Indiana Mobility Reports*, Purdue University, West Lafayette, IN., 2014. DOI: 10.5703/1288284315508

REFEREED CONFERENCE PAPERS

- Starke, J. A., & **McNamara, M. L.**, & Povinelli, R. J., & Castillo-Perez, D., & Brigham, L. N. (2020, October), *Staying Connected – Interactive Student Learning during the COVID Transition to Remote Learning*. Paper presented at 2020 ASEE North Midwest Section Annual Conference, Ames, Iowa. 10.18260/1-2--44673

- McNamara, Margaret L.**, R. Sakhare, H. Li, M. Baldwin, and D.M. Bullock, “Integrating Connected Vehicle Traffic Speeds into Winter Operations Performance Measures,” Transportation Research Board Annual Meeting, January 8-12, 2017. Paper No. 17-00161.
- McNamara, Margaret L.**, Z. Knoll, C. Voss, and D.M. Bullock, “Commercial Driver Behavioral Analysis Using Real-Time Mirror Check Monitoring Tools,” Transportation Research Board Annual Meeting, January 8-12, 2017. Paper No. 17-00162.
- Mekker, Michelle M., H. Li, **M.L. McNamara**, J.D. McGregor, M. Kachler, and D.M. Bullock, “Implementation of a Connected Data Smart Work Zone Management System to Provide Queue Alerts to Stakeholders,” Transportation Research Board Annual Meeting, January 8-12, 2017. Paper No. 17-00104.
- Ortega-Alvarez, J. D., R. A. Streveler, A. W. Fentiman, H. W. Aggarwal, W. Biswas, B. S. Coventry, A. Hassan, **M.L. McNamara**, and S. N. Paul. “From Graduate Students to Faculty: Portraits of Balance in the Professional Development Plans of Engineering Graduate Students.” 2017 ASEE Annual Conference & Exposition, Columbus, Ohio. June 25-28, 2017.
- Mott, John H., **M.L. McNamara**, and D.M. Bullock, “Estimation of Aircraft Operations at Airports Using Nontraditional Statistical Methods.” 2016. IEEE Aerospace Conference. Big Sky, Montana, Mar 5-12, 2016.
- McNamara, Margaret L.**, H. Li, S.M. Remias, D.K. Horton, E. D. Cox, and D.M. Bullock, “Real-Time Probe Data Dashboards for Interstate Performance Monitoring During Winter Weather and Incidents,” Transportation Research Board Annual Meeting, January 10-14, 2016. Paper No. 16-0622.
- Mekker, Michelle M., S.M. Remias, **M.L. McNamara**, and D.M. Bullock, “Characterizing Interstate Crash Rates Based on Traffic Congestion Using Probe Vehicle Data,” Transportation Research Board Annual Meeting, January 10-14, 2016. Paper No. 16-1194.
- Day, Christopher M., S.M. Remias, H. Li, M.M. Mekker, **M.L. McNamara**, and E.D. Cox, “Performance Ranking of Arterial Corridors Using Travel Time and Travel Time Reliability Metrics.” Transportation Research Board Annual Meeting, January 11-15, 2015. Paper No. 15-0063.

REFEREED CONFERENCE PRESENTATIONS

- “Measuring Access to Services by Multiple Modes: A Case Study of Milwaukee.” ITE Annual Meeting, Virtual. August 4-6 and 11-13, 2020. (International)
- “Route-Based Travel Time Analysis of Hospital Access in Alabama.” Southern District ITE Annual Meeting, Mobile, AL. April 8-11, 2018. (Regional)
- “Effect of Crashes on Intersection Delay: High-Resolution Signal Data Visualization.” ITS Midwest Annual Meeting, Columbus, OH, September 28-29, 2017. (Regional)
- “Winter Operations.” 103rd Purdue Road School, West Lafayette, IN, March 6-8, 2017. (Local)

- “Emerging Tools for After-Action Review.” 103rd Purdue Road School, West Lafayette, IN, March 6-8, 2017. (Local)
- “Integrating Connected Vehicle Traffic Speeds into Winter Operations Performance Measures.” TRB Annual Meeting 2017. Washington, D.C., January 8-12, 2017. (International)
- “Analysis of a University Bike-Sharing Program and Lessons Learned.” 102nd Purdue Road School. West Lafayette, IN, March 8-10, 2016. (Local)
- “Traffic Ticker: A Statewide Operations Dashboard.” 102nd Purdue Road School. West Lafayette, IN, March 8-10, 2016. (Local)
- “Leveraging Aircraft Avionics for Fleet and Airport Management.” TRB Annual Meeting 2016. Washington, DC. January 10-14, 2016. (International)
- “Development of a Real-Time Web-Based Dashboard for Interstate Performance Monitoring.” ITS America, 25th Annual Meeting and Exposition. Pittsburgh, PA, June 1-3 2015. (International)
- “Implementation of Real-Time Traffic Operations Dashboards Using Commercial Probe Data.” GIS Day 2015. Indianapolis, IN. September 22, 2015. (Local)

REFEREED POSTER PRESENTATIONS

- ^Wattelet, T. and **McNamara, M.L.** “Examining Hard Braking Events in Work Zones on Surface Streets in Milwaukee, Wisconsin.” TRB Annual Meeting, Washington D.C. January 8-12, 2023. (International)
- McNamara, M.L.** and Dalton, S.G.H.. “A Systematic Literature Review of Transportation in Adults with Chronic Stroke Impairments.” TRANSED: Mobility, Accessibility, and Demand Response Transportation Conference, September 2022. Virtual. (International)
- Dalton, S.G.H., **McNamara, M.L.**, Fial, A., Otto, K., *Amoruso, J., Angelina, E., ^Del Conte, D., *Locascio, A., McDermott, M., & Savino, P. “A systematic review of transportation access for adults with chronic aphasia.” ASHA Annual Convention, November 2021. Virtual. (National)
- Dalton, S.G.H., **McNamara, M.L.**, Fial, A., Otto, K., *Amoruso, J., Angelina, E., ^Del Conte, D., McDermott, M., *Locascio, A., & Savino, P. “Systematic review of transportation access for adults with chronic aphasia: Preliminary findings.” Nordic Aphasia Conference, June 2021 Virtual – Asynchronous. (International)
- “Accessibility Analysis of Labor & Delivery Services in Alabama.” Institute of Transportation Engineers Annual Meeting, Austin, TX. July 21-24, 2019. (International)
- “Route-Based Travel Time Analysis of Hospital Access in Alabama.” 19th Annual Rural Health Conference, Tuscaloosa, AL. April 25-26, 2018. Judge’s Choice Winner – 3rd place, professional division. (Local)
- “Commercial Driver Behavioral Analysis Using Real-Time Mirror Check Monitoring Tools.” 103rd Purdue Road School, West Lafayette, IN, March 6-8, 2017. (Local)
- “Commercial Driver Behavioral Analysis Using Real-Time Mirror Check Monitoring Tools.” TRB Annual Meeting 2017. Washington, D.C., January 8-12, 2017. (International)

- “Analysis of a University Bike-Sharing Program.” Institute of Transportation Engineers Annual Meeting, Anaheim, CA, August 14-17, 2016. (International)
- “Real-Time Probe Data Dashboards for Interstate Performance Monitoring.” Institute of Transportation Engineers Midwest/Great Lakes District Meeting. Chicago, IL, June 27-28, 2016. (Regional)
- “Characterizing Interstate Crash Rates Based on Traffic Congestion Using Probe Vehicle Data.” ITE Midwest/Great Lakes District Meeting. Chicago, IL, June 27-28, 2016. Poster. Best Student Poster Award Winner, with Michelle Mekker (Regional)
- “Leveraging Aircraft Avionics for Fleet and Airport Management.” 102nd Purdue Road School. West Lafayette, IN, March 8-10, 2016. (Local)
- “Real-Time Probe Data Dashboard for Monitoring Detour Route During I-65 N Road Closure.” 102nd Purdue Road School. West Lafayette, IN, March 8-10, 2016. (Local)

NON-REFEREED POSTER PRESENTATIONS

- *Marquez, C. “Examining Safety on Milwaukee’s Pedestrian High Injury Network with Hard Braking Events.” OCOE Undergraduate Research Poster Session, Marquette University, October 28, 2023. (Local)
- “Transportation access after a stroke: Identifying barriers and facilitators.” Forward-Thinking Poster Session, Marquette University, November 19, 2020. (Local)

GRANTS

- 2023 “Measuring Pedestrian Exposure To Traffic for Robust Statistical Safety Analysis at Signalized Intersections,” SFF/RRG at Marquette University, PI, \$9,100
- 2022 “Examining Safety on Milwaukee’s Pedestrian High Injury Network with Hard Braking Events” by the Summer Undergraduate Research Fellowship (SURF) Program at Opus College of Engineering at Marquette University, PI, \$5,000
- “Workshop on Spatial Data Analytics for Undergraduate Students.” Helen Way Klingler College of Arts and Sciences Mellon Grant. A. Snowden, W. McDonald, M. McNamara, S. Puri, A. Ranson. \$5,000.
- 2019 “Measuring Access to Services by Multiple Transportation Modes: A Case Study of Milwaukee” by Opus College of Engineering at Marquette University, PI, \$10,000
- Master Contract with Minnesota DOT, co-led with Dr. Jaime Hernandez. Allows for an interdisciplinary team at Marquette to compete for RFPs put out by MnDOT for transportation-related projects. Effective 2020 – Jan. 31, 2027.
- 2017 “Transportation Needs Assessment for Pickens County” by the University of Alabama-Pickens County Partnership, Co-PI, \$22,400, June 2018 – August 2019

“Using AlgoTraffic Data to Improve Traffic Incident Management” by ALDOT, Co-PI,
\$182,000, February 2018 – February 2019

AWARDS AND HONORS

- 2020 Jump Start Certificate of Award for “Which poster best illustrates the forward-thinking nature of the project?” for the poster “Transportation access after a stroke: Identifying barriers and facilitators.”
- 2018 Judge’s Choice – 3rd Place Poster in Professional Division, Alabama Rural Health Conference, University of Alabama

TEACHING EXPERIENCE

Courses taught at Marquette University:

- CEEN 4640 – Traffic Characteristics & Design Fall 19, 20, 21, 22, 23
- CEEN 4615 – Highway Planning & Design Spring 21, 22, 24
- CEEN 3610 – Transportation Engineering Spring 20, 21, 22, 24
- CEEN 6610 – Advanced Traffic Operations Analysis & Design Fall 21
- CEEN 6675 – Data Analysis & Visualization (created) Fall 22

Courses assisted in at Marquette University:

- CEEN 4889 – Senior Design Spring 20, 21, 22, 24
 - Served on faculty advisory board, reviewing student presentations and providing technical advice
 - Deliver guest lecture on Presentation Tips & Tricks
- CEEN 1200 – Introduction to Infrastructure Fall 19, 20, 21, 22, 23
 - Deliver week of lectures on transportation engineering
 - Provide a homework assignment and project to course instructor

Guest Lectures at Marquette University:

- CORE 1929H – Honors Core Methods of Inquiry April 6, 2021
 - Guest Lecture on “Transportation and Cities: An Engineer’s Perspective”

UNIVERSITY SERVICE

Departmental Involvement:

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| Graduate Students Committee, Member | 2019-Present |
| Institute of Transportation Engineers (ITE) Student Chapter Advisor | 2019-Present |

PROFESSIONAL SERVICE

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| Member | Institute of Transportation Engineers (ITE) |
| | Tau Beta Pi (Engineering Honor Society) |

American Society of Civil Engineers (ASCE)
 American Society for Engineering Education (ASEE)

Committee Leadership

Paper Review Coordinator, Transportation Research Board (TRB)	2022-Present
Visualization in Transportation Committee	
Co-chair, ITE International Women in ITE Subcommittee	2018-2021

Committee Membership

TRB Visualization in Transportation Committee	2019-Present
TRB Freeway Operations Committee	2021-Present
Women in ITE Subcommittee	2017-Present
ITE International Membership Committee	2017-18
Student Membership Subcommittee	2017

Panel Member

National Cooperative Highway Research Program (NCHRP) 08-167, “A Guide for Creating Effective Transportation Visualizations”	2022-Present
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Reviewer

Transportation Research Board (TRB) Annual Meeting
 Transportation Research Record: Journal of the Transportation Research Board
 Advances in Transportation Studies

LICENSES AND CERTIFICATIONS

Professional Engineer, WI (48675 – 6)

STUDENTS SUPERVISED

M.S. (Thesis)	Danielle Del Conte	Spring 2022
M.S. (Course)	Thomas Wattelet	Spring 2023

ONLINE SCHOLAR PROFILES

ORCID:	orcid.org/0000-0003-3008-229X
Scopus Author ID:	https://www.scopus.com/authid/detail.uri?authorId=57189899449
Google Scholar:	https://scholar.google.com/citations?user=6RFNOA0AAAAJ