

## STEPHANIE S. IVEY, Ph.D.

Associate Dean for Research, Herff College of Engineering  
Associate Professor, Department of Civil Engineering, University of Memphis  
108B Engineering Science Bldg., 3815 Central Avenue, Memphis, TN 38152  
Office: 901.678.3286, Fax: 901.678.3026  
Email: [ssalyers@memphis.edu](mailto:ssalyers@memphis.edu)

### BIO

**Dr. Stephanie Ivey** is the Associate Dean for Research for the Herff College of Engineering and a Professor with the Department of Civil Engineering at the University of Memphis. She also directs the Intermodal Freight Transportation Institute and the Southeast Transportation Workforce Center. Her research includes focus on community livability and transportation planning and policy. She is the Project Director for the West Tennessee STEM Hub, a regional K-12 outreach initiative. Ivey also has a lengthy and nationally recognized research record focused on STEM and transportation education and workforce issues. She is a member of the Tennessee STEM Leadership Council and the Federal Reserve Bank of St. Louis Transportation Industry Council. She serves as faculty advisor for the University of Memphis student chapters of WTS and the Institute of Transportation Engineers and is a member of the Executive Committee of the ITE Transportation Education Council.

### EDUCATION

2003 **Doctor of Philosophy (Ph.D.) in Civil Engineering**, University of Memphis, Memphis, TN  
1998 **Master of Science in Civil Engineering**, University of Memphis, Memphis, TN  
1996 **Bachelor of Science in Civil Engineering**, University of Memphis, Memphis, TN

### PROFESSIONAL EXPERIENCE

2017- **Professor**, Department of Civil Engineering, University of Memphis  
2017- **Associate Dean for Research**, Herff College of Engineering, University of Memphis  
2021- **Associate Director**, Center for Applied Earth Science and Engineering Research, University of Memphis  
2015-20 **Director**, Intermodal Freight Transportation Institute, University of Memphis  
2014- **Director**, Southeast Transportation Workforce Center, University of Memphis  
2011-17 **Associate Professor**, Department of Civil Engineering, University of Memphis  
2003-11 **Assistant Professor**, Department of Civil Engineering, University of Memphis  
2001-03 **Research Associate**, Ground Water Institute, University of Memphis  
1999-01 **Graduate Research Assistant**, Ground Water Institute, University of Memphis  
1997-99 **Instructor**, Immaculate Conception High School, Memphis, TN

### TEACHING EXPERIENCE

<b>SUBJECT</b> ( <i>Undergraduate (U), Graduate (G), Other</i> )	<b>INSTITUTION</b>
CIVL 3103 Approximations and Uncertainty in Engineering (U)	University of Memphis
CIVL 3161 Transportation Systems Engineering (U)	
CIVL 4191 Civil Engineering Projects (U)	
CIVL 4199 Senior Design (U)	
CIVL 4162/6162 Traffic Engineering (U/G)	
CIVL 4901/6901 Introduction to Transportation Systems Management and Operations	
CIVL 4903/6902 Transformative Technologies in Engineering	
CIVL 7001/8001 Engineering Analysis (G)	
CIVL 7012/8012 Probabilistic Methods in Engineering (G)	
CIVL 7991 Civil Engineering Projects (G)	
Advanced Placement Calculus, Other	Immaculate Conception High School
Honors Physics, Other	
Honors Chemistry, Other	
Geometry, Other	

## RESEARCH/SCHOLARSHIP/CREATIVE ACTIVITIES

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### Refereed Journal Publications

Jordan, S. and Ivey, S. *In Press*. Complete Streets: Promises and Proof. ASCE Journal of Urban Planning and Development.

Yu, H., Zhou, Y., Ivey, S., and Lang, Y. (2019) Large-Scale Multibaseline Phase Unwrapping: Interferogram Segmentation based on Multibaseline Envelope-Sparsity Theorem. *IEEE Transactions on Geoscience and Remote Sensing*, 57(11), pp. 9308-9322. 10.1109/TGRS.2019.2926096

Ivey, S., Powers, M., and Clark, A. (2019) Building a Business Case for Increasing Diversity in the Transportation Workforce. *TRR News*, September-October 2019, pp. 22-27.

Szymkowski, T. and Ivey, S. (2019) Job Openings for TSMO – Delivering Transportation System Management and Operations Services. *TRR News*, September-October 2019, pp. 32-36.

Ivey, S. and McRae, G. (2019) Emerging Technologies and the Changing Transportation Workforce: Lessons in Predicting the Future. *Journal of Interprofessional Workforce Research*. 2(2).

Windsor, A., and Ivey, S. (2018) “Mid-Semester Evaluations for Increasing Success of STEM Students.” *Journal of STEM Education*, Vol. 19, No. 3.

Yang, Y., Ivey, S., Levy, M., and Royne, M. (2016) “Active Travel to School: Findings from the Survey of US Health Behavior in School-aged Children, 2009-2010.” *Journal of School Health*, Vol. 86, No. 6.

Ivey, S., Levy, M., Royne, M., Ford, K., Guthikonda, K. (2016) “Impact of Freight Traffic on School Walking Decisions in Urban Environments.” *Journal of Transportation Management*, Vol. 25, No.2.

Fox, A., Stafford, M., Ivey, S., and Levy, M. (2016) “Marketing Active Transportation to School to Improve Children’s Health: Utilizing Parental Perspectives from an Inner-City Environment.” *Health Quarterly Marketing*. <http://dx.doi.org/10.1080/07359683.2016.1238656>.

Ivey, S. Hall, A., Allen, L., and Bridson, P. (2015) “West TN STEM Hub: Cradle to Career Collaborations for STEM.” *Critical Conversations: Journal of the Tennessee Board of Regents*. Vol. 1, Spring 2015.

Windsor, A., Bargagliotti, A., Best, R., Franceschetti, D., Haddock, J., Ivey, S., and Russomanno, D. (2015) “Increasing retention in STEM: Results from a STEM Talent Expansion Program at the University of Memphis.” *Journal of STEM Education*, Vol. 15, No. 2, pp. 11-19.

Ivey, S. Golias, M., Palazolo, P., Ford, K., Wise, A., and Thomas, P. (2014) “Transportation Engineering Careers: Strategies for Attracting Students to Transportation Professions.” *Transportation Research Record, Journal of the Transportation Research Board*, No. 2414.

Turochy, R., Fricker, J., Hawkins, H.G., Hurwitz, D., Ivey, S., Knodler, M., Young, R. (2013) “Assessment of Introductory Transportation Engineering Course and General Transportation Engineering Curriculum.” *Transportation Research Record: Journal of the Transportation Research Board*, No. 2328, *Transportation Research Board of the National Academies*, Washington, DC, pp. 9-15.

Larsen, D., Morat, J., Waldron, B., Ivey, S., and Anderson, J. (2013) “Stream loss contributions from Nonconnah Creek to the Shallow and Memphis aquifers near the Sheahan well field, Memphis, TN.” *Environmental and Engineering Geoscience*, Vol. 19, No. 3, pp. 265-287.

Karafa, J. Golias, M., Ivey, S., Saharidis, G., and Leonardos, N. (2013) “The berth allocation problem with stochastic vessel handling times.” *International Journal of Advanced Manufacturing Technology*, Vol. 65, No. 1-3, Pp. 473-484.

Koban, J., Larsen, D., and Ivey, S. (2012) “Resolving the source and mixing proportions of modern leakage to the Memphis aquifer in a municipal well field using geochemical and 3H/3He data, Memphis, TN, USA.” *Environmental Earth Sciences*, Vol. 66, Issue 1, pp. 295-310.

Ivey, S., Badoe, D., and Edwards, S. (2012) “National Household Travel Survey Add-On Program: Experience of Stakeholders and Best Practices for Maximizing Program Benefits.” *Transportation Research Record, Journal of the Transportation Research Board*, No. 2291, pp. 150-156.

Ivey, S., Golias, M., Palazolo, P., Edwards, S., and Thomas, P. (2012) “Attracting Students to Transportation Engineering: Gender Differences and Implications of Student Perceptions of Transportation Engineering Careers.” *Transportation Research Record, Journal of the Transportation Research Board*, No. 2320.

Edwards, S., Ivey, S., Lipinski, M., and Golias, M. (2012) “Bicycle and Pedestrian Studies Based on Data from National Household Travel Survey.” *Transportation Research Record, Journal of the Transportation Research Board*, No. 2299.

Golias, M., Ivey, S., Saharidis, G. (2011) “Advances in Truck Scheduling at a Cross-Docking Facility.” Submitted to the *International Journal of Information Systems and Supply Chain Management*, March 2011.

Ivey, S. and Badoe, D. (2011) “A Review of Policies on Access to Transportation Planning Data and Models: Implications for Transportation Planning Agencies.” *ASCE Journal of Urban Planning and Development*, v137 (4), pp. 438-447.

Karafa J., Golias M.M., Ivey S., Saharidis G.K.D., Leonardos N. (2011) Scheduling at a cross dock facility with stochastic truck arrival times. In: Ed. Khodr H.M, *Scheduling Problems and Solutions*. Nova Publishing. ISBN 978-1-61470-689-2

Koban, J., Larsen, D., and Ivey, S. (2011) “Resolving the source and mixing proportions of modern leakage to the Memphis aquifer in a municipal well field using geochemical and 3H/3He data, Memphis, Tennessee USA.” *Environmental Earth Sciences*, DOI 10.1007/s12665-011-1239-x, 18 p.

Mehlhorn, S., Racer, M., Ivey, S., and Lipinski, M. (2011) “A Single-objective Recovery Phase Model.” *International Journal of Information Technology Project Management*. V2, n3, pp. 53-71.

Russomanno, D., Best, R., Ivey, S., Haddock, J., and Franceschetti, D. (2010) “MemphiSTEM: A STEM Talent Expansion Program at the University of Memphis.” *Journal of STEM Education*, V11, n1&2, pp.25-37.

Ivey, S. S., Gentry, R. W., Larsen, D., and Anderson, J. (2008) “Inverse Applications of Age-Distribution Modeling Using Environmental Tracers 3H/3He.” *ASCE Journal of Hydrologic Engineering*, V13, n11, pp. 1002-1010.

Ivey, S.S., Gentry, R. W., Larsen, D., and Anderson, J. (2008) “Case Study of the Sheahan Wellfield Using 3H/3He Field Data to Determine Localized Leakage Areas.” *ASCE Journal of Hydrologic Engineering*, V13, n11, pp. 1011-1020.

Gentry, R.W., Larsen, D., Ivey, S.S. (2003) “Efficacy of genetic algorithm to investigate small scale aquitard leakage.” *ASCE Journal of Hydraulic Engineering*, V129, n7, pp. 527-535.

Larsen, D., Gentry, R.W., Ivey, S., Solomon, D.K., and Harris, J. (2003) “Groundwater leakage through a leaky confining unit beneath a municipal well field, Memphis, Tennessee, USA.” In Schulz, H.D., and Hader, A., eds., *Geochemical Processes in Soil and Groundwater, Measurement-Modelling-Upscaling*. Wiley-VCH, Berlin, p. 51-64.

### **Book Chapters**

Ivey, S., Olson, B., and Reeb, T. (2021). Visualizing Equality in the New Mobility Workforce. In E. Ozdenerol (ed.), *Gender Inequalities: GIS Approaches to Gender Analysis*. CRC Press. ISBN 9780367184735.

Ivey, S. and Parish, S. (2020). Cultivating STEM Identity through the Peer Mentoring Relationship. In A. Rockinson-Szapkiw, J. Wendt, and K. Wade-Jaimes (Ed.), *Navigating the Peer Mentoring Relationship: A Handbook for Women and Other Underrepresented Populations in STEM*. Kendall Hunt Publishing Company. ISBN 9781792407932.

Ivey, S. S. (2019). Inspiring the Next Generation Mobility Workforce through Innovative Industry-Academia Partnerships. In T. Reeb (Ed.), *Empowering the New Mobility Workforce*. p. 317-348, Elsevier, <https://doi.org/10.1016/B978-0-12-816088-6.00015-8>.

### **Technical Reports**

Ivey, S., Lipinski, M., Milligan, J., Sirbaugh, L. (2020). Freight Stakeholder Survey. Produced under Memphis Metropolitan Planning Organization Contract No. CA2100112.

Ivey, S., Lipinski, M., and Oppong, D. (2020) Transportation-STEM Academy: A playbook for developing transformational educational experiences through industry-academia partnerships. Produced under Federal Highway Administration Agreement No. DTFH6114H00025.

Ivey, S., Lipinski, M., and Oppong, D. (2020) Women in Transportation Playbook: Inspire, Engage, and Empower. Produced under Federal Highway Administration Agreement No. DTFH6114H00025.

Ivey, S., Camp, J., Triplett, K., Bowman, K., Turner, K., Fite, L. Isbell, A., and Baroud, H. (2020). Best Strategies for Hiring, Retaining, and Utilizing Minorities and Women. Produced under Tennessee Department of Transportation Agreement No. RES2019-19.

Ivey, S., Milligan, J., Oppong, D., Sirbaugh, L., and Waldron, B. (2020). Analysis of Demographic, Socioeconomic and Regional Differences in TDOT Customer Satisfaction Survey. Produced under Tennessee Department of Transportation Agreement No. RES2019-23.

Szymkowski, T., Ivey, S., Lopez, A., Noyes, P., Kehoe, N., and Redden, C. (2019). Transportation Systems Management and Operations (TSMO) Workforce Guidebook: Final Guidebook. National Cooperative Highway Research Program (NCHRP) Project 20-07/Task 408, Transportation Research Board of The National Academies of Sciences, Engineering and Medicine. <https://transportationops.org/sites/transops/files/TSMO%20Workforce%20Guidebook%20NCHRP.pdf>

Ivey S., Powers, M., Rapalo, A., Lipinski, M. (2018). Transportation, Distribution, and Logistics: Apprenticeship Acceleration in West Tennessee. Produced under Tennessee Department of Economic and Community Development Agreement No. 33002-77718.

Ivey, S., Rapalo, A., Powers, M., Lipinski, M. (2017). The Transportation Operations Discipline: Identifying the Education, Training, Experiential Learning, Competencies, and Skills for Critical Occupations. Produced under FHWA Agreement No. DTFH6114H00030.

Ivey, S., Rapalo, A., Powers, M., Lipinski, M. (2016). Job Needs and Priorities Report: Southeastern US, Phase II Action Plans. Produced under Federal Highway Administration Agreement No. DTFH6114H00025.

Doherty, M., Hart, M., Ivey, S. (PI), Ford, K., Greenstreet, A., Mersereau, J., Rapalo, V., Schafer, S., Schroeckenthaler, K., Adams, T., Lipinski, M. (2016). Making Freight-Centric Communities More Livable. National Center for Freight & Infrastructure Research & Education, Report No. CFIRE RI-02, CFDA 20.701.

Tate, S., Rapalo, A., Ivey, S. (2015). Job Needs and Priorities Report: Southeastern US, Phase 1. Produced under Federal Highway Administration Agreement No. DTFH6114H00025.

Ivey, S. and Badoe, D. (2014) "Use of Regional Travel Demand Models to Address Performance-Measure Requirements of the Moving Ahead for Progress in the 21<sup>st</sup> Century Act." Report prepared for Tennessee Models Users Group, December 2014.

Ivey, S. and Badoe, D. (2012) “Data Inputs Required and Challenges Faced by Metropolitan Planning Organizations in Tennessee for Development of Long Range Travel Demand Models.” Report prepared for Tennessee Model Users Group, December, 2012.  
[http://web.utk.edu/~tnmug08/2013/TNMUG\\_2012\\_FinalDraft\\_122112.pdf](http://web.utk.edu/~tnmug08/2013/TNMUG_2012_FinalDraft_122112.pdf)

Carson, J. and Ivey, S. (2006) “Developing A “Recruitment Toolbox” For Transportation Professionals”, Report No.SWUTC/06/167765.

### **Refereed Conference Publications**

Goodman, K., Ivey, S., Stewart, C., O'Brien, S., Darbeheshti, M., Schupbach, W., Alfrey, K. (2020). Launching the Urban STEM Collaboratory. *Proceedings of the American Society for Engineering Education Virtual Conference*. June 22-26, 2020. Paper ID #29081.

Jordan, S. and Ivey, S. (2020). Complete Streets: Promises and Proof, *Proceedings of the Transportation Research Board 99<sup>th</sup> Annual Meeting*, Washington, DC, January 2020.

Sarram, G. and Ivey, S. (2018). Investigating Customer Satisfaction Patterns in a Community Livability Context: An Efficiency-Oriented Decision-Making Approach, *Proceedings of the 2018 International Conference on Transportation and Development*, Pittsburgh, PA, July 2018.

Zhou, Y., Ivey, S., Yu, H. (2018) Large-scale Minimum Cost Flow Algorithm: an Agglomerative Clustering based Approach, *Proceedings of the Transportation Research Board 97<sup>th</sup> Annual Meeting*, Washington, DC, January 2018.

Sarram, G., and Ivey, S. (2017) “Evaluating a Survey of Public Livability Perceptions and Quality-of-Life Indicators: Considering Freight-Traffic Impact.” *Proceedings of the 2017 ASCE International Conference on Sustainable Infrastructure*, New York, New York, October 26-28.

Sarram, G., and Ivey, S. (2017) “Proxy Setting for Developing a Quantitative Livability Forecasting Metric: Identifying Freight Traffic Role.” *Proceedings of 2017 METRANS International Urban Freight Conference (I-NUF)*, Long Beach, October 2017. <https://www.metrans.org/2017-i-nuf-presentationspapers>

Zhou, Y., and Ivey, S. (2017) “A Decomposition Solution to Large-Scale Multi-Commodity Networks.” *Proceedings of 2017 METRANS International Urban Freight Conference (I-NUF)*, Long Beach, October 2017. <https://www.metrans.org/2017-i-nuf-presentationspapers>

Zhou, Y., and Ivey, S. (2017). “A Study of Large-Scale Minimum Cost Network Flow Problem.” *Proceedings of the Transportation Research Board 96<sup>th</sup> Annual Meeting*, Washington, DC, January 2017.

Zhou, Y., and Ivey, S. (2016). “An Agglomerative Clustering Based Large-Scale Minimum Cost Flow Algorithm.” *Proceedings of 2016 INFORMS Annual Meeting*, Nashville, TN, November 2016.

Rapalo, V., Ivey, S., Hart, M., Schroeckenthaler, K., and Adams, T. (2016) “Evaluation of Factors Affecting Livability in a Freight-Centric Community in Memphis, Tennessee.” *Proceedings of the Transportation Research Board 95<sup>th</sup> Annual Meeting*, Washington, DC, January 2016.

Zhou, Y., and Ivey, S. (2016) “Liner Shipping Network Design of Inland and Sea Transportation Nodes: A Two-Stage Programming Approach.” *Proceedings of the Transportation Research Board 95<sup>th</sup> Annual Meeting*, Washington, DC, January 2016.

Royne, M., Ivey, S., Levy, M., Roakes, S., and Fox, A. (2014) “Parental Perspectives on Walking to School in the Inner-City: Marketing Communications and Public Policy Implications.” AMA Marketing & Public Policy Conference, Boston, Massachusetts, June 2014.

Ivey, S. Golias, M., Palazolo, P., Ford, K., Wise, A., and Thomas, P. (2014) “Transportation Engineering Careers (TREC): Program Evolution, Impact, and Lessons Learned.” *Proceedings of the Transportation Research Board 93<sup>rd</sup> Annual Meeting*, Washington, DC, January 2014.

Doherty, M., Hart, M., Adams, T., Wise, A., and Ivey, S. (2013) "Defining Livability for Freight-Centric Communities: Identifying Priorities of Residents of the Lamar Avenue Corridor in Memphis, TN." *Proceedings of the ASCE 2<sup>nd</sup> T&DI Green Streets, Highways and Development Conference*, Austin, TX.

Ivey, S., Best, R., Camp, C., and Palazolo, P. (2013) "Transforming a Civil Engineering Curriculum Through GIS Integration." *Proceedings of the 2013 NSF CCLI/TUES Conference*, Washington, DC, January 2013.

Turochy, R., Fricker, J., Hawkins, H.G., Hurwitz, D., Ivey, S., Knodler, M., Young, R. (2013) "Assessment of Introductory Transportation Engineering Course and General Transportation Engineering Curriculum." *Proceedings of the Transportation Research Board 92<sup>nd</sup> Annual Meeting*, Washington, DC, January 2013.

Portal, I., Kaisar, E., Golias, M., Ivey, S. (2013) "Scheduling Container Vessels Under Handling and Arrival Time Uncertainty." *Proceedings of the Transportation Research Board 92<sup>nd</sup> Annual Meeting*, Washington, DC, January 2013.

Ivey, S., Best, R., Camp, C., and Palazolo, P. (2012) "Transforming a Civil Engineering Curriculum through GIS Integration." *Proceedings of the 2012 ASEE Annual Conference*, San Antonio, TX. Final paper accepted January, 2012; conference June 10-13, 2012.

Golias, M., Georgios, S., Ivey, S., and Lipinski, M. (2012) "Scheduling Inbound Trucks at Cross-Dock Facility Under Truck Arrival Uncertainty." *Proceedings of the Transportation Research Board 91<sup>st</sup> Annual Meeting*, Washington, DC, January 2012.

Ivey, S., Badoe, D., and Edwards, S. (2012) "National Household Travel Survey Add-On Program: Experience of Stakeholders and Best Practices for Maximizing Program Benefits." *Proceedings of the Transportation Research Board 91<sup>st</sup> Annual Meeting*, Washington, DC, January 2012.

Ivey, S., Golias, M., Palazolo, P., Edwards, S., and Thomas, P. (2012) "Attracting Students to Transportation Engineering: Gender Differences and Implications of Student Perceptions of Transportation Engineering Careers." *Proceedings of the Transportation Research Board 91<sup>st</sup> Annual Meeting*, Washington, DC, January 2012.

Jami, N., Ivey, S., Lipinski, M., and Golias, M. (2012) "LED Traffic Signal Retrofits: Implications for Intersection Safety." *Proceedings of the Transportation Research Board 91<sup>st</sup> Annual Meeting*, Washington, DC, January 2012.

Royne, M., Ivey, S., Levy, M., and Roakes, S. (2012) "Factors Affecting School Walking Decisions in an Urban Environment: Implications for Public Health and Public Policy." *Proceedings of the 2012 American Council on Consumer Interests Conference*, Memphis, TN, April 2012.

Levy, M., Ivey, S., Royne, M. and Roakes, S. (2011) "Safe Routes to School: Community and university partnerships to promote walking to school." *American Public Health Association 13<sup>th</sup> Annual Meeting and Exposition*, Washington, DC, November 2011.

Ivey, S. and Palazolo, P. (2011) "Girls Experiencing Engineering: Evolution and Impact of a Single-Gender Outreach Program." *Proceedings of the 2011 ASEE Annual Conference*, Vancouver, BC, Canada, June 2011.

Palazolo, P. and Ivey, S. (2011) "First Steps: Moving from the Freshman to the Sophomore Year in Engineering." *Proceedings of the 2011 ASEE Southeast Section Annual Conference*, Charleston, SC.

Best, R., Russomanno, D., Ivey, S., Haddock, J., Franceschetti, D., Bargagliotti, A., Hairston, R. (2010) "Math Bridge bootcamp: A Strategy for Facilitating Undergraduate Success in STEM Courses." Accepted for presentation and publication in *FECS10 – 6<sup>th</sup> International Conference on Frontiers in Education: Computer Science and Computer Engineering*, Las Vegas, NV.

Palazolo, P., Ivey, S., and Camp, C. (2010) "Freshman Engineering Student Perceptions of Engineering Disciplines." *Proceedings of the ASEE Southeast Section Annual Conference*, Blacksburg, VA.

Ivey, S. and Badoe, D. (2010) "A Survey of Policies on Access to Transportation Planning Data, Models, and Cost Recovery." *Proceedings of the Transportation Research Board 89<sup>th</sup> Annual Meeting*, Washington, DC, January 2010.

Levy, M., Ivey, S., Royne, M., and Roakes, S. (2010) "Promoting Pedestrian Safety and Walkable Communities : Safe Routes to Schools – Best Practices for Successful Implementation." *Proceedings of the Tennessee Public Health Association Annual Meeting*, Franklin, TN, September 2010.

Mills, L., Ivey, S., Golias, M. (2010) "Effectiveness of Freeway Truck Operation Safety Measures: A Review of Current Research." *Proceedings of the Transportation Research Board 89<sup>th</sup> Annual Meeting*, Washington, TN, January 2010.

Golias, M., Ivey, S., Haralambides, H., and Saharidis, G. (2010) "Maximizing Throughput and Minimizing Tardiness and Earliness at a Cross Dock Facility: A Bi-objective Formulation." *Proceedings of the Transportation Research Board 89<sup>th</sup> Annual Meeting*, Washington, TN, January 2010.

Boidapu, V., Golias, M., Ivey, S., Lipinski, M. (2010) "A System Description and a Literature Review Survey for Rail Intermodal Container Terminal Operations." *Proceedings of the Transportation Research Board 89<sup>th</sup> Annual Meeting*, Washington, TN, January 2010.

Golias, M., Ivey, S., Ji, K., Lipinski, M. (2010) "A bi-objective model to minimize service and storage time at a cross-dock facility." 51<sup>st</sup> Annual Transportation Research Forum, Arlington, Virginia.

Ivey, S., Palazolo, P., Camp, C. (2008) "GIS integration across a civil engineering curriculum." *Proceedings of the ASEE-SE Annual Conference*, Memphis, TN, April 2008. \*Winner of 2008 Best Conference Paper.

Ivey, S. and Lambert, A. (2008) "Opportunities for Engineering Educators through Participation in Outreach Activities." *Proceedings of the ASEE Annual Conference and Exposition*, Pittsburg, PA.

Ivey, Stephanie, Lambert, Anna, and Jones, Tony. (2007) "When They Stay and When They Don't: Examples of First Semester Retention Rates and Relationships to Learning Styles." *Proceedings of the ASEE Annual Conference and Exposition*, Honolulu, HI.

Larsen, D. Ph.D., Morat, J., Waldron, B. Ph.D., Ivey, S. Ph.D., Anderson, J. Ph.D. (2007) "Use of Tracers and Other Data to Assess Leakage from Nonconnah Creek to the Shallow and Memphis Aquifers in the Vicinity of the Sheahan Well Field, Memphis, Tennessee." Geological Society of America Abstracts with Programs, Vol. 39, No. 2.

Palazolo, P. and Ivey, S. (2007) "Girls Experiencing Engineering: Lessons Learned from a Single Gender Summer Program." *Proceedings of the ASEE-SE Annual Conference*, Louisville, KY.

Ivey, Stephanie, and Lambert, Anna. (2005) "When They Stay and When They Don't: Examples of First Semester Retention Rates and Relationships to Learning Styles." *Proceedings of the ASEE-MW Annual Conference*, Fayetteville, Arkansas. \* Winner of 2005 Best Conference Paper.

Larsen, D., Morat, J., Waldron, B., Ivey, S., Anderson, J., Owen, A., Garner C. (2005) "Hydrologic Assessment of Leakage from Nonconnah Creek to the Shallow Aquifer in the Vicinity of the Sheahan Well Field, Memphis, Tennessee." *Proceedings of the 15th Annual Tennessee Water Resources Symposium*, Burns, TN.

Larsen, D. Waldron, B., Anderson, A., Gentry, R., Ivey, S., Owen, A., and Morat, J. (2005) "Insights into groundwater recharge processes and pathways based on hydrochemical and tritium data from municipal well fields in Shelby County, Tennessee, USA. *Proceedings of the GSA-SE Annual Conference*, Biloxi, MS.

Palazolo, P., Lipinski, M., Ivey, S., Lambert, A. (2005) "Lessons learned through listening: Engineering outreach with community and industry collaboration" *Proceedings of the ASEE-SE Annual Conference*, Chattanooga, TN.

Ivey, S.S., Larsen, D., Anderson, J., Gentry, R.W. (2003) "Use of lumped parameter models for wellhead protection delineation." *Proceedings of the 13th Annual Tennessee Water Resources Symposium*, Burns, TN.

Ivey, S.S., Gentry, R.W., Larsen, D., Anderson, J. (2002) "A Preliminary Framework for the Use of Environmental Tracers to Determine Aquifer Vulnerability." *Proceedings of the 12th Annual Tennessee Water Resources Symposium*, Burns, TN.

Larsen, D., Gentry, R.W., Ivey, S., Solomon, D.K., and Harris, J. (2002) "Groundwater leakage through a leaky confining unit beneath a municipal well field, Memphis, Tennessee, USA." *In Proceedings of GeoProc2002*, Bremen, Germany.

Larsen, D., Gentry, R. W., Waldron, B., Ivey, S., Hudgins, S., and Salyers, M. (2001) "Variations in Water Quality and Tritium in the Sheahan and Morton Well Fields, Memphis, Tennessee, USA." *Proceedings of the 11th Annual Tennessee Water Resources Symposium*, Burns, TN.

Larsen, D., Gentry, R., Ivey, S. (2000) "Water Quality Impact and Distribution of Modern Recharge on Municipal Pumpage in the Sheahan Well Field, Memphis, Tennessee, USA." *Proceedings of the Geological Society of America Annual Conference*, Reno, NV.

### **Refereed Conference Presentations**

Ivey, S. (2020). The Evolution of Transportation and Implications for our Future Workforce. ITE 2020 Annual Meeting and Exhibition. Virtual. August 13, 2020.

Ivey, S. (2019). Connecting Freight to STEM: The Memphis STEM Hub Model. Session 1356, The Future of Intermodal Freight Education. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, DC, January 14.

Ivey, S. (2019). Innovation in Workforce Development. Session 1211, Leadership in Innovation. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, DC, January 14.

Ivey, S. (2019). Transportation Operations: Characterizing the Workforce. ADHD15 Maintenance and Operations Committee. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, DC, January 15.

O'Brien, T., Reeb, T., Adams, T., Albert, S., Ivey, S., McRae, G. (2018). Addressing the Impact of Disruptive/Transformative Technologies on the Transportation Workforce. Workshop 873: 97<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, DC, January 11.

Ivey, S. (2017). "Sustainable STEM: Best Practices for Lasting Community Engagement." 2017 Tennessee STEM Innovation Summit. Murfreesboro, TN.

Ivey, S. and Rapalo, V. (2016) "Assessing Livability of Freight-Centric Communities." 2016 Southern District Institute of Transportation Engineers. Nashville, TN.

Ivey, S. and Rapalo, V. (2015) "National Network for the Transportation Workforce." 2015 Institute of Transportation Engineers Annual Meeting and Exhibit. Hollywood, FL.

Ivey, S. and Rapalo, V. (2015) "Effective Strategies for Increasing Students' Interest in Transportation Professions." 2015 Annual Meeting of the Southern District Institute of Transportation Engineers. Biloxi, MS.

Ivey, S. and Rapalo, V. (2015) "Southeastern Transportation Workforce Center: Stakeholder Workshop." 2015 Annual Meeting of the Southern District Institute of Transportation Engineers. Biloxi, MS.

Ivey, S. and Rapalo, V. (2015) "Southeast Transportation Workforce Center: An Overview." 2015 Tennessee Section Institute of Transportation Engineers Winter Meeting. Memphis, TN.

Ivey, S., Hart, M. (2014) "Making Freight-Centric Communities More Livable: Examining Residential Perceptions and Priorities for Livable Communities." 2014 Mid-Continent Transportation Research Symposium. Madison, WI.



Fox, A., Royne, M., Ivey, S., Levy, M., and Roakes, S. (2014) “Marketing Active Transportation to School: Utilizing Parental Perspectives on Walking to School in an Inner-City Environment.” 2014 AMA Public Policy Conference. Boston, MA.

Ivey, S., Levy, M., Royne, M., Ford, K., Guthikonda, K. Thomas, P., and Wise, A. (2013) “Factors Affecting School Walking Decisions in Urban, Freight-Centric Communities.” ASCE 2<sup>nd</sup> T&DI Green Streets, Highways and Development Conference, Austin, TX.

Ivey, S., and Badoe, D. (2013) “Data Requirements and Challenges for Development of Long Range Travel Demand Models.” Tennessee Model Users Group Spring Meeting, Mt. Juliet, TN.

Ivey, S., and Badoe, D. (2011) “NHTS Add-on Data Program: Applications and Survey Findings.” Tennessee Model Users Group Spring Meeting, Mt. Juliet, TN.

Ivey, S., Golias, M., and Roakes, S. (2010) “Safe Routes to School: Best Practices for Successful Implementation.” 2010 Annual Southern District ITE Meeting, Portsmouth, VA.

Ivey, S. and Badoe, D. (2009) “Access Policy on Data, Models, and Model Output – Part II.” Tennessee Model Users Group Spring Meeting, Mt. Juliet, TN.

Badoe, D. and Ivey, S. (2008) “Access Policy on Data, Models, and Model Output – Part I.” Tennessee Model Users Group Fall Meeting, Mt. Juliet, TN.

Ivey, S. (2007) “The Metropolitan Planning Organization (MPO) and Stakeholder Involvement: Evaluating Tools for More Effective Communication.” Tennessee Model Users Group Spring Meeting, Nashville, TN. Paper and Presentation available at: <http://ctr.utk.edu/TNMUG/meetings.htm>.

Ivey, S.S., Lackey, L., Lambert, A., Camp, C.V., Marchetta, J., Robinson, A. (2005) “Learning styles and freshman retention: Are changes in teaching styles warranted?” *Proceedings of the ASEE Annual Conference and Exposition*, Portland, Oregon.

### **Invited Presentations**

Ivey, S. (2021). TSMO Workforce Development: Preparing the Next Generation. Winter Meeting of the Tennessee Section Institute of Transportation Engineers. February 25, 2021.

Ivey, S., Farrell, M., Gammill, C., Jackson, T., and Louviere, L. (2020). Intermodal Workforce of the Future. Webinar hosted as part of IANA Business of Intermodal series, December 8, 2020. [https://www.youtube.com/watch?v=3PKUoJrWYA0&list=PLV\\_Zz32OeLLbCVvyB6u324t2Ls9W7JFUZ&index=3](https://www.youtube.com/watch?v=3PKUoJrWYA0&list=PLV_Zz32OeLLbCVvyB6u324t2Ls9W7JFUZ&index=3)

Cronin, B., Giuliano, G., Ivey, S., and Reeb, T. (2020). The State of the Transportation and Mobility Workforce. Webinar hosted by the Eno Center for Transportation, July 28, 2020. <https://www.enotrans.org/event/the-state-of-the-transportation-and-mobility-workforce/>

Ivey, S., Lockwood, S. and Rensel, E. (2020). TSMO Workforce Webinar Series: Background, Guidebook, and Resources. (Ivey- Guidebook). Webinar hosted by the National Operations Center of Excellence and facilitated by P. Son, March 17, 2020. <https://transportationops.org/workforce/webinar-series>

Symkowski, T, and Ivey, S. (2020). TSMO Workforce Webinar Series: Workforce Training, Career Pathways, and Industry Assessments. (Ivey – Career Pathways). Webinar hosted by the National Operations Center of Excellence and facilitated by P. Son, April 9, 2020 <https://transportationops.org/workforce/webinar-series>

Symkowski, T., and Ivey, S. (2020). TSMO Workforce Webinar Series: HR Resources, Position Descriptions, and KSAs. (Ivey - KSAs and Workplace Culture). Webinar hosted by the National Operations Center of Excellence and facilitated by P. Son, May 7, 2020 <https://transportationops.org/workforce/webinar-series>

Symkowski, T., and Ivey, S. (2020). TSMO Workforce Webinar Series: The Next Phase of the TSMO Workforce: Paraprofessionals and NOCoE Efforts. (Ivey – Career Pathways, Apprenticeships, and Early Education). Webinar

hosted by the National Operations Center of Excellence and facilitated by P. Son, June 2, 2020

<https://transportationops.org/workforce/webinar-series>

Ivey, S. (2019). Transportation Systems Management and Operations (TSMO) Workforce: Skills, Positions, Recruitment, Retention, and Career Development. AASHTO Special Committee on Research and Innovation. Irvine, CA, October 22 (presentation via web).

Ivey, S. (2019). TSMO Workforce of the Future. ITS America TN Chapter Meeting, Nashville, TN, September 30.

Ivey, S. (2019) TSMO Education: What do we need, and how do we get there? ITS America Annual Meeting, Washington, DC, June 4-7.

Ivey, S. (2019) Module 4: TSMO Workforce Education. Tennessee Department of Transportation Region 3 TSMO Workshop. Nashville, TN, May 21, 2019.

Ivey, S. (2019) The Future of TSMO Workforce: New Approaches for Attracting and Retaining Talent. 2019 Spring Meeting, Tennessee Section Institute of Transportation Engineers, Memphis, TN, May 16, 2019.

Ivey, S. (2019) West TN STEM Hub. Tennessee STEM Innovation Summit, Nashville, TN, May 15, 2019.

Ivey, S. (2019) *Invited Moderator*. Memphis Business Journal Big Deals in Logistics. Memphis, TN, May 14, 2019.

Ivey, S. (2019) Transportation Workforce Development: The Diversity Challenge. Women in Transportation Summit, 47<sup>th</sup> APEC Transportation Working Group, Vancouver, Canada, April 23, 2019.

Ivey, S. (2019) Integrating Technology and Data to Prepare for the Future of the Transportation Sector. *Invited Panelist*. Women in Transportation Summit, 47<sup>th</sup> APEC Transportation Working Group, Vancouver, Canada April 23, 2019.

Ivey, S. (2019) Module 4: TSMO Workforce Education. Tennessee Department of Transportation Region 4 TSMO Workshop. Memphis, TN, March 12, 2019.

Ivey, S. (2018) Why Diversity Matters, and Addressing the Talent Gap. *Invited Panelist*. 42<sup>nd</sup> Annual Convention and Career Exposition of the Organization of Black Aerospace Professionals. Houston, TX, August 17.

Ivey, S. (2018). National Transportation Career Pathways Initiative: Insights for Transportation Operations Workforce Development. ITS America Heartland Consortium, Webinar, January 25.

Ivey, S. (2018). National Transportation Career Pathways Initiative: Methodology and Key Findings. Maintenance and Operations Personnel Standing Committee Meeting. 97<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, DC.

Ivey, S. (2017). Using Engaged Scholarship to Deepen Conceptual Understanding and Demonstrate Societal Impact of Transportation Engineering. ITE Transportation Education Council National Webinar Series. December 07.

Ivey, S. (2017). Transportation Workforce Development: Innovative High School Initiatives. Annual Pennsylvania Transportation Engineering & Safety Conference., State College, PA, December 07.

Ivey, S. (2017) "Finding and Retaining Talent: Carrying the Industry Forward." Session Leader. Journal of Commerce Inland Distribution Conference, Atlanta, GA, November 6.

Ivey, S. (2017) "The Future of Maintenance & Operations Personnel." 2017 Infrastructure Maintenance Symposium, Atlanta, GA, November 7.

Ivey, S. (2017) InnovateIT, Digital Transformation in Logistics & Transportation, *Panelist*, Greater Memphis IT Council, Memphis, TN October 25.

Martin, C., Ivey, S., McRae, G., Oneill, P. (2017) “National Transportation Career Pathways Initiative.” USDOT ITS Community College Workshop, Washington, DC, September 20, 2017. (presented by web conference)

Ivey, S. (2017) Women in Tech Talks, *Panelist*, Greater Memphis IT Council, Memphis, TN September 20.

Ivey, S. (2017) “Shelby County Livability Project.’ 2017 Tennessee MPO Planning Conference, Memphis, TN, June 7.

Ivey, S. (2017) “Early Engagement for STEM Success.” 2017 TAIS Innovation & Tech Institute, Memphis, TN April 21.

Ivey, S. (2017) “Logistics and Transport Challenges: What does our future hold?” 2017 Healthcare Packaging Consortium Spring Meeting, Memphis, TN, April 28.

Ivey, S. (2017) “Choosing Transportation: Challenges and Opportunities for Professionals.” Tennessee Department of Transportation Young Engineers Group, Jackson, TN, May 18.

Ivey, S. (2017) “West TN STEM Hub: Resources and Opportunities.” TN Department of Education Southwest Superintendent Study Council, Jackson, TN, May 18.

Ivey, S. (2017) “T-STEM Academy at East High School.” Engineers Club of Memphis, Memphis, TN, May 22.

Ivey, S. (2017) “Moving the Needle on Transportation Workforce Issues.” WTS Charlotte Chapter Annual Meeting, Charlotte, NC, January 26.

Ivey, S. (2017) “Workforce, Millennials, and the Implications of Baby Boomer Retirement.” Young Members Council: 96<sup>th</sup> Annual Transportation Research Board Annual Meeting, Washington, DC, January 9.

Reeb, T., Jakovich, S., Ivey, S., Son, P., and Rensel, E. (2017) “How Career Pathway Demonstration Programs Can Unite Industry and Academic Leaders to Prepare the Next Generation of Transportation Professionals.” Standing Committee on Transportation Education and Training: 96<sup>th</sup> Annual Transportation Research Board Annual Meeting, Washington, DC, January 10.

Ivey, S. and Gallagher, S. (2017) “Developing the New Surface Transportation Maintenance Operations Workforce: Training and Education .” Standing Committee on Maintenance and Operations Personnel: 96<sup>th</sup> Annual Transportation Research Board Annual Meeting, Washington, DC, January 10.

Ivey, S. (2017) “Transportation Systems Management and Operations Workforce Development.” Standing Committee on Regional Transportation Systems Management and Operations: 96<sup>th</sup> Annual Transportation Research Board Annual Meeting, Washington, DC, January 11.

Ivey, S. (2016) “Southeast Region Transportation Workforce: Challenges and Opportunities.” Transportation Club of Memphis, November 8, 2016, Memphis, TN.

Ivey, S. (2016) “Finding Critical Talent.” Journal of Commerce Inland Distribution Conference. November 8-10, 2016, Memphis, TN. (roundtable ‘think tank’)

Ivey, S. (2016) “The Workforce of the Future – Raising the Visibility of Transportation and Logistics as a Career.” Journal of Commerce Inland Distribution Conference. November 8-10, 2016, Memphis, TN. (workshop)

Ivey, S. (2016) “Transportation Job Needs and Priorities in the Southeastern United States.” Tennessee Public Transit Association Annual Conference. October 26, 2016, Memphis, TN.

Ivey, S. and Badoe, D. (2016) "Travel Models and the Application of Performance Measures: MPO Experiences." Tennessee Model Users Group Fall Meeting. October 19, 2016, Mt. Juliet, TN.

Ivey, S. (2016) "Assessing Livability of Freight Centric Communities." 2016 SSCET Symposium and Jackson State University Engineering Forum. August 26.

Ivey, S. (2016) "Creating Opportunities for Women in the Transportation Workforce." TRB Webinar: The Evolving Surface Transportation Operations and Maintenance Workforce: Challenges and Opportunities. August 18.

Ivey, S. (2016) "Choosing Transportation." PennDOT Secretary's Transportation Tomorrow Speaker Series. Pennsylvania Department of Transportation, Harrisburg, PA, May 4.

Ivey, S. (2016) *Keynote Address*. South Carolina Department of Transportation Annual Engineering Conference, March 22.

Ivey, S. (2016) "Creating Opportunities for Women in the Transportation Maintenance and Operations Workforce." Standing Committee on Maintenance and Operations Personnel: 95<sup>th</sup> Annual Transportation Research Board Annual Meeting, Washington, DC, January 11.

Ivey, S. (2016) "Building a National Network for the Transportation Workforce: Job Needs and Priorities by Region." *Panelist*, Standing Committee on Transportation Education and Training: 95<sup>th</sup> Annual Transportation Research Board Annual Meeting, Washington, DC, January 13.

Ivey, S. (2015) "Inspiring Students in STEM: Strategies for Making an Impact." MLGW Engineering Conference, Memphis, TN December 3.

Corbin, J. and Ivey, S. (2015) "Transportation Workforce Issues and Initiatives." National webinar hosted jointly by ITE Transportation Safety Maintenance & Operations and Transportation Education Councils, November 6, 2015.

Ivey, S. (2015) "Measuring Success." *Panelist*, Asia-Pacific Economic Cooperation Women in Transportation Forum. White House, Washington, DC, July 28.

Ivey, S., Adams, T., Albert, S., McRae, G., and O'Brien, T. (2015) "National Network for the Transportation Workforce." 2015 Annual Meeting of the Transportation Research Board, Washington, DC, TRB Session 840, January 14.

Ivey, S., and Badoe, D. (2014) "Use of Travel Demand Models in the Evaluation of MAP-21 Performance Measures: A Survey of MPO Practices." Tennessee Model Users Group Fall Meeting, Nashville, TN, October 9, 2014.

Ivey, S. (2014) "West TN STEM Hub: Progress, Challenges, and Opportunities for Engagement." Engineers Club of Memphis, Memphis, TN July 2014.

Ivey, S. (2013) "West TN STEM Hub." West Tennessee Career and Technical Education Directors Meeting, Jackson, TN, December 2013.

Hall, W. and Ivey, S. (2013) "Tennessee STEM Innovation Network." Fall Meeting of Tennessee Chambers of Commerce, Memphis, TN, August 2013.

Ivey, S., Palazolo, P., Ford, K. (2013) "Integrating Engineering within Math and Science Classrooms." Tennessee Math Teachers Association, Memphis, TN, September 27, 2013.

Ivey, S., Ford, K., Wise, A. (2013) "Girls Experiencing Engineering: 10 Years of Opening Doors and Minds to Engineering Professions." STEM Think Tank, Nashville, TN, July 17, 2013.

Ivey, S., and Brasher, S. (2013) “Girls Experiencing Engineering: Evolution, Impact, and Teacher Resources.” Tennessee STEM Leadership Academy (Oak Ridge Associated Universities and TN SCORE), Memphis, TN, February 18, 2013.

Ivey, S. (2013) “Workforce Development Initiatives: Evolution and Impact of K-12 Outreach Programs.” National Center for Freight and Infrastructure Research and Education Freight Workforce Summit, Memphis, TN, February 6, 2013.

Ivey, S. (2013) “West TN STEM Hub.” Engineers Club of Memphis, March 4, 2013.

Ivey, S. (2011) “Complete Streets and Context Sensitive Design.” Engineers Club of Memphis, December 19, 2011.

Ivey, S. (2011) “K-12 and Community Outreach: Impact on Student Learning and Engagement.” *2011 TSITE Winter Meeting*. Memphis, TN, March 1, 2011.

Ivey, S. (2011) “Transforming Undergraduate Civil Engineering Curriculum at the U of M: How do we address changing accreditation requirements and the vision for engineers of the future?” *Physics Seminar Series*, April 6, 2011, Memphis, TN.

Ivey, S. (2010) “Walkable Communities: National Best Practices and Applications in Memphis, TN.” *Herff College of Engineering Alumni Association*. Memphis, TN, December 1, 2010.

Ivey, S. (2010) “Transportation Improvement Plan for the Rozelle Annesdale Neighborhood: Challenges and Lessons Learned.” *Strengthening Communities Summit*, Memphis, TN, October 22, 2010.

Ivey, S. (2010) “Girls Experiencing Engineering: Strategies, Challenges, and Lessons Learned from a Single-Gender Outreach Program.” *2010 Society of Women Engineers Region D Conference*, Memphis, TN.

Ivey, S. (2010) “A Return to Walkable Communities: Examples from two projects at the U of M.” A2H Lunch and Learn Series, Memphis, TN.

Ivey, S. (2009) “Engineering Outreach Activities at the University of Memphis: Strategies, Challenges, and Lessons Learned.” 2009 Fall Meeting Tennessee Section ITE, Memphis, TN.

Lipinski, M., Brugge, M., and Ivey, S. (2009) “Access Management.” West TN Section ASCE Professional Development Workshop, Memphis, TN.

Ivey, S. (2009) “Rozelle Annesdale Neighborhood Project.” *Engaged Scholarship: The Cutting Edge of Service Learning*. University of Memphis, Memphis, TN.

Ivey, S. (2009) “Girls Experiencing Engineering.” University Transportation Center Symposium, 88<sup>th</sup> Annual Transportation Research Board Meeting, Washington, DC.

Ivey, S. (2008) “Safe Routes to School: A Collaborative Approach.” *Mid South Planning and Zoning Institute: Promoting Community Revitalization Through Participatory Planning and Collaborative Action*, Memphis, TN.

Ivey, (2008) “GIS Integration in a Civil Engineering Curriculum – Response to Stakeholder Feedback.” University of Memphis STEM Faculty Colloquium, Memphis, TN.

## **HONORS/AWARDS**

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2020	Engineering Educator of the Year, West TN Branch ASCE
2020	Wilbur S. Smith Distinguished Transportation Educator Award, ITE International
2020	Excellence in Transportation Engineering Education Award, ITE Southern District
2019	US Delegate, APEC Women in Transportation Forum, Vancouver CA
2019	STEM Advocate of the Year, Tennessee STEM Innovation Network

2018	Ed Watt Distinguished Service Award, TN Section Institute of Transportation Engineers
2016	White House Conference on Inclusive STEM Education for Youth of Color, Invited Participant
2016	Whitehaven Elementary STEM Advocate Award
2015	Peter G. Hoadley Outstanding Engineering Educator, ASCE TN Section
2015	Memphis-Area Joint Engineers Council Award of Excellence
2013	APEC Women in Transportation White House Listening Session, Invited Participant
2012	Outstanding Faculty Research Award, Herff College of Engineering
2011	TN Section Institute of Transportation Engineers Outstanding Individual Service Award
2009-15	A2H Junior Faculty Fellowship
2009,11-13	Memphis-Area Joint Engineers Council Featured Engineer
2008, 2015	Outstanding Faculty Teaching Award, Herff College of Engineering.
2007	ASCE Tennessee Section Young Engineer Award
2005-07, 13-14	ASCE Outstanding Faculty Award, U of M ASCE Student Chapter
2008	ASEE Southeast Section, Best Paper
2007	ASEE Zone III, Best Paper
2005	ASEE Midwest Section, Best Paper
2005	ASCE ExCEED (Excellence in Civil Engineering Education) Fellowship

### **LEADERSHIP ACTIVITIES**

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- Intermodal Education Advisory Group, Intermodal Association of North America, 2019-2021
- National Science Foundation College of Reviewers for Undergraduate Education, 2019-2022
- Reviewer, Mineta Transportation Institute, 2018-20
- Reviewer, Tran-SET University Transportation Center, 2019
- University Middle Steering Committee, University of Memphis
- Young Women's Advisory Council, Women's Foundation for a Greater Memphis, 2018-2020
- Board of Directors, TennSmart, 2020-present
- Board of Directors, Greater Memphis IT Council, 2018-present
- ITE International Diversity and Inclusion Committee, STEM Subcommittee, 2018-present
- Memphis 3.0 Technical Committee Complete Streets Working Group, City of Memphis, 2017-19
- Transportation Industry Council, Federal Reserve Bank of St. Louis, 2016-present
- Tennessee STEM Leadership Council, 2016-18
- Member, TRB Standing Committee on Maintenance and Operations Personnel (AHD15) (2016-present)
- ASCE National Engineer's Week/ DiscoverE Task Committee, 2017-19
- Community Team Member, Strickland Mayoral Transition Team 2015
- Outreach Coordinator, ITE Transportation Education Council (2012- 2015)
- Executive Committee Member, ITE Transportation Education Council (2012-present)
- Chair, University of Memphis Traffic and Parking Committee (2015-present)
- Committee Member, Center for Research in STEM Teaching and Learning – Steering Committee (2012-Present)
- Committee Member, Tennessee Safe Routes to Schools State Network Committee; Complete Streets Subcommittee (2010-2014)
- Board Member, West TN American Society of Civil Engineers (ASCE) Branch (2012-13)
- Past-President, West TN American Society of Civil Engineers (ASCE) Branch (2011-12)
- President, West TN American Society of Civil Engineers (ASCE) Branch (2010-11)
- Vice President, West TN American Society of Civil Engineers (ASCE) Branch (2009-10)
- Board Member, National Transportation Education Task Force (2009)
- Chair, West TN American Society of Civil Engineers (ASCE) Younger Member Group (2006-09)
- Chair, American Society for Engineering Education, Southeast (2008-09)

**RESEARCH SUPPORT - INTERNAL**

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<b>INTERNAL (Funded)</b>	<b>AGENCY/SOURCE</b>	<b>AMOUNT</b>	<b>PERIOD</b>
Freight Terminals Course Development, Co-PI	Center for Intermodal Freight Transportation Studies	\$24,438	June 2010-May 2011
A GIS Framework for the Evaluation of Truck Restrictions on State Highways, Co-PI	Center for Advanced Intermodal Technologies	\$61,640	May 2009- August 2010
Transportation Engineering Education at The University of Memphis: A Curriculum Reform Project, PI	Center for Intermodal Freight Transportation Studies	\$20,598	May 2009-February 2010
Strengthening Communities: Transportation Improvement Plan for Rozelle-Annesdale Neighborhood, PI	Strengthening Communities	\$6,250	July 2008-July 2009
Implementing Innovative Instructional Technologies for the 21 <sup>st</sup> Century Engineer, PI	TAF Innovation to Excellence in Learning Grant	\$71,400	August 2006 – August 2007

**RESEARCH SUPPORT - EXTERNAL**

EXTERNAL (Funded)	AGENCY/SOURCE	AMOUNT	PERIOD
Intelligent Transportation System Professional Capacity Building, PI	USDOT Volpe Center	\$94,994	Feb. 2021-May 2022
Economic Impact Study for Southeastern US, PI	Global Affairs Canada	\$5,100	Jan. 2021 – Mar. 2021
Promoting Innovations through Training to Improve Traffic Signal Operations in Tennessee, UofM PI (subcontract, total project \$125,000)	University of TN (TDOT)	\$40,000	Dec. 2020 – May 2022
Adaptations for Sustainable Policies and Increased Recruitment Excellence in Diversity (ASPIRED), Co-P	National Science Foundation	\$1M	Sept. 2020 – Aug. 2023
Memphis MPO Freight Survey	Memphis MPO	\$21,830	Jun. 2020-Nov. 2020
Greater Memphis Apprenticeship Pathway UofM PI (SWTCC lead institution, total award \$1M)	Southwest TN Community College (Department of Labor)	\$465,822	Jun. 2020- Feb. 2024
STEM Ambassadors	Shelby County Schools	\$75,000	Apr. 2019-Dec. 2020
Urban S-STEM Collaboratory U of M lead institution, \$5M project, PI	National Science Foundation	\$1.7M	Oct. 2018- Sept. 2023
Analysis of Demographic, Socioeconomic, and Regional Difference in TDOT Customer Satisfaction Survey, PI	TN Department of Transportation	\$77,284	Jan.2019 - May 2020
Best Strategies for Hiring, Retaining, and Advancing Minorities and Women	TN Department of Transportation	\$69,710	May 2019 - Jun. 2020
Research Collaborative Forums to Boost Innovation, UofM PI (Vanderbilt lead institution)	Vanderbilt University (TN Department of Transportation)	\$19,835	Jun. 2020 - Jun. 2021
Apprenticeship Accelerator for Nontraditional Candidates in Transportation and Logistics, PI	TN Department of Economic and Community Development	\$43,208	March – May 2018
NCHRP 20-07/Task 408 Transportation Systems Management and Operations Workforce, UofM PI	Gannett Fleming (TRB, Prime)	\$49,952	Jan. – Dec. 2018
Transportation Workforce Strategic Initiative, PI (subcontract)	CSULB (prime for FHWA award)	\$158,000	Jan. 2017-June 2019
West TN STEM Hub, PI	Battelle Education – Tennessee STEM Innovation Network	\$204,491	September 2016-June 2021.
West TN STEM Hub Support Fund, PI	Private corporations/donors	\$222,869	January 2017-June 2018
STEM Ambassador Program, PI	Community Foundation	\$75,000	Sept 2015-Aug 2016
Southeast Transportation Workforce Center, PI	Federal Highway Administration	\$1,227,500	Oct 2014-Dec 2019
Girls Experiencing Engineering, Co-PI/PI	Women’s Foundation for a Greater Memphis	\$536,797	2004- 2021 (funded annually)
Innovative Strategies for Public Involvement, co-PI	TDOT	\$61,448	Jan 2014 – May 2015
ITEST: Memphis Virtual STEM Academy at East High School, Co-PI/PI	National Science Foundation	\$1,342,970	Oct 2013-Sept 2018



EXTERNAL (Funded)	AGENCY/SOURCE	AMOUNT	PERIOD
Tennessee Model Users Group Technical Assistance, PI	University of Tennessee Center for Transportation Research	\$53,000	July 2013-Dec 2017
Making Freight-Centric Communities More Livable: Measuring the Impact of Advanced Technologies, PI	Center for Freight and Infrastructure Research and Education – USDOT UTC	\$162,548	August 2012-Dec 2016
Factors Affecting School Walking Decision in Urban Environments Near Rail and Truck Corridors, PI	Center for Freight and Infrastructure Research and Education – USDOT UTC	\$124,567	August 2012-Dec 2014
West Tennessee STEM Hub, PI	Battelle for State of TN	\$849,992	Sept 2012-Jun 2015
Mississippi River Color Study, Co-PI	City of Memphis	\$290,900	Oct 2012- Dec 2013
Garret A Morgan Technology and Transportation Education Program, PI	US Department of Transportation/Federal Highway Administration	\$32,313	Oct. 2012- Sept 2013
Scholarships for STEM Students: Supporting a New Generation, Co-PI	National Science Foundation	\$574,848	Aug 2012-July 2017
Tennessee Model Users Group Technical Assistance, PI	University of Tennessee Center for Transportation Research	\$27,750	Sept 2010- Dec 2012
Transforming a Civil Engineering Curriculum through GIS Integration, PI	National Science Foundation	\$199,350	2010-2013
MemphiSTEP: A STEM Talent Expansion Program at The University of Memphis, Co-PI/PI	National Science Foundation	\$2,000,000	2008-2014
S-STEM Scholarship Program: Building Upon a Legacy of Success, Co-PI/ PI	National Science Foundation	\$499,627	2008-2011
Stormwater Utility – City of Jacksonville, PI	Camp, Dresser, & McKee, Inc.	100,000	December 2007- March 2008
Stormwater Utility – City of Stratford, Canada, PI	Sedgewick and Associates	\$16,676	Sept 2005- Aug 2006
Stormwater Utility – City of Concord, NC, PI	Sedgewick and Associates	\$17,248	October – December 2005
Stormwater Utility – City of Memphis, CO-PI, PI	City of Memphis contract with Camp Dresser & McKee, Inc.	\$176,500	May 2005 – May 2006
Evaluation of Learning Style Preference as a Predictor of Freshman Attrition in Engineering Programs, PI	NSF DUE-0341127, Colorado School of Mines	\$2,000	November 2004 – June 2005
An Investigation of Surface-Ground Water Connections at Nonconnah Creek, Co-PI	Tennessee Water Resources Center	\$83,023	FY2003

## OUTREACH & SERVICE

ACTIVITY	PARTICIPANTS	PERIOD	SPONSORSHIP
WTS Student Chapter – faculty advisor	U of M students	2016-present	
University Traffic and Parking Standing Committee	Faculty and staff	2015-present	
University Research Vision Committee	Faculty and staff	2015-present	

ACTIVITY	PARTICIPANTS	PERIOD	SPONSORSHIP
Annual Blue Pump Gala Coordinator (fundraiser for students pursuing transportation majors)	University students, faculty, public/private sector transportation professionals	2014-present	CN, FedEx, Vaco Logistics, TDOT, Cornerstone, IMC Companies, Peer Power, Mallory Alexander
Choosing Transportation Student Conference	High school students	2015, 2016	CN, Peer Power Foundation, Vaco Logistics
Department of Civil Engineering Scholarship Committee	Students	2008-present	
Construction – Memphis chair	Middle and high school students	2007-present	West TN ASCE
Transportation Academy / Transportation Engineering Careers/CN Youth Transportation Institute	High school students	2004-present	IFTI, SETWC, CN, Women’s Foundation for a Greater Memphis, Vaco Logistics, DeHart Foundation, SSR, Frito Lay, Pepsi
ITE Student Chapter – faculty advisor	U of M students	2006-present	
University of Memphis Faculty Panel for Prospective Students	Incoming freshmen and transfer students	2005-present	
Girls Experiencing Engineering	Middle and high school students	2004-present	Women’s Foundation for a Greater Memphis, TVA, Carrier/UTC, Johnson Controls, Frito Lay, Pepsi
Herff College of Engineering EDAY – Civil Engineering Coordinator	Local K-12 students, teachers, parents	2003-present	Herff College of Engineering