

Curriculum Vitae

Mohan Venigalla, Ph.D., P.E., F.ASCE

Professor • mvenigal@gmu.edu

Sid and Reva Dewberry Department of Civil, Environmental and Infrastructure Engineering
Volgenau School of Engineering • George Mason University • Fairfax VA 22030-4444

EDUCATIONAL BACKGROUND

<u>Degree</u>	<u>University / Institution</u>	<u>Major</u>	<u>Year</u>
Ph.D.	The University of Tennessee, Knoxville, TN	Civil Engineering	1994
M.S.	The University of Tennessee, Knoxville, TN	Civil Engineering	1990
M.S.	The Indian Institute of Technology, Madras, India	Civil Engineering	1988
B.Tech.	Sri Venkateswara University, Tirupathi, AP, India	Civil Engineering	1984

EMPLOYMENT HISTORY (categorized by sector)

ACADEMIC

George Mason University, Fairfax, VA <i>Sid and Reva Dewberry Department of Civil, Environmental, and Infrastructure Engineering (CEIE)</i>	2000 – present
o Professor	2020 – present
o Associate Professor	2006 – 2020
o Assistant Professor	2000 – 2006
<u>CEIE Appointments:</u>	
o Associate Chair of the Department	2009 – 2011
o Undergraduate Program Director	2003 – 2009
<u>Department of Environmental Science and Policy</u>	
o Affiliate faculty	2005 – present
The University of Tennessee, Knoxville, TN <i>Oak Ridge National Laboratory (ORNL), Oak Ridge, TN (via University of Tennessee Transportation Center – UTTC)</i>	1989 – 1994
o Research Associate	1991 – 1994
o Research Assistant	1990 – 1991
<i>University of Tennessee Transportation Center (UTTC)</i>	
o Graduate Research Assistant	1989 – 1990
NBKR Institute of Science and Technology, Vidyanagar, AP, India <i>Department of Civil Engineering</i>	1984 – 1985
o Associate Lecturer	

PUBLIC SECTOR

Office of the Secretary of Transportation, US Department of Transportation, Washington, DC <i>Bureau of Transportation Statistics</i>	7/2019 – 8/2020
o GMU faculty on assignment as <i>Faculty Research Fellow: Shared Mobility Services</i>	

Volpe National Transportation Systems Center, Cambridge, MA 1994 – 1998
(*on-site research via EG & G Dynatrend Inc.*)
○ Traffic Systems Engineer

ENGINEERING PRACTICE

Wilbur Smith Associates, Columbia, SC 1998 – 2000
Transportation Planning Division
○ Senior Transportation Engineer

Kirloaskar Consultants Ltd., Madras, India 1987 – 1989
○ Consultant 1988 – 1989
○ Associate 1987 – 1988

EXPERTISE, EXPERIENCE AND SKILLSET

- 30+ years of diverse experience in public sector, academia and private sectors.
- Expertise includes modeling of transportation systems encompassing travel behavior analysis, travel demand modeling, traffic simulation, network analysis, and intelligent transportation systems.
- Current and prior works covered a range of topics on transportation policy, planning, air quality, transit-oriented developments, shared mobility, traffic simulation and urban freight planning.
- Skillset includes traditional quantitative and statistical methods, geographic information systems, data mining, and big data analytics.

NTOABLE AWARDS, HONORS AND OTHER RECOGNITIONS

- Appointed as Faculty Fellow, Office of the Secretary of Transportation, US Department of Transportation (USDOT), 2019.
- Elected by the Board of Direction of the American Society of Civil Engineering as a Fellow of ASCE. January 2019. This honor is bestowed on no more than 3% of the more than 150,000 ASCE members from 177 countries.
- Special recognition for leadership and service to the Committee on Transportation Air Quality (ADC20). Transportation Research Board. January 2007.
- Recipient of the 1995 Pyke Johnson Award for the best paper in the area of Transportation Systems Planning and Administration. (<http://www.trb.org/AboutTRB/JohnsonAward.aspx>).
- Recipient of the 1992 Student of the Year from the US Department for Transportation for academic excellence, research quality and professionalism.

DEPARTMENTAL LEADERSHIP

UNDERGRADUATE PROGRAM DIRECTOR (2003-2009) & ASSOCIATE CHAIR (2009-2011)

- Responsibilities included representing CEIE at on- and off-campus recruitment events; advising students; implementing department's academic policies; coordinating course and curriculum changes; course scheduling; assigning course load to graduate teaching assistants; liaising with other departments that offer CEIE-required undergraduate courses; and helping the department chairman on such matters as daily operations, recruiting adjunct faculty, and developing department policies and procedures.
- In the 8-year period, undergraduate enrollments grew four-fold (from 74 to nearly 300).

PUBLICATIONS

A. DISSERTATION / THESES

1. Doctoral dissertation: A Network Assignment Based Approach to Modeling Mobile Source Emissions. The University of Tennessee, Knoxville, TN. 1994. (Advisor: Arun Chatterjee)
2. M.S. Thesis: Operational Effects of Non-Traversable Medians and two-way Left-Turn Lanes: A Comparison. The University of Tennessee, Knoxville, TN. 1994. (Advisor: Arun Chatterjee)
3. M.S. Thesis: Modernization of Commercial Vehicle Fleet on Indian Roads. The Indian Institute of Technology, Madras. 1988. (Advisor: David J. Victor)

B. BOOK CHAPTERS

1. **Venigalla MM** (2013) Mobile Source Emissions Testing (Chapter 7). [*Handbook of Measurement Science in Engineering*](#). Editor: M. Kutz. Wiley Publications. 2013.
2. Chatterjee A, **Venigalla MM** (2003) Travel Demand Forecasting for Urban Transportation Planning (Chapter 7). [*Handbook of Transportation Engineering*](#). Editor: M. Kutz. McGraw-Hill Publications. 2003.

C. ARTICLES IN REFEREED JOURNALS

Articles in print / accepted (*Student authors underlined*)

- J34. Venigalla, M.M., Rayaprolu, S., Brennan, T., & Kaviti, S. (2020). Could Value-based Pricing Improve Economic Sustainability of Bikeshare? *Journal of Modern Mobility Systems*, 1, 131-137. (<https://doi.org/10.13021/jmms.2020.2709>)
- J33. Rayaprolu, S. & Venigalla, M.M. (2020). Motivations and Mode-choice Behavior of Micromobility Users in Washington, DC. *Journal of Modern Mobility Systems*, 1, 110-118. (<https://doi.org/10.13021/jmms.2020.2894>)
- J32. Pulugurtha SS, Duddu VR, **Venigalla MM** (2020). Evaluating Spatial and Temporal Effects of Planned Special Events on Travel Time Performance Measures. *Transportation Research: Interdisciplinary Perspectives*. (Elsevier)
- J31. **Venigalla MM**, Kaviti S, Brennan T (2020) Impact of bikesharing pricing policies on usage and revenue: An evaluation through curation and fusion of large datasets from revenue transactions and trips. *Journal of Big Data in Transportation*. Springer. Vol. 2 (February 2020). (<https://doi.org/10.1007/s42421-020-00014-z>)
- J30. Pulugurtha SS, Duvvuri SR, Jain RN, **Venigalla MM** (2019). How Accurate are Regional Travel Demand Models in Mimicking Real-World Travel Times? *Journal of Urban, Planning and Transport Research*. Taylor & Francis. 7:1, 2019, 53-73 (<https://doi.org/10.1080/21650020.2019.1661790>)
- J29. Kaviti S, **Venigalla MM** (2019). Assessing Service and Price Sensitivities, and Pivot Elasticities of Public Bikeshare System Users through Monadic Design and Ordered Logit Regression. *Transportation Research: Interdisciplinary Perspectives*. Elsevier. Vol. 1, June 2019. (<https://doi.org/10.1016/j.trip.2019.100015>)
- J28. Brennan T, Gurriell RA, Bechtel AJ, **Venigalla MM** (2019). Visualizing and Evaluating Interdependent Regional Traffic Congestion and System Resiliency, a Case Study Using Big Data from Probe Vehicles. *Journal of Big Data Analytics in Transportation*. Springer. 1(1), 2019, pp. 25–36. (<http://doi.org/10.1007/s42421-019-00002-y>)

- J27. Kaviti S, **Venigalla MM**, Lucas K (2019) Travel Behavior and Price Preferences of Bikesharing Members and Casual Users: A Capital Bikeshare Perspective. *Travel Behavior and Society*. Elsevier. Vol. 15, April 2019, pp. 133-145. (<http://doi.org/10.1016/j.tbs.2019.02.004>)
- J26. **Venigalla MM**, Dixit S, Pulugurtha SS (2018) A Methodology to Derive Land Use Specific Auto-Trip Emission Footprints from Household Travel Survey Data. *Journal of Urban, Planning and Transport Research*. Taylor & Francis. 6(1), 2018, pp. 111-128. (<http://doi.org/10.1080/21650020.2018.1555055>)
- J25. Brennan TM, **Venigalla MM**, Hyde A, LaRegina A (2018) Performance Measures for Characterizing Regional Congestion Using Aggregated Multiyear Probe Vehicle Data *Transportation Research Record: Journal of the Transportation Research Board*. Sage. Vol. 2672(42), 2018, pp. 170–179. (<http://journals.sagepub.com/doi/10.1177/0361198118797190>)
- J24. Kaviti S, **Venigalla MM**, Zhu S, Lucas K, Brodie S (2018) Impact of Pricing and Transit Disruptions on Bikeshare Ridership and Revenue. *Transportation*. Springer Publications. (June 2018) (<http://doi.org/10.1007/s11116-018-9904-5>).
- J23. Zhou X, Venigalla MM, Zhu S, (2017) A Bounding Box Approach to Network Pruning for Efficient Path Search Through Large Networks. *Journal of Computing in Civil Engineering*. ASCE. Vol. 31(5), Sept. 2017. ([http://dx.doi.org/10.1061/\(ASCE\)CP.1943-5487.0000675](http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000675)).
- J22. Brennan T, **Venigalla MM** (2016) A Constructability Assessment Method (CAM) for Sustainable Division of Land Parcels. *Land Use Policy*. Elsevier. Vol. 56, 2016, pp. 47-57. (<http://dx.doi.org/10.1016/j.landusepol.2016.04.031>)
- J21. **Venigalla MM**, Zhou X, Zhu S (2016) The Psychology of Route Choice in Familiar Networks: Minimizing Turns and Embracing Signals. *Journal of Urban Planning and Development*. ASCE. Vol. 142(3), September 2016, pp. 1-14. ([http://dx.doi.org/10.1061/\(ASCE\)UP.1943-5444.0000364](http://dx.doi.org/10.1061/(ASCE)UP.1943-5444.0000364))
- J20. Shaughnessy W, **Venigalla MM**, Trump D (2015). Health Effects of Ambient Levels of Respirable Particulate Matter (PM) on Healthy, Young-Adult Population. *Atmospheric Environment*. Vol. 123, Part A, December 2015, pp. 102-11. Elsevier. (<http://dx.doi.org/10.1016/j.atmosenv.2015.10.039>).
- J19. **Venigalla MM**, Faghri A (2015) A Quick-Response Discrete Transit-Share Model for Transit-Oriented Developments. *Journal of Public Transportation*. USF. Vol. 18(3), 2015, pp. 107-123.. (<http://dx.doi.org/10.5038/2375-0901.18.3.7>)
- J18. Faghri A, **Venigalla MM** (2013) Measuring Travel Behavior and Transit Trip Generation Characteristics of Transit-Oriented Developments. *Transportation Research Record. Journal of the Transportation Research Board*. Sage. Volume 2397, 2013, pp. 72-79. (<http://dx.doi.org/10.3141/2397-09>)
- J17. **Venigalla MM**, Baik B (2007) GIS-Based Engineering Management Service Functions. *Journal of Computing in Civil Engineering*. ASCE. Volume 21(5), 2007, pp. 331-342. ([http://dx.doi.org/10.1061/\(ASCE\)0887-3801\(2007\)21:5\(331\)](http://dx.doi.org/10.1061/(ASCE)0887-3801(2007)21:5(331)))
- J16. **Venigalla MM**, M. Casey (2006) Innovations in Geographic Information Systems Applications for Civil Engineering. *Journal of Computing in Civil Engineering*. ASCE. 20(6), 2006, pp. 375–376. ([http://dx.doi.org/10.1061/\(ASCE\)0887-3801\(2006\)120:16\(375\)](http://dx.doi.org/10.1061/(ASCE)0887-3801(2006)120:16(375)))
- J15. **Venigalla MM**, Krimmer MJ (2006) Impact of Electronic Toll Collection and Electronic Screening on Heavy-Duty Vehicle Emissions. *Transportation Research Record: Journal of the*

Transportation Research Board. Sage. No. (1987), 2006, pp. 11-20.
(<http://dx.doi.org/10.3141/1987-02>)

- J14. **Krimmer MJ, Venigalla MM** (2006) Measuring Impacts of High-Occupancy-Vehicle Lane Operations on Light-Duty-Vehicle Emissions: Experimental Study with Instrumented Vehicles. *Transportation Research Record: Journal of the Transportation Research Board*. Sage. Vol. 1987(1), 2006, pp. 1-10. Sage. (<http://dx.doi.org/10.3141/1987-01>).
- J13. **Venigalla MM, Ali AT**, 2005. Deriving performance measures for transportation planning using ITS archived data. *The Journal of Civil Engineering and Environmental Systems*. 22(3), 2005, pp. 171-188. (<http://dx.doi.org/10.1080/10286600500279998>).
- J12. **Venigalla MM, Chalumuri S & Mandapati R**, 2005. Developing Custom Tools for Deriving Complex Data from Travel Survey Databases. *Transportation Research Record: Journal of the Transportation Research Board*. Sage. 1917(1), 2005, pp. 80-89. (<http://dx.doi.org/10.3141/1917-10>).
- J11. **Venigalla MM, Bronzini MS** (2004) Arrival Sampling Without Replacement for Simulating Fixed Entity Streams in Civil Engineering Systems. *Journal of Computing in Civil Engineering*. ASCE. 18(4), October 2004, pp. 313-321. ([https://doi.org/10.1061/\(ASCE\)0887-3801\(2004\)18:4\(313\)](https://doi.org/10.1061/(ASCE)0887-3801(2004)18:4(313)))
- J10. **Chalumuri S, Venigalla MM** (2004) Methodology for Deriving Vehicle Activity Parameters from Travel Survey Databases. *Transportation Research Record: Journal of the Transportation Research Board*. Sage. 1880(1), 2004, pp.108-118. (<http://dx.doi.org/10.3141/1880-13>).
- J09. **Venigalla MM, Pickrell DH** (2002) Soak Distribution Inputs to Mobile Source Emissions Modeling: Measurement and Transferability. *Journal of Transportation Research Board, Transportation Research Record: Journal of the Transportation Research Board*. Sage. 1815(1) 2002, pp. 63-70. (<http://dx.doi.org/10.3141/1815-08>).
- J08. **Venigalla MM, Chatterjee A, Bronzini MS**, 1999. A specialized equilibrium assignment algorithm for air quality modeling. *Transportation Research – Part D*. Elsevier. Volume 4. No. 1, January 1999, pp. 19-44. ([http://dx.doi.org/10.1016/S1361-9209\(98\)00022-4](http://dx.doi.org/10.1016/S1361-9209(98)00022-4)).
- J07. **Venigalla MM, Pickrell DH** 1997. Implications of Transient Mode Duration for High Resolution Emission Inventory Studies. *Transportation Research Record: Journal of the Transportation Research Board*, (1587) 1997, pp. 63-72. Sage. (<http://dx.doi.org/10.3141/1587-08>).
- J06. Chatterjee A, **Reddy PM, Venigalla MM & T. Miller**, 1996. Operating Mode Fractions on Urban Roads Derived by Traffic Assignment. *Transportation Research Record: Journal of the Transportation Research Board*. Sage. 1520(1), 1996, pp. 97-103. (<http://dx.doi.org/10.3141/1520-12>).
- J05. Chatterjee A, Cadotte E, Stamatiadis N, Sink H, **Venigalla MM**, Gaides G (1996) Driver-related factors involved with truck accidents. *Journal of Safety Research*. Elsevier. 27(1), 1996. (<https://www.infona.pl/resource/bwmeta1.element.elsevier-b6d1565d-51c9-3d28-906f-67090ad0b0a4x>)
- J04. **Venigalla MM, Miller T, Chatterjee A** (1995) Alternative Operating Mode Fractions to the FTP Mode Mix for Mobile Source Emissions Modeling. *Transportation Research Record: Journal of the Transportation Research Board*. Sage. 1472(1), 1995, pp. 35-44. (<http://trid.trb.org/view.aspx?id=427194>).
- J03. **Venigalla MM, Miller T, Chatterjee A** (1995) Start Modes of Trips for Mobile Source Emissions Modeling. *Transportation Research Record: Journal of the Transportation Research Board*.

Sage. 1472(1), 1995. pp. 26-34. Sage. (<http://trid.trb.org/view.aspx?id=427193>). (This paper is the winner of 1995 "Pyke Johnson Award" for the best paper of the year on transportation systems planning and administration)

- J02. Rathi AK, **Venigalla MM** (1992) Variance Reduction Applied to Urban Network Traffic Simulation. *Transportation Research Record: Journal of the Transportation Research Board*. Sage. 1365(1), 1992, pp. 133-146. Sage. (<http://trid.trb.org/view.aspx?id=371414>).
- J01. **Venigalla MM**, Margiotta R, Clarke DB, Rathi AK (1992) Operational Effects of Non-Traversable Medians and two-way Left-Turn Lanes: A Comparison. *Transportation Research Record: Journal of the Transportation Research Board*. Sage. 1356(1), 1992, pp. 37-46. (<http://trid.trb.org/view.aspx?id=370810>).

In Review (for publication in journals)

D. ARTICLES IN TRADE PRESS

- TP01. Brennan TM, **Venigalla MM** (2019) Leveraging Probe Vehicle Data to Analyze Evacuation Route Resiliency. *Traffic and Transit*. Fall 2019. <https://www.trafficandtransit.com/archive>

E. PEER-REVIEWED PRESENTATIONS – A (Full-papers that appeared in proceedings and journals)

Full-length papers that were peer-reviewed, presented at conferences, and published in conference proceedings. They were also published in associated journals identified by (Jxx) in the journal articles listed above.

- PPJ13. Brennan TM, **Venigalla MM**, Hyde A, LaRegina A (2018) Performance Measures for Characterizing Regional Congestion Using Aggregated Multi-Year Probe Vehicle Data. Presented at the 97th TRB Annual Meeting in Washington DC. January 2018. Appeared in proceedings. <https://trid.trb.org/view/1496374>. (J25)
- PPJ12. Faghri A, **Venigalla MM** (2013) Measuring Travel Behavior and Transit Trip Generation Characteristics of Transit-Oriented Developments. *Transportation Research Board Annual Meeting*. Washington DC. January 2013. <http://trrjournalonline.trb.org/doi/10.3141/2397-09> (J18)
- PPJ11. **Venigalla MM**, Krimmer MJ (2006) Impact of Electronic Toll Collection and Electronic Screening on Heavy-Duty Vehicle Emissions. Presentation at the Annual Meeting of the Transportation Research Board. Washington D.C. 2006. <http://trrjournalonline.trb.org/doi/10.3141/1987-02>. (J15)
- PPJ10. Krimmer MJ, **Venigalla MM**, 2006. Measuring Impacts of High-Occupancy-Vehicle Lane Operations on Light-Duty-Vehicle Emissions: Experimental Study with Instrumented Vehicles. Presentation at the Annual Meeting of the Transportation Research Board. Washington D.C. 2006. <http://trrjournalonline.trb.org/doi/10.3141/1987-01>. (J14)
- PPJ09. **Venigalla MM**, Chalumuri S, Mandapati R (2005) Developing custom tools for deriving complex data from travel survey databases. Presented at the Transportation Research Board 84th Annual Meeting. Washington DC. January 2005. <http://trrjournalonline.trb.org/doi/abs/10.3141/1917-10>. (J12)
- PPJ08. Chalumuri S, **Venigalla MM** (2004) Methodology for deriving vehicle activity parameters from travel survey databases. Presented at the Transportation Research Board 83rd Annual

- Meeting. Washington DC. January 2004.
<http://trrjournalonline.trb.org/doi/abs/10.3141/1880-13>. (J10)
- PPJ07. **Venigalla MM**, Pickrell DH (2002) Soak Distribution Inputs to Mobile Source Emissions Modeling: Measurement and Transferability. Presentation at the Annual Meeting of the Transportation Research Board. Washington D.C. 2002.
<http://trrjournalonline.trb.org/doi/10.3141/1815-08>. (J09)
- PPJ06. **Venigalla MM**, Pickrell DH (1997) Implications of Transient Mode Duration for High Resolution Emission Inventory Studies. Presentation at the Annual Meeting of the Transportation Research Board. Washington D.C. 1997.
<http://trrjournalonline.trb.org/doi/10.3141/1587-08>. (J07)
- PPJ05. Chatterjee A, Reddy PM, **Venigalla MM**, Miller T (1996) Operating Mode Fractions on Urban Roads Derived by Traffic Assignment. Presentation at the Annual Meeting of the Transportation Research Board. Washington D.C. 1996. <http://dx.doi.org/10.3141/1520-12>. (J06)
- PPJ04. **Venigalla MM**, Miller T, Chatterjee A (1995) Alternative Operating Mode Fractions to the FTP Mode Mix for Mobile Source Emissions Modeling. Presentation at the 75th Annual Meeting of the Transportation Research Board. Washington D.C. 1995.
<http://trid.trb.org/view.aspx?id=427194>. (J04)
- PPJ03. **Venigalla MM**, Miller T, Chatterjee A (1995) Start Modes of Trips for Mobile Source Emissions Modeling. Presentation at the 75th Annual Meeting of the Transportation Research Board. Washington D.C. 1995. <http://trid.trb.org/view.aspx?id=427193>. (J03)
- PPJ02. Rathi AK, **Venigalla MM** (1992) Variance Reduction Applied to Urban Network Traffic Simulation. Presented at and appeared in the proceedings of the 71st Annual meeting of the Transportation Research Board, Washington, DC, January 1992.
<http://trid.trb.org/view.aspx?id=371414>. (J02)
- PPJ01. **Venigalla MM**, Margiotta R, Clarke DB, Rathi AK (1992) Operational Effects of Non-Traversable Medians and two-way Left-Turn Lanes: A Comparison. Presented at and appeared in the proceedings of the 71st Annual meeting of the Transportation Research Board, Washington, DC, January 1992. <http://trid.trb.org/view.aspx?id=370810>. (J01)

F. PEER-REVIEWED PRESENTATIONS – B (Full-length papers that appeared/accepted in proceedings)

Full-length papers that were peer-reviewed, presented at conferences and published in conference proceedings.

- PP24. Brennan TM, **Venigalla MM**. (2020) Baseline Arterial Performance Evaluation and Signal System Management by Fusing High-Resolution Data from Traffic Signal Systems and Probe Vehicles. To be presented at IEEE Forum on Integrated and Sustainable Transport Systems. Nov 3-5. Delft, The Netherlands.
- PP23. Brennan TM, **Venigalla MM**, Dinger TM, Dinger RP. (2020) Evaluating Regional Traffic Congestion and System Resiliency Using Big Data from Traffic Message Channels. To be presented at 27th World Congress on Intelligent Transport Systems. October 4 - 8, 2020. Los Angeles, California.
- PP22. **Venigalla MM**, Brennan TM, Rayaprolu S, Kaviti S (2020) Increasing Bikeshare Revenue through Value-Based Pricing: Lessons from Behavioral Economics. In: Proceedings of the 99th Annual Meeting of the Transportation Research Board. National Research Council. Washington DC. (Jan 12-15, 2020)

- PP21. **Venigalla MM**, Kaviti S, Brennan T (2019) Impact of the introduction of single-trip fare product on bikeshare usage and revenue: the Capital Bikeshare experience. In: Proceedings of the 15th world conference on transport research (WCTR), May 26–31, 2019, Mumbai
- PP20. Kaviti S, **Venigalla MM** (2019) Modeling bikeshare user sensitivity and elasticity to pricing using monadic design and ordered logit. In: Proceedings of the 15th World Conference on Transport Research (WCTR). May 26-31, 2019. Mumbai.
- PP19. Brennan, T. R.A. Gurriell, Bechtel AJ, **Venigalla MM** (2019) Performance Metrics for Visualizing Interdependent Regional Traffic Congestion Using Aggregated Probe Vehicle Data. Proceedings of the 98th Annual Meeting (Jan 13-17, 2019) in Washington DC. National Research Council.
- PP18. Kaviti S, **Venigalla MM**, Lucas K (2019) Portraying and Differentiating Profiles and Preferences of Casual Users and Registered Members of Capital Bikeshare. Proceedings of the 98th Annual Meeting (Jan 13-17, 2019) in Washington DC. National Research Council.
- PP17. Brennan TM, **Venigalla MM**, De Grandi ABC, Ladeira LA (2017) Incorporating speed data to analyze evacuation route resiliency. Presented at ITS World Congress 2017 Montreal, October 29 – November 2, 2017. <http://itsworldcongress2017.org/wp-content/uploads/2017/11/BrennanITSWC2017.pdf>.
- PP16. Faghri A, **Venigalla MM**, (2016) Disaggregate Models for Mode Choice Behavior of Transit-Oriented Developments. Paper presented at the 95th Annual Meeting of the Transportation Research Board. Washington, D.C. January 2016. <https://trid.trb.org/view.aspx?id=1392481>
- PP15. Zhou X, **Venigalla MM** (2014) Influence of Turns and Signals on Path Choice. Compendium of papers, 93rd Transportation Research Board Annual Conference. Washington DC. January 2014. 28p.
- PP14. Dixit S, **Venigalla MM** & Bronzini MS (2010). A Methodology For Disaggregation of Freight Origin Destination Data for Metropolitan and Regional Planning. Presented at the TRB Annual Meeting, Washington DC. January 2010. 22p. Published in the TRB 89th Annual Meeting Compendium of Papers DVD. <http://trid.trb.org/view.aspx?id=1092988>
- PP13. **Venigalla MM**, X. Zhou (2008) Environmental Justice Implications of Personal Travel Related Emissions Burden. Presented at the 87th TRB Annual Meeting. Washington D.C. January 2008. Published in the TRB 87th Annual Meeting Compendium of Papers DVD. <http://trid.trb.org/view.aspx?id=848436> <http://dx.doi.org/10.13140/RG.2.2.15375.02724>
- PP12. Ali AT, Flannery A, **Venigalla MM** (2007) Prediction Models for Free-Flow Speed on Urban Arterials. Presented at the Transportation Research Board 86th Annual Meeting. Washington DC. January 2007. 21p. Published in the TRB 86th Annual Meeting Compendium of Papers DVD. <http://trid.trb.org/view.aspx?id=801967>.
- PP11. Ali AT, **Venigalla MM**, Flannery A (2007) Estimating Running Time on Urban Street Segments. The 3rd Urban Street Symposium. Transportation Research Board. 2007. pp. 24-27. <http://trid.trb.org/view.aspx?id=851001>
- PP10. Asma AT, **Venigalla MM** (2006) Global positioning systems data for performance evaluation of HOV and GP lanes on I-66 and I-395/I-95. Intelligent Transportation Systems Conference, IEEE, Sept 2006. pp. 915-920. <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=1706861>.
- PP09. Skolicki Z, **Venigalla MM**, Arciszewski T (2005) Security of Transportation Systems: An Evolutionary Approach, the Critical Infrastructure Protection Session at “Working

Together: Research & Development (R&D) Partnerships in Homeland Security," Department of Homeland Security Conference, Boston, April 2005.

- PP08. **Venigalla MM** (2004) Household Travel Survey Data Fusion Issues. In *Resource Paper, National Household Travel Survey Conference: Understanding Our Nation's Travel* (Vol. 1, No. 2), Nov 2004. <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.120.2980>.
- PP07. **Venigalla MM, Chalumuri A** (2004) Applications of TRIMM for Small and Medium Communities. Transportation Research Board conference on Tools of the Trade. Colorado Springs, CO. September 2004.
- PP06. **Venigalla MM, Bronzini MS** (2002) Sampling Entities Without Replacement for Stochastic Simulation Using Randomized Streams. Proceedings of the [IASTED International Conference on Modeling and Simulation](#), ACTA Press, May 2002, pp. 110-117.
- PP05. **Venigalla MM, Pickrell DH, Black K** (1999) Conformity Related Sensitivity Analysis of the CO Hot-Spot Model, CAL3QHC. Presented at 78th Annual Transportation Research Board Meeting, January 1999. <http://dx.doi.org/10.13140/RG.2.2.21967.94882>
- PP04. Margiotta R, Cohen H, Elkins G, Rathi A, **Venigalla MM** (1995) Generic Vehicle Speed Model Based on Traffic Simulation: Development and Application. Proceedings of the 74th Annual Meeting of the Transportation Research Board. 1995. 10p
<http://ntl.bts.gov/lib/7000/7000/7009/m96004384.pdf>.
- PP03. **Venigalla MM, Rathi AK** (1993) Software Utilities for Network Traffic Simulation Models. Proceedings of the ASCE 4th International Conference on Microcomputers in Transportation, Baltimore, July 22-24, 1993. pp. 707-717.
<http://cedb.asce.org/cgi/WWWdisplay.cgi?80343>.
- PP02. **Venigalla MM, Rathi AK** (1992) A Software Utility for Regional Evacuation (SURE). Proceedings of the ASCE 8th Specialty Conference on Computing in Civil Engineering, Dallas, June 7-9, 1992. pp. 25-32. <http://cedb.asce.org/cgi/WWWdisplay.cgi?76435>.
- PP01. Southworth F, Janson B, **Venigalla MM** (1992) DYMOD: Towards Real Time, Dynamic Traffic Routing During Mass Evacuations. Proceedings of Simulation Multi-Conference, Orlando, April 1992. <http://catalog.hathitrust.org/Record/002878423>.

In Review (for presentation at conferences)

3. Brennan TM, & **Venigalla MM**. Baseline Arterial Performance Evaluation and Signal System Management by Fusing High-Resolution Data from Traffic Signal Systems and Probe Vehicles. Submitted for presentation at the IEEE Forum on Integrated and Sustainable Transportation Systems, Delft, The Netherlands, 30 June- 02 July 2020.
2. **Venigalla MM, Brennan TM, Rayaprolu S, Kaviti S**. Leveraging Behavioural Economics for Sustainable Micromobility. Submitted for presentation at the IEEE Forum on Integrated and Sustainable Transportation Systems, Delft, The Netherlands, 30 June- 02 July 2020.
1. Rayaprolu S, Venigalla MM. Is Bikeshare the Odds on Favorite in Micromobility? Submitted for presentation at the IEEE Forum on Integrated and Sustainable Transportation Systems, Delft, The Netherlands, 30 June- 02 July 2020.

G. PEER-REVIEWED PRESENTATIONS – C (Abstract-based)

Conference presentations, selected based on review of abstracts (no associated publications).

- P08. **Venigalla MM**, 2019. Price Discovery in Shared Mobility: Lessons from Capital Bikeshare. Second Annual [Irvine Symposium on Emerging Research in Transportation](#) (ISERT). The Beckman Center. University of California, Irvine. January 18-19, 2019.
- P07. **Venigalla MM** (2018) The Impact of Pricing Changes on Bikeshare Ridership and Revenue. [Moving Forward Together](#) conference presented by NABSA & BBSP. Portland, OR. September 4-7, 2018.
- P06. Brennan T, **Venigalla MM** (2016). Incorporating Probe Vehicle Data to Analyze the Impact of a Natural Disaster. Second Annual Symposium on Transportation Informatics: Big Data in Transportation. George Mason University. Arlington, VA. Aug 4-5, 2016.
- P05. Brennan T, **Venigalla MM** (2016) Incorporating Probe Vehicle Data to Analyze the Impact of a Natural Disaster. Second Annual Symposium on Transportation Informatics: Big Data in Transportation. George Mason University. Arlington, VA. Aug 4-5, 2016.
- P04. **Venigalla MM**, [Zhou X](#), Zhu S (2015) Effect of Turns, Signals and Other Network Variables on Route Choice. Poster presentation. Symposium on Transportation Informatics: Big Data Analytics Transforming Transportation Operations, Management and Safety. Buffalo Niagara, NY. August 2015.
- P03. [Zhou X](#), **Venigalla MM**, Zhu S (2015) A Bounding Box Approach to Network Pruning for Efficient Path Search Through Large Networks. Poster presentation. Symposium on Transportation Informatics: Big Data Analytics Transforming Transportation Operations, Management and Safety. Buffalo Niagara, NY. August 2015.
- P02. **Venigalla MM**, Zhou X, Zhu S (2015) Effect of Turns, Signals and Other Network Variables on Route Choice. Poster presentation. Symposium on Transportation Informatics: Big Data Analytics Transforming Transportation Operations, Management and Safety. Buffalo Niagara, NY. August 2015.
- P01. Zhou, Tracy (Xi), **Venigalla MM** & S. Zhu, 2015. A Bounding Box Approach to Network Pruning for Efficient Path Search Through Large Networks. Poster presentation. Symposium on Transportation Informatics: Big Data Analytics Transforming Transportation Operations, Management and Safety. Buffalo Niagara, NY. August 2015.

H. PRESENTATIONS AS AN INVITED SPEAKER

- IP18. Safe and Secure Connected Vehicles in Smart Cities: Interconnecting access to smart city mobility systems through MaaS. Commonwealth Conference on National Defense and Intelligence. Charlottesville, VA. June 9-11, 2019.
- IP17. Panelist. The Price is Right? Best practices in pricing bikeshare and getting it right! Moving Forward Together conference presented by NABSA & BBSP. Portland, OR. September 4-7, 2018.

The following presentations were made, on invitation, at various prestigious universities around the world on bikeshare pricing; user sensitivities to price; impact of pricing on ridership; price discovery of bikeshare fare products; and the role of behavioral economics on bikeshare revenues.

- IP16. University of Alabama, Tuscaloosa, AL. October 5, 2018
- IP15. The Indian Institute of Technology, Bombay. August 14, 2018
- IP14. The Indian Institute of Science, Bengaluru. August 13, 2018

- IP13. The Indian Institute of Technology, Madras. August 3, 2018
- IP12. The College of New Jersey. April 10, 2018.
- IP11. Clemson University, Clemson, SC. March 15, 2018.
- IP10. University of North Carolina, Charlotte. March 14, 2018.
- IP09. University of Memphis. February 23, 2018.
- IP08. Livability in Transportation and the City of Alexandria. A presentation to Agenda Alexandria January 2015.
- IP07. Webcast Series on Higher Education in USA, with Dr. Rao Mulpuri of George Mason University. Several engineering college students in India participated. November 2013.
- IP06. Presentation to Civil Engineering students on graduate studies in Civil Engineering. National Institute of Technology, Warangal, India. June 2013.
- IP05. Presentation on Transportation Planning at a Breakfast Meeting, Rotary Club, Herndon, VA 2013.
- IP04. Special Presentation to Civil Engineering students on the Future of Civil Engineering. National Institute of Technology, Trichy, India (March 2009).
- IP03. Graduate studies in Civil Engineering at US universities. Presentation to Chaitanya Bharati Institute of Technology (CBIT) students, Hyderabad, India. December 2008.
- IP02. Future of Civil Engineering. Presentation to Civil Engineering students at Siddhardha College of Engineering, Vijayawada, India. January 2007.
- IP01. Presentation on Transportation Air Quality at Annual Dinner Event, National Society of Professional Engineers, Northern VA Chapter. 2006.

I. OTHER NOTABLE PUBLICATIONS / REPORTS TO SPONSORS

- R38. **Venigalla MM**, Hancock K, Kim W, White M, Birson K, Clower T, Kim M, Leary RS (2019) On-Site Berths and Curbside Implications. District Department of Transportation (DDOT). July 2019.
- R37. **Venigalla MM**, Kaviti S, Pierce W, Zhu S (2018). Analysis of Single-Trip Fare Data for Capital Bikeshare. District Department of Transportation (DDOT). April 2018.
- R36. Bronzini MS, **Venigalla MM**, Thirumalai K, Zhou X et al. (2012) Applications of Commercial Remote Sensing and Spatial Information Technologies to Analysis and Planning of Marine Highways. Final Report, DTOS59-10-H-00004, Research and Innovative Technology Administration, U.S. Department of Transportation (USDOT), Washington, DC (October 2012).
- R35. Bronzini MS, **Venigalla MM**, Chalumuri S (2004) National Air and Space Museum Transportation Impact Study. Dept. of Civil, Environmental & Infrastructure Engineering, George Mason University, for Smithsonian Institution, Washington, DC (May 2004).
- R34. Chalumuri S, **Venigalla MM** (2004) *Vehicle Activity and Personal Travel Inputs to Emission Models*. Report Submitted to the Federal Highway Administration (FHWA). March 2004.
- R33. Chalumuri S, **Venigalla MM** (2004) *TRIMM User Manual and Guidance Document*. Report Submitted to the Federal Highway Administration (FHWA). March 2004.
- R32. Multiple authors. TMC Applications of Archived Data –ADMS (Archived Data Management System) Virginia. May 2004.
- R31. Cooney T, **Venigalla MM** (2002) User Guide to Expert System Projections (ESP). Arizona Department of Transportation. May 2002.

- R30. Multiple authors. "Environmental Impact Statement for Redline Extension Study," Draft report submitted to the Cleveland Rapid Transit Authority. June 1999
- R29. Multiple authors. "Northeast Nebraska Corridor Feasibility Studies." Submitted to Nebraska Department of Roads, December 1999.
- R28. Chatterjee A, Reddy PM, **Venigalla MM**, Miller T (1995) "Operating Mode Fractions for the Sacramento Urban Area Highway Network." Final Report. Transportation Center for California Department of Transportation. The University of Tennessee, Knoxville. 1995. Rept No. 65328-637055. (<http://searchworks.stanford.edu/view/3076015>)
- R27. Multiple authors. "Intelligent Transportation Systems (ITS) Impact Assessment Framework." Report prepared for the ITS Joint Program Office of the Federal Highway Administration. Volpe National Transportation Systems Center, October 1995.
- R26. Chatterjee A, Cadotte H, Sink H, **Venigalla MM**, Gaides G (1994) *Driver Related Factors Involved with Truck Accidents*. Institute for Transportation Research and Education, North Carolina State University. Raleigh, N.C., 1994.
- R25. **Venigalla MM** "A Network Assignment Based Approach to Modeling Mobile Source Emissions" A Dissertation Research Report Presented in Partial Fulfillment for the Award of Doctor of Philosophy in Civil Engineering, The University of Tennessee, Knoxville, Tennessee, May 1994.
- R24. Margiotta R, Cohen H, Elkins G, Rathi AK, **Venigalla MM** "Speed Determination Models for the Highway Performance Monitoring System," Prepared for the Federal Highway Administration by Science Applications International Corporation, Oak Ridge, Tennessee. October 1993.
- R23. Bronzini et. al. Panama Canal Operating Characteristics and Capacity Evaluation Study, TAMS Consultants, Inc., for the Commission for the Study of Alternatives to the Panama Canal (1993).
- R22. Rathi AK, **Venigalla MM**, Louis Chang, Sarah Jennings, "User Manual for Oak Ridge Evacuation Model (OREM)," Oak Ridge National Laboratory, June 1992.
- R21. **Venigalla MM**, Southworth F, Davies CG (1992) "Evacuation Time Estimates for Pueblo Depot Activity and Vicinity," Oak Ridge National Laboratory, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, April 1992.
- R20. **Venigalla MM**, Rathi AK, Metzger DN, and Davies CG (1992) "Evacuation Time Estimates for Pine Bluff Arsenal and Vicinity," Oak Ridge National Laboratory, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, January 1992.
- R19. Metzger DN, Rathi AK, **Venigalla MM** (1991) Evacuation Time Estimates for Anniston Army Depot and Vicinity. Oak Ridge National Laboratory, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, October 1991.
- R18. Chatterjee A, Margiotta R, Mukherjee D, **Venigalla MM** (1991) "Suburban Highway Cross-Sections: Median vs. two-way Designs," Prepared for the Tennessee Department of Transportation, Transportation Center, the University of Tennessee, February 1991. <https://trid.trb.org/view/410636>
- R17. Rathi AK, Southworth F, **Venigalla MM**, Jacobi J (1991) "Evacuation Time Estimates for Newport Army Ammunition Plant and Vicinity." Oak Ridge National Laboratory, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, February 1991.

- R16. Rathi AK, Metzger D, **Venigalla MM** and F. Southworth. "Evacuation Time Estimates for Lexington-Blue Grass Army Depot and Vicinity." Oak Ridge National Laboratory, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, 1992.
- R15. Southworth, F., Rathi AK, **Venigalla MM**. "Evacuation Time Estimates for Aberdeen Proving Grounds and the Vicinity." Oak Ridge National Laboratory, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, January 1991.
- R14. Southworth F., Rathi AK, J. Jacobi, and **Venigalla MM**. "Database Development for Regional Evacuation Studies." Oak Ridge National Laboratory, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, November 1990.
- R13. Rathi AK, Southworth F, **Venigalla MM** and J. Jacobi. "Evacuation Time Estimates for Tooele Army Depot and Vicinity." Oak Ridge National Laboratory, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, December 1990.
- R12. Chatterjee A, Margiotta RA, and **Venigalla MM**, D. Mukherjee. A monograph on "Guidelines For Selecting Roadway Cross-Sections In Developing Urban/Suburban Areas." South Eastern Transportation Center. US Department of Transportation. 1991
- R11. **Venigalla MM** (1990) "Operational Effects of Non-Traversable Medians and two-way Left-Turn Lanes: A Comparison." A Master's Thesis Submitted to the University of Tennessee, December 1990.
- R10. Southworth F, Rathi AK, Jacobi J, **Venigalla MM** (1990) "Evacuation Time Estimates for Aberdeen Proving Ground and Vicinity," Oak Ridge National Laboratories, Prepared for the U.S. Department of Army and Federal Emergency Management Agency, October 1990.
- R09. Margiotta RA, **Venigalla MM**, Evans G (1990) "Improving Safety for Pedestrians and Bicyclists," Transportation Center, University of Tennessee, Prepared for the Tennessee Governor's Highway Safety Program, Tennessee Department of Transportation, December 1989.
- R08. Santosh VK, **Venigalla MM**, Isaac V (1989) "Improvements to Cross-Cut Road at Coimbatore," Kirloskar Consultants Limited, Prepared for the Project Management Group, Tamil Nadu Urban Development Program (Madras) and the World Bank, April 1989.
- R07. Santosh VK, **Venigalla MM**, Isaac V (1989) "Users' Perception of Different Aspects of Travel and Value of Travel Time," Kirloskar Consultants Limited, Prepared for Madras Metropolitan Development Authority and the World Bank, February 1989.
- R06. Santosh VK, **Venigalla MM**, Isaac V (1989) "Highway Capacity and Speed-Flow Relationship," Kirloskar Consultants Limited, Prepared for Madras Metropolitan Development Authority and the World Bank, February 1989.
- R05. Santosh VK, **Venigalla MM**, Isaac V (1988) "Improvements to the Subway at Big Bazaar Street Intersection," Kirloskar Consultants Limited, Prepared for the Project Management Group, Tamil Nadu Urban Development Program (Madras) and the World Bank, October 1988.
- R04. Santosh VK, **Venigalla MM**, Isaac V (1987) "A Report on the Evaluation of Arumbakkam Sites and Services," Kirloskar Consultants Limited, Prepared for Madras Metropolitan Development Authority, December 1987.

- R03. Santosh VK, **Venigalla MM**, Isaac V (1988) "Development of Kilpauk Section of Inner Orbital Road," Kirloskar Consultants Limited, Prepared for Madras Metropolitan Development Authority, the Corporation of Madras and the World Bank, October 1988.
- R02. Santosh VK, **Venigalla MM**, Isaac V (1988) "Traffic Management Scheme for Nungambakkam High Road," Kirloskar Consultants Limited, Prepared for Madras Metropolitan Development Authority, the Corporation of Madras and the World Bank, October 1988.
- R01. **Venigalla MM**, "Modernization of Commercial Vehicle Fleet on Indian Roads," Master's Thesis Submitted to the Indian Institute of Technology, Madras, April 1987.

Journals as Paper Review Co-Chair (with Shauna Hallmark)

1. [Energy and Environmental Concerns 2004](#). *Transportation Research Record: Journal of Transportation Research Board*, (1880), 2004.
2. [Energy, Air Quality, and Fuels 2003](#). *Transportation Research Record: Journal of Transportation Research Board*, (1842), 2003.
3. [Energy, Air Quality, and Fuels 2002](#). *Transportation Research Record: Journal of Transportation Research Board*, (1815). 2002.

CONTRACTS AND GRANTS

EXTERNAL FUNDING SUMMARY (DATA AS OF 8/31/2019)

Grant ¹	Fund Code	Role	Start Date	End Date	Status	Award Amount	Actual Expense ²	Co-PI portion ²	
G16	N/A	PI	7/1/19	8/23/20	A	\$209,649	\$21,888		
G14	203145	Co-PI	9/30/13	9/30/19	A	\$568,921	\$568,921	\$167,247	
G13	204070	PI	10/1/16	31/1/19	C	\$193,000	\$192,999		
G12	204427	PI	1/31/18	8/31/18	C	\$5,000	\$5,000		
G10	204118	PI	11/30/16	2/28/18	C	\$25,000	\$24,425		
G09	222823	Co-PI	8/18/15	11/20/17	C	\$234,500	\$234,500	\$11,275	
G08	201969	Co-PI	1/4/10	3/31/12	C	\$1,311,906	\$1,311,879	\$527,375	
G07	N/A	PI	4/15/04	12/31/06	C	\$58,000	\$58,000		
G06	200622	PI	8/14/03	12/15/05	C	\$99,275	\$99,275		
G05	221128	PI	5/11/05	6/30/05	C	\$9,990	\$9,990		
G04	200553	PI	12/16/02	5/16/04	C	\$100,014	\$89,957		
G03	200667	PI	8/14/03	3/31/04	C	\$4,990	\$4,990		
G02	200429	PI	6/19/02	8/31/03	C	\$50,166	\$50,166		
G01	220612	PI	2/10/02	8/31/02	C	\$10,515	\$10,069		
			Award amount		Venigalla's share as PI & co-PI ²				
Time period			Cumulative		Per year		Cumulative		Per year
Career (2000-2019)			\$2,880,926		\$151,628		\$1,460,418		\$76,864
Since last promotion (2006-2019)			\$2,605,976		\$200,460		\$1,137,970		\$87,536
Last 5 years (2014-2019)			\$1,236,070		\$247,214		\$610,595		\$122,119
A = Active; C = Complete;									
¹ Description of the grants are listed below (by grant number).									
² Green emphasis indicates PI's share and blue emphasis indicates Co-PI's share. 'Cumulative' is sum of both PI & Co-PI share.									
In addition to the external grants listed above, secured \$198,000 from internal sources at GMU for student research									

PENDING

- P2. Center for Travel Demand Analytics (TraDA Center): Effects of the Gig Economy, E-commerce and Telecommunications (GEET) on Travel Demand in the Post-COVID-19 Pandemic World (PI)
Sponsor: University Transportation Centers Program, US Department of Transportation
Total Funding Amount: \$1,000,000
Dates: 12/15/2020 – 6/30/2022
- P1. Micromobility, Behavior, and Lifecycle Energy Impacts. (PI, with the University of Tennessee as the lead institution.)
Sponsor: US Department of Energy
Total Funding Amount: \$400,000 (GMU-share: \$140,000)
Dates: 10/1/2020 – 12/31/2022

ACTIVE

- G16. Faculty Fellow – Shared Mobility Services
Sponsor: Bureau of Transportation Statistics (BTS), Office of the Secretary of Transportation (OST), USDOT
Total Funding Amount: \$209,649
Dates: 7/1/2019 – 8/24/2020

COMPLETED

- G15. Transportation Research and Student Management (PI)
Sponsor: DC Department of Transportation,
Funding Amount: Indefinite Delivery, Indefinite Quantity (IDIQ) contract.
Dates: 7/1/2015-6/30/2020
- G14. Transportation Informatics University Transportation Center (co-PI) (PI: S. Zhu)
Sponsor: US Department of Transportation, University Transportation Centers Program
Funding Amount: \$568,921 (MV share: \$167,247)
Dates: 12/15/2013-9/30/2019
- G13. On-Site Berths and the Curbside Implications (PI)
Sponsor: District Department of Transportation (DDOT)
Funding Amount: \$193,000
Dates: 1/15/2017-1/31/2019
- G12. Eisenhower Fellowship (Faculty sponsor)
Sponsor: US Department of Transportation
Funding Amount: \$5,000
Dates: 1/31/2018 to 8/31/2018
- G11. [Global Initiative of Academic Networks](#) (Not routed through GMU)
Sponsor: Government of India via National Institute of Technology, Warangal
Funding amount: \$8,000 (approximate)
Dates: August 6-11, 2018
- G10. Analysis of Per-Ride Fare Data for Capital Bikeshare (PI)
Sponsor: District Department of Transportation (DDOT)
Funding Amount: \$25,000
Dates: 11/30/2016-2/28/2018
- G09. Virginia Economic Development and Housing Study (co-PI) (PI: Terry Clower)
Sponsor: Commonwealth of Virginia via Virginia Polytechnic and State University

- Funding Amount: \$234,500 (*MV share: \$11,725*)
 Dates: 8/18/2015-11/20/2017
- G08. Application to Marine Highway Systems (MHS) (co-PI) (PI: M. Bronzini)
 Sponsor: US Department of Transportation, CRS&SI Technology Application Program,
 Cooperative Agreement No. DTOS59-10-H-00004
 Funding Amount: \$1,311,906 (*MV share: \$568,921*)
 Dates: 12/15/2009-3/31/2012
- G07. Critical Infrastructure Vulnerability Assessment (Transportation) (PI)
 Sponsor: National Capital Region/US Department of Homeland Security
 Funding Amount: \$58,000 [Approximate equivalent of \$78,000 by including F&A]
 Dates: 4/15/2004-Dec 2006
- G06. Evaluating Emission Impacts of Traffic Flow Improvement Projects using Instrumented Test Vehicles (PI)
 Sponsor: US Department of Transportation
 Funding Amount: \$99,275 (*MV share: \$99,275*)
 Dates: 9/1/2003-Dec 2006
- G05. Estimating Emission Impacts of ETC/E Screening (PI)
 Sponsor: US Department of Transportation via SAIC
 Funding Amount: \$9,990 (*MV share: \$9,990*)
 Dates: 5/15/05-6/30/05
- G04. TMC Applications of Archived Data (ADMS Virginia) (PI)
 Sponsor: US Department of Transportation & Virginia Department of Transportation
 Funding Amount: \$100,014 (*MV share: \$89,957*)
 Dates: 12/17/2002-31/5/2004
- G03. Analysis of the 2000 NHTS Data for Inclusion in TRIMM (PI)
 Sponsor: US Department of Transportation
 Funding Amount: \$4,990 (*MV share: \$4,990*)
 Dates: 9/1/2003-4/30/2004
- G02. Emission Impacts of Personal Travel Variables (PI)
 Sponsor: US Department of Transportation
 Funding Amount: \$50,166 (*MV share: \$50,166*)
 Dates: 9/1/2002-12/31/2003
- G01. Development of an Expert System for Traffic Forecasting (PI)
 Funding amount: \$10,069 (*MV share: \$10,069*)
 Sponsor: Arizona Department of Transportation/Wilbur Smith Associates.
 Dates: 3/1/2002 - 5/31/2002

INTERNAL GRANTS (GMU)

4. Dissertation Completion Grant for Shweta Dixit
 Sponsor: GMU Office of the Provost
 Funding Amount: \$10,000
 Dates: Spring 2017
3. Dissertation Completion Grant for Xi (Tracy) Zhou
 Sponsor: GMU Office of the Provost
 Funding Amount: \$8,000
 Dates: Spring 2014
2. Presidential Fellowship (Student: Shweta Dixit)

Sponsor: GMU Office of the Provost
Funding Amount: \$150,000 (rough estimate)
Dates: Spring 2010-Spring 2014

1. Dissertation Grant (Student: Asma Ali)
Sponsor: Volgenau School of Engineering (VSE)
Funding Amount: \$30,000
Dates: AY 2006, 2007

UNSUCCESSFUL RECENT MAJOR PROPOSALS

(The following is a short-list of major proposals that were submitted since AY 2016 (last five years). These proposals requested \$4,623,425 in total funding and were not funded. The list is included in the CV for internal review purposes only.)

6. UTC Tier 1 Center on (PI, NC State and UNLV as partners)
Sponsor: University Transportation Centers Program, the US Department of Transportation
Requested Funding Amount: \$1,000,000
Date submitted: May 2020
5. Micromobility, Behavior, and Lifecycle Energy Impacts (PI. University of Tennessee, Knoxville as partner)
Sponsor: US Department of Energy
Requested Funding Amount: \$400,000 (GMU portion: \$139,997)
Date submitted: April 28, 2020
4. Predictive models for mode choice, energy and environmental impacts of transport by micromobility modes (PI, partner: University of Tennessee, Knoxville)
Sponsor: US Department of Energy
Requested Funding Amount: \$500,000
Dates: 10/1/2020 – 12/31/2022
3. UTC National Research Center on Congestion Relief (co-PI, the University at Buffalo as lead)
Sponsor: University Transportation Centers Program, the US Department of Transportation
Requested Funding Amount: \$2,647,000
Date submitted: December 2018
2. Harvesting the Big Data Nexus of Bikeshare Systems for Sustainable Urban Systems
Sponsor: National Science Foundation
Requested Funding Amount: \$1,401,425
Date submitted: May 2018
1. Precast Concrete Pavement Systems on Pavement Repairs and Rehabilitations (co-PI)
[PI: Girum Urgessa]
Sponsor: with District Department of Transportation.
Funding amount: \$75,000
Date submitted: Fall 2016

TEACHING, MENTORING AND ADVISING

TEACHING HIGHLIGHTS BY NUMBERS (2000-2019):

- Graduated students: 7 PhD; 1 Engineer's Degree; 5 MS (Thesis); 16 (MS project)
- Current students being advised by me (research): 2 PhD, 2 MS, 4 undergraduate
- Number of different courses taught: 15

- Number of new courses developed: 10

COURSES TAUGHT (2013-2019)

1. CEIE 101 – Introduction to Civil Engineering
2. CEIE 301 – Engineering and Economic Models in Civil Engineering
3. CEIE 304 – Junior Engineering Competency Exam
4. CEIE 360 – Introduction to Transportation Engineering
5. CEIE 404 – Senior Engineering Competency Exam
6. CEIE 410/510 – Geographic Information Systems in Engineering
7. CEIE 462/562 – Intro to Urban Transportation Planning
8. CEIE 499 – Air Quality
9. CEIE 685 – Civil Engineering Information Management
10. CEIE 690/664 – Transportation Engineering and the Environment
11. CEIE 762 – Network Models for Transportation Planning
12. CEIE 890 – Special Topics in Urban Transportation
13. ENGR 400 – Principles of Professional Practice in Engineering
14. ENGR 401 / CEIE 409 – Professional Practice and Management in Engineering

NEW COURSES DEVELOPED

1. CEIE 101 – Introduction to Civil Engineering
2. CEIE 117 – Information Technology for Engineering
3. CEIE 404 – Senior Engineering Competency Exam
4. ENGR 400 – Principles of Professional Practice in Engineering
5. CEIE 409 – Professional Practice and Management in Engineering
6. CEIE 410/510 – Geographic Information Systems in Engineering
7. CEIE 462/562 – Urban Transportation Planning
8. CEIE 664 – Transportation Engineering and the Environment
9. CEIE 685 – Civil Engineering Information Management
10. CEIE 499 – Air Quality

OTHER TEACHING-RELATED ACTIVITIES

1. Pilot Project on Online Course Development. Online Course Development Institute, George Mason University. Spring 2015.
2. Developing a portfolio of videos for help with FE Preparation for the benefit of engineering majors at George Mason University.

ADVISING (NON-RESEARCH)

1. Managing undergraduate curriculum and advising. Very involved in the process from 2002-2011 as undergraduate program director and Associate Chair. (See Departmental Leadership above.).
2. Faculty adviser, GMU student chapter of the Society of American Military Engineers (SAME): 2014-2016.

STUDENT ADVISING AND MENTORING (RESEARCH)

Summary of Student Accomplishments

1. The following graduate students I advised and mentored are in teaching or academic research
 - i. Dr. Thomas Brennan – Associate Professor (tenured), The College of New Jersey (2012-present)
 - ii. Dr. Shruthi Kaviti – Assistant Professor, Institute of Aeronautical Engineering, Hyderabad, India. (2018-present)

- iii. Dr. Michael Krimmer (retired) – Assistant Professor, NVCC (2007-2014); Adjunct Faculty, George Mason University (2008-2014)
 - iv. Dr. Asma Ali – Adjunct Faculty, George Mason University (2008; 2018-Current)
 - v. Dr. Arsalan Faghri – Adjunct Faculty, George Mason University (2012-current)
2. Dr. Shweta Dixit received “2017 Student of the Year” award from the US Department of Transportation’s University Transportation Centers Program in January 2018.
 3. Benjamin Atsem received the prestigious Eisenhower Fellowship from US Department of Transportation in January 2018.

Ph.D. as Dissertation Director

7. Kaviti, Shruti. Profiles, Preferences, and Reactions to Price Changes of Bikeshare Users: A Comprehensive Look at Capital Bikeshare Data. August 2018.
Currently an Assistant Professor in the Department of Civil Engineering at Institute of Aeronautical Engineering, Hyderabad, India.
 6. Dixit, Shweta. Modeling Emission Footprints of Sustainable Land Use Policies at Local Jurisdictional Level. August 2017.
Currently working with Northern Virginia Transportation Authority.
 5. Zhou, Xi, P.E. Dissertation title: Revealed Path Choice Behavior and Network Pruning for Efficient Path Finding. May 2014.
Currently a Senior Transportation / Traffic Engineer at Jacobs Engineering
 4. Faghri, Arsalan. Dissertation title: Advanced Planning Methods for Transit Oriented Developments. May 2012.
Currently an Engineer at Virginia Department of Transportation, and an adjunct professor at George Mason University
- E.D. Suydam, Martin. [Instant Learning for Crisis Response](#). A Thesis Submitted for the Fulfillment of *Engineer Degree* (a diploma between MS and PhD, which is now discontinued). Summer Semester 2008.
Currently an Instructor in Math and Computer Science, Washington College.
3. Krimmer, Michael J. Dissertation title: Assessing Impacts of Transportation Control Measures (TCMs) on Light Duty Gasoline Vehicle Emissions: An Experimental Study with Instrumented Vehicles. May 2007.
Currently Retired. After graduating with PhD, he served as Associate Professor at Northern Virginia Community College and later at Applied Engineering Management
 2. Ali, Asma T. P.E. Dissertation title: Empirical Models For Estimating Automobiles Running Speeds On Urban Streets. May 2007.
Currently a Project Manager at T3 E Design and also an adjunct professor of civil engineering at CEIE, George Mason University, Fairfax, VA.
 1. Shaughnessy, William J. Dissertation title: Ambient Levels of Respirable Particulate Matter and Health Outcomes in a Healthy, Young-Adult Population.” May 2005.
Current affiliation is unknown

In-progress Ph.D. work

1. Benjamin Atsem (Dissertation director). Cleared qualifying exam. Expected graduation date: December 2020.
2. Siddharth Rayaprolu. (Dissertation director). Expected graduation date: May 2021.

Ph.D. committee member (completed)

1. Guanqi Liu. Improving Traffic Operations under Incidents Using Large-Scale Traffic Simulations and Simulation-Based Optimization Methods. May 2019
2. Zhou Yang. Modeling Behavioral Reactions to Transit Network Disruptions based on Data Fusion and Integration. December 2018.
3. Neza Vodopivec. Analytical Techniques for Addressing the Impact of Public Transport Service Disruptions on Transit-Reliant Populations. December 2017.
4. Charles Augustine (Emissions monitoring). May 2008.
5. Sanjeev Raman (Data mining). May 2005.
6. Arjumand Zaidi (Environmental engineering, water quality). December 2004.

M.S. (Thesis adviser)

1. Brennan Jr., Thomas. (Currently a tenured associate professor at the College of New Jersey). Thesis: Analytical Hierarchy Optimization of Potential Residential Lot Distribution. August 2007.
2. Xhou, Xi (Tracy). (Currently a Senior Transportation / Traffic Engineer at CH2M Hill) Thesis: Environmental Justice Implications of Vehicle Emissions by Income Groups. Jan 2007.
3. Susan Cheung. (Current affiliation unknown). Thesis: Emissions Estimation Using GPS Data. May 2006.
4. Baik, Bo. (Currently an analyst at Fairfax County). Thesis: Geographic Information System in Sanitary Sewer System Management. May 2004.
5. Chalumuri, Soujanya. P.E. (Currently a small business owner.) Thesis: Emission Impacts of Personal Travel Variables. August 2003.

M.S. (Thesis committee member)

1. Melissa Rossi (Travel Behavior) – May 2019
2. Christina Davis (Roundabout design) – May 2009
3. Gary Furr (Global warming) – May 2005
4. Ryan Foroughi (Land use planning) – December 2004
5. William Johnson (Roundabout design) – December 2004
6. Anna Kandavalli (Highway quality of service) – December 2004
7. Angela Martin (Highway quality of service) – December 2004

M.S. (Scholarly Paper/non-thesis/project)

1. Swathi T. Chepyala. "Analysis on Travel Behavior of Bikeshare Systems in United States" (May 2019)
2. Sanjala Bajracharya, "Service Reliability of City University Energy Saver (CUE) Bus." (May 2012).
3. Kobina Gaituah. "Short Sea Shipping: A Feasible Mode for the United States." (May 2012).
4. Mohammed Elomary. "Streetcar Along Columbia Pike" (May 2012)
5. Gardner, Lindsay. "Methodology for Analyzing the Traffic Impact Analysis." (May 2011).
6. Palomino, Rurick. "Study on Latex Modified Concrete Overlays." (May 2007)
7. Radzikowski, Roderick. R. "Hybrid Vehicles and HOV Lanes in Washington Metropolitan Area." (May, 2007).
8. Gladis Arboleda. "Bike path network for Prince William County." (May 2006).
9. Mamoun Mustafa. "Ridership trends for WMATA." (May 2006).

10. Mohammad Babgi. "Asset management in transportation." (August 2005).
11. Harshit Thaker. (Transportation Impact Studies). (December 2003).
12. Selamawit Hailegiorgis. (May 2013)
13. Durbois Zim. "Identifying travelers' path choice with GPS equipped vehicles." (August 2003).
14. Fadia Abdelrehman. "Emissions trading and alternative fuels." (May 2002).
15. Mike Mercer. "Impact of soak period distribution on emissions." (May 2001).

Undergraduate Research and Mentoring

The following undergraduate students participated and helped with data collection and analysis on various research projects led by me.

1. R Scott Leary
2. Wesley Pierce
3. Kathleen Pena
4. Chi Thai
5. Briauna Battle
6. Kirsten Horn
7. Hana Azab
8. Elizabeth Lazaro

SERVICE

COMMITTEE MEMBERSHIPS AND OFFICES

- Transportation Research Board committee on Transportation and Air Quality (ADC 20).
Member: 2001-2010; Active friend: 2010-present
- Transportation Research Board committee on Transportation Planning for Small and Medium Sized Communities (ADA 30). Member: 2004-2010; Active friend: 2010-present
- Transportation Research Board committee on Environmental Justice in Transportation (ADD 50).
Active Friend: 2007-present
- Association of Transportation Professionals of Indian Origin (ATPIO)
 - Vice President: 2018-present
 - Director: 2014-present
 - Treasurer and Director: 2005-2009

ABET

- Served on the ABET team for the following BS civil engineering programs:
 - Observer: Milwaukee School of Engineering (Nov 2016)
 - Program Evaluator: Clemson University (Oct 2017)
 - Program Evaluator: Alabama A&M University (Oct 2018)

JOURNAL EDITORSHIPS / REVIEW LEAD

- Chief Editor: Journal of Modern Mobility Systems (JMMS), Mason Publishing. 2019-present
- Guest Editor: Special Issue of *Sustainability*. Probe Vehicle Data and Sustainability 2019-2020.
- Associate Editor: 2020 IEEE Forum on Integrated and Sustainable Transportation Systems. June 29-July 3, 2020 Delft, The Netherlands
- Co-Editor. Second Annual TransInfo Symposium on Big Data in Transportation. Fairfax, VA. August 2016.
- Associate Editor of ASCE *Journal of Computing in Civil Engineering*. 2001 - 2012.

- Paper Review Co-Chair. Transportation Research Record (Issues on Transportation Air Quality), *Journal of Transportation Research Board*. 2002-2005.

REVIEWING ACTIVITIES

Reviewed hundreds of articles for the following journals and other leading scholarly publications:

- Transportation Research Record (Also, paper review committee co-chair on multiple occasions)
- Journal of Computing in Civil Engineering (Also served as a associate editor)
- Transportation Research - Part C
- Transportation Research - Part D
- Journal of Transportation (ASCE)
- Journal of Public Transportation
- The Journal of Civil Engineering and Environmental Systems
- International Journal of Geographical Information Science
- Sustainability (also serving as a guest editor)

Review panels:

- US Department of Energy. 2019 Technology Commercialization Fund. Proposal reviewer.
- US DoT Center for Connected and Multimodal Mobility (2018)
- National Science Foundation ITR Review Panel. March 2003
- National Cooperative Highway Research Program (NCHRP) Panel: 25-25/Task 71: Templates for Project-Level Analyses Using MOVES and AERMOD
- National Science Foundation, Engineering Education Centers. August 2015.

PROFESSIONAL REGISTRATION

- Professional Engineer, Commonwealth of Virginia (License number. 0402036609)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Member, Institute of Transportation Engineers: 1990-Present
- Member, American Society of Civil Engineers: 2000-Present
- Member, American Society of Engineering Educators: 2000-Present

REVIEWING ACTIVITIES FOR AGENCIES

- National Science Foundation ITR Review Panel. March 2003
- National Cooperative Highway Research Program (NCHRP) Panel: 25-25/Task 71: Templates for Project-Level Analyses Using MOVES and AERMOD

WORKSHOPS AND SYMPOSIA

- Coordinator, Workshop on IVHS Benefit Assessment. Graylyn Conference Center, Wake Forest University, Winston Salem, NC. April 1995.
- Coordinator, TRB Summer Conference on Transportation Air Quality and Workshop. Beckman Center, University of California, Irvine, CA. June 2001.
- Coordinator, Second Annual Symposium on Transportation Informatics. George Mason University, Arlington, VA. August 2016.

OTHER PROFESSIONAL SERVICE

- Professional outreach activities include reaching out to, and mentoring undergraduate engineering students in India for successfully pursuing graduate studies in United States (see “Invited lectures and presentations”).

GEORGE MASON UNIVERSITY

CEIE Department

1. Undergraduate program director and Associate Chair: 2003-2008, 2009-2011
2. Promotion and Tenure Committee: 2006-current
3. Department and School representative at a multitude of orientation events 2000-present
4. Multiple faculty search committees in CEIE and ME departments: 2000-2015, 2019
5. Search committee for department chair: 2008-09; 2016-17
6. Contributed (personally) to, and raised over \$30,000 for various scholarship funds within the department

Volgenau School of Engineering

1. Computing Committee: 2001-2005
2. Undergraduate Committee 2003-2011
3. Computing Committee: 2001-2004
4. Promotion and Tenure Committee. 2006-2008, 2009-2014
5. Volgenau School Representative for various new and prospective student orientation events (2001-2012)

George Mason University

1. University Grievance Committee: 2018-current
2. Elected Faculty Representative to the Board of Visitors’ Committee on Land Use and Finance: 2019-current