SOYOUNG (SUE) AHN

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1. EDUCATION

2005 Ph.D., Civil and Environmental Engineering, University of California, Berkeley
2001 M.S., Civil and Environmental Engineering, University of California, Berkeley
2000 B.S., Civil and Environmental Engineering, Ohio State University, *Summa Cum Laude*

2. ACADEMIC APPOINTMENTS

8.2019 – Present	Professor, Civil and Environmental Engineering, University of Wisconsin – Madison
5.2018 – Present	Executive Director, Mid-America Freight Coalition (MAFC)
2.2014 – 7.2019	Associate Professor, Civil and Environmental Engineering, University of Wisconsin – Madison
7.2013 – 1.2014	Visiting Professor, Civil and Environmental Engineering, University of Wisconsin – Madison
8.2012 – 6.2013	Associate Professor, Civil, Environmental and Sustainable Engineering, Arizona State University
5.2011 – 6.2013	Senior Sustainability Scientist, Global Institute of Sustainability, Arizona State University
8.2006 – 7.2012	Assistant Professor, Civil, Environmental and Sustainable Engineering, Arizona State University
6.2008	Visiting Scholar, Université de Lyon, ENTPE-INRETS, Laboratoire d'Ingénierie Circulation Transports LICIT
10.2005 – 7.2006	Faculty Associate, Civil and Environmental Engineering, Portland State University
8.2000 – 9.2005	Graduate Student Researcher, University of California, Berkeley
8.2002 – 5.2005	Graduate Student Instructor, University of California, Berkeley

3. PRINCIPAL AREAS OF TEACHING AND RESEARCH

Traffic Flow Analysis and Modeling; Connected Autonomous Vehicles; Traffic Control

4. HONORS AND AWARDS

- Best paper in Traffic Flow Theory, AHB 45 Traffic Flow Theory and Characteristics Committee, Transportation Research Board, 2019
- Cunard Award: Best paper with first young author in the area of operations in Transportation Research Board, 2016

- National Science Foundation CAREER Award, 2012-2017
- Best ITS Planning Project, Annual ITS Arizona Conference, 2008
- Outstanding Graduate Student Instructor, University of California, Berkeley, 2005
- University of California, Berkeley Fellowship, 2000-2001
- Robert H. Simpson Memorial Prize for the highest GPA in graduating class, Ohio State University, 2000
- Undergraduate Honors Fellowship and Internship, Ohio State University, 1999-2000
- C. Newton Brown Scholarship for academic excellence, Ohio State University, 1998-2000
- Dean's List, Ohio State University, 1996-2000

5. PUBLICATIONS

Bold represents postdoctoral researchers and students that I advised as a sponsor or a committee chair.
Bold Italic represents other students that I worked closely.
* represents corresponding author.

5.1. Articles in Refereed Archival Journals

1. **Han., Y.**, Ahn, S.*, Estimation of traffic flow rate with data from connected-automated vehicles using deep learning and Bayesian inference. Under review. Transportation Research Part C.
2. **Reina, P.***, Ahn, S., Lane flow distribution of congested traffic on three lane freeways. Under review. International Journal on Transportation Science and Technology.
3. Reina, P.*, Saman, G., Ahn, S., 2019. On the spatial evolution of traffic state transitions: Empirical observations and general features. Forthcoming in Transportation Research Record, Journal of the Transportation Research Board.
4. **Zhou, Y.**, Wang, M., Ahn, S.*, 2019. Distributed model predictive control approach for cooperative car-following with guaranteed local and string stability. Forthcoming in Transportation Research Part B.
5. **Bang, S.***, Ahn, S., 2019. Mixed traffic of connected and autonomous vehicles and human-driven vehicles: Traffic evolution and control using spring-mass-damper system. Transportation Research Record, Journal of the Transportation Research Board. https://doi.org/10.1177/0361198119847618
6. **Zhou, Y.**, Ahn, S.*, 2019. Robust local and string stability for a decentralized car following control strategy for connected automated vehicles. Transportation Research Part B 125, 175-196. https://doi.org/10.1016/j.trb.2019.05.003
7. **Zhou, Y.**, Ahn, S.*, Wang, M., Hoogendoorn, S., 2019. Stabilizing mixed platoons with connected automated vehicles: An H-infinity norm approach. Accepted. ISTTT 23; Transportation Research Part B. https://doi.org/10.1016/j.trb.2019.06.005
8. Chen, D.**, Srivatava, A.**, Ahn, S.*, Li, T., 2019. Traffic dynamics under speed disturbance in mixed traffic with automated and non-automated vehicles. Accepted. ISTTT 23; Transportation Research Part C. https://doi.org/10.1016/j.trc.2019.03.017

9. **Han, Y.**, Ahn, S.*, 2019. Variable speed release (VSR): Speed control to increase bottleneck capacity. In press. IEEE-ITSC.
https://doi.org/10.1109/TITS.2019.2891314

10. **Bang, S.**, Ahn, S.*, 2018. Control of connected and autonomous vehicles for cut-in movement by using spring mass damper system. Transportation Research Record, Journal of the Transportation Research Board. (*2019 Best Paper on Traffic Flow Theory given by the TRB's Traffic Flow Theory and Characteristics Committee*)
https://doi.org/10.1177/0361198118796927

11. **Chen, D.**, Ahn, S.*, 2018. Capacity-drop at extended bottlenecks: merge, diverge, and weave. Transportation Research Part B 108, 1-20.
https://doi.org/10.1016/j.trb.2017.12.006

12. **Han, Y.**, Ahn, S.*, 2018. Stochastic modeling of breakdown at freeway merge bottleneck and traffic control strategies using connected/automated vehicle. Transportation Research Part B 107, 146-166.
https://doi.org/10.1016/j.trb.2017.11.007

13. **Zhou, Y.**, Ahn, S.* Chitturi, M., Noyce, D., 2017. Receding horizon stochastic optimal control strategy for ACC and CACC under uncertainty. Transportation Research Part C 83, 61–76.
https://doi.org/10.1016/j.trc.2017.07.011

14. **Bang, S.**, Ahn, S.*, 2017. Platooning strategy for connected and autonomous vehicles: transition from light traffic. Transportation Research Record, Journal of the Transportation Research Board 2623. DOI: 10.3141/2623-08.
https://doi.org/10.3141/2623-08

15. **Chen, D.**, Ahn, S.* Chitturi, M., Noyce, D., 2017. Truck platooning on uphill grades under cooperative adaptive cruise control (CACC). Transportation Research Part C 83, 61–76. Also in Transportation Research Procedia 23 (for ISTTT 22), 1059-1078.
https://doi.org/10.1016/j.trc.2017.08.025

16. **Chen, D.**, Ahn, S.*, Chitturi, M., Noyce, D., 2017. Towards vehicle automation: roadway capacity formulation for traffic mixed with regular and automated vehicles. Transportation Research Part B 100. 196–221.
https://doi.org/10.1016/j.trb.2017.01.017

17. **Han, Y.**, **Chen, D.**, Ahn, S.*, 2017. Variable speed limit control at fixed freeway bottlenecks using connected vehicles. Transportation Research Part B 98, 113-134.
http://dx.doi.org/10.1016/j.trb.2016.12.013

18. **Chen, D.**, Ahn, S.*, **Bang, S.**, Noyce, D., 2016. Car-following and lane-changing behavior involving heavy vehicles. Transportation Research Record, Journal of the Transportation Research Board 2561, 89–97. *(2016 Cunard Award: Best paper with first young author in the area of operations in Transportation Research Board)*
http://dx.doi.org/10.3141/2561-11

19. **Han, Y.**, **Chen, D.**, Ahn, S.*, Hegyi, A., 2015. Analysis of driver response and traffic evolution under variable speed limit control. Transportation Research Record, Journal of the Transportation Research Board 2490, 1-10.
http://dx.doi.org/10.3141/2490-01

20. **Reina, P.**, Ahn, S.*, 2015. On macroscopic freeway merge behavior: Estimation of merge ratios using asymmetric lane flow distribution. Transportation Research Part C 60, 24-35. http://dx.doi.org/10.1016/j.trc.2015.07.008

21. Reyna, J.*, Chester, M., Ahn, S., Fraser, A., 2015. Improving the accuracy of vehicle emissions profiles for urban transportation greenhouse gas and air pollution inventories. Environmental Science & Technology 49 (1), 369–376. http://dx.doi.org/10.1021/es5023575

22. **Chen, D.**, Ahn, S.*, 2015. Variable speed limit control for severe non-recurrent freeway bottlenecks. Transportation Research Part C 51, 210-230. http://dx.doi.org/10.1016/j.trc.2014.10.015

23. **Chen, D.**, Ahn, S.*, Hegyi, A., 2014. Variable speed limit control for steady and oscillatory queues at fixed freeway bottlenecks. Transportation Research Part B 70, 340-358. http://dx.doi.org/10.1016/j.trb.2014.08.006

24. **Chen, D.**, Ahn, S.*, Laval, J., Zheng, Z., 2014. On the periodicity of traffic oscillations and capacity drop: the role of driver characteristics. Transportation Research Part B 59, 117-136. http://dx.doi.org/10.1016/j.trb.2013.11.005

25. Ahn, S.*, **Vadlamani, S.**, Laval, J., 2013. A method to account for non-steady state conditions in measuring traffic hysteresis. Transportation Research Part C 34, 138-147. http://dx.doi.org/10.1016/j.trc.2011.05.020

26. **Zheng, Z.**, Ahn, S.*, Chen, D., Laval, J., 2013. The impact of lane-changing on the immediate follower: anticipation, relaxation, and behavioral change. Transportation Research Part C 26 (1), 367-379. http://dx.doi.org/10.1016/j.trc.2012.10.007

27. Chen, D.*, Laval, J., Ahn, S., **Zheng, Z.**, 2012. Microscopic traffic hysteresis in traffic oscillations: a driver behavioral perspective. Transportation Research Part B 46 (10), 1440-1453. http://dx.doi.org/10.1016/j.trb.2012.07.002

28. Duret, A., Ahn, S.*, Buisson, C., 2012. Lane-flow distribution on a three-lane freeway: Empirical observation and model implementation. Transportation Research Part C 24, 157-167. http://dx.doi.org/10.1016/j.trc.2012.02.009

29. Chen, D.*, Laval, J., **Zheng, Z.**, Ahn, S., 2012. A behavioral car-following model that captures traffic oscillations. Transportation Research Part B 46 (6), 744-761. http://dx.doi.org/10.1016/j.trb.2012.01.009

30. **Zheng, Z.**, Ahn, S.*, Chen, D., Laval, J., 2011. Freeway traffic oscillations: microscopic analysis of formations and propagations using wavelet transform. Transportation Research Part B 45 (9), 1378-1388. (Also in the proceedings of the 19th International Symposium of Transportation and Traffic Theory). http://dx.doi.org/10.1016/j.trb.2011.05.012

31. ***Duret, A.***, Ahn, S.*, Buisson, C., 2011. Passing rates to measure relaxation and impact of lane-changing in queue. Computer-Aided Civil and Infrastructure Engineering 26 (4), 285-297. http://dx.doi.org/10.1111/j.1467-8667.2010.00675.x

32. Ahn, S.*, **Kandala, S.**, Uzan, J., El-Basyouny, M., 2011. Impact of input traffic data in predicting pavement distress using the mechanistic empirical pavement design guide (MEPDG). Road

Materials and Pavement Design 12 (1), 195-216.
http://dx.doi.org/10.3166/rmpd.12.195-216

33. **Zheng, Z.**, Ahn, S.*, Chen, D., Laval, J., 2011. Applications of wavelet transform for analysis of freeway traffic: bottlenecks, transient traffic, and traffic oscillations. Transportation Research Part B 45 (2), 372-384.
http://dx.doi.org/10.1016/j.trb.2010.08.002

34. **Vadlamani, S.**, **Chen, E.**, Ahn, S.*, Washington, S., 2011. Identifying large truck hot spots using crash counts and PDOEs. ASCE Journal of Transportation Engineering 137 (1), 11-21.
http://dx.doi.org/10.1061/(ASCE)TE.1943-5436.0000183

35. Ahn, S.*, Laval, J., Cassidy, M., 2010. Effects of merging and diverging on freeway traffic oscillations: theory and observation. Transportation Research Record, Journal of the Transportation Research Board 2188, 1-8.
http://dx.doi.org/10.3141/2188-01

36. Bar-Gera, H.*, Ahn, S., 2010. Empirical macroscopic evaluation of freeway merge-ratios. Transportation Research Part C 18, 457-470.
http://dx.doi.org/10.1016/j.trc.2009.09.002

37. **Zheng, Z.**, Ahn, S.*, Monsere, C.M., 2010. Impact of traffic oscillations on freeway crash occurrences. Accident Analysis and Prevention 42 (2), 626-636.
http://dx.doi.org/10.1016/j.aap.2009.10.009

38. Laval, J.*, Chen, D., Ben Amer, K., Guin, A., Ahn, S., 2009. Evolution of oscillations in congested traffic: improved estimation method and additional empirical evidence. Transportation Research Record, Journal of the Transportation Research Board 2124, 194-202.
http://dx.doi.org/10.3141/2124-19

39. **Ma, T**., Ahn, S.*, 2008. Comparisons of speed-spacing relations under general car-following vs. Lane-changing. Transportation Research Record, Journal of the Transportation Research Board 2088, 138-147.
http://dx.doi.org/10.3141/2088-15

40. Ahn, S.*, Bertini, R., ***Auffray, B.***, Ross, J., Eshel, O., 2007. Evaluating the benefits of a system-wide adaptive ramp-metering strategy in Portland, Oregon. Transportation Research Record, Journal of the Transportation Research Board 2012, 47-56.
http://dx.doi.org/10.3141/2012-06

41. Ahn, S.*, Cassidy, M. J., 2007. Freeway traffic oscillations and vehicle lane-change maneuvers. In: R.E. Allsop, M.G.H. Bell, B.G. Heydecker (Eds.), 17th International Symposium of Transportation and Traffic Theory, Elsevier, Amsterdam, pp. 691-710.

42. Cassidy, M. J.*, Ahn, S., 2005. Driver turn-taking behavior in congested freeway merges. Transportation Research Record, Journal of the Transportation Research Board 1934, 140-147.
http://dx.doi.org/10.3141/1934-15

43. Ahn, S., Cassidy, M. J.*, Laval, J., 2004. Verification of simplified car-following theory. Transportation Research Part B 38 (5), 431-440.
http://dx.doi.org/10.1016/S0191-2615(03)00074-2

5.2. Articles in Preparation

1. Zhang, Z., Ding, F., **Zhou, Y.**, Ahn, S.*, Ran, B., Deep long short-term memory network based long-term vehicle trajectory prediction.
2. **Wu, J.**, Ahn, S.*, Zhou, Y., Liu, P. The cooperative sorting problem in connected and automated platoons.
3. Chen, D., **Srivastava, A.**, Ahn, S.* Harnessing connected and automated vehicle technologies to control lane changes at freeway merge bottlenecks.
4. **Srivastava, A.**, Ahn, S.*, Chen, D., 2018. CAV control to mitigate stop and go oscillation amplification in mixed traffic with chained asymmetric driver behavior.

5.3. Articles in Refereed Conference Proceedings

1. **Han, Y.**, Perry, E.*, Ahn, S., Vorhes, G., 2019. Evaluating regional freight corridors in the mid-America states: a step towards regional prioritization for freight operations and investments. Accepted. Proceedings of the 98th Annual Meeting of TRB.
2. **Srinivasav, A.***, Chitturi, M., Ahn, S., Rafferty, P., 2019. Analytical methods for work zone travel time reliability. Accepted. Proceedings of the 98th Annual Meeting of TRB.
3. **Chen, D.**, Ahn, S.*, 2018. Harnessing connected and automated vehicle technologies to control lane changes at freeway merge bottlenecks. Proceedings of the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
4. **Reina, P.***, Ahn, S., 2016. Characterizing variations of congested freeway lane flow distribution trends. Proceedings of the 95th Annual Meeting of the Transportation Research Board, Washington D.C.
5. **Han, Y.**, Chen, D., Ahn, S., 2016. Variable speed limit control at fixed freeway bottlenecks using connected vehicles. Proceedings of the 95th Annual Meeting of the Transportation Research Board, Washington D.C.
6. Huang, D.*, Shere, S., Ahn, S., 2010. Dynamic highway congestion detection and prediction based on shock waves. VANET '10 Proceedings of the seventh ACM international workshop on VehiculAr InterNETworking, New York, NY, pp. 11-20.
7. ***Duret, A.***, Ahn, S.*, Buisson, C., 2009. Spatio-temporal analysis of impacts of lane changing consistent with wave propagation. Proceedings of the 88th Annual Meeting of the Transportation Research Board, Washington D.C.
8. Ahn, S.*, **Rayabhari, M.**, Ou, Q., Bertini, R., 2009. An empirical study of transient freeway traffic states along kinematic waves. Proceedings of the 88th Annual Meeting of the Transportation Research Board, Washington D.C.
9. Ahn, S.*, **Kandala, S.**, Uzan, J., El-Basyouny, M., 2009. Comparative analysis of input traffic data and the MEPDG output for flexible pavements in state of Arizona. Proceedings of the 88th Annual Meeting of the Transportation Research Board, Washington D.C.
10. Tufte, K.*, Ahn, S., Bertini, R., ***Auffray, B.,*** Rucker, J., 2007. Toward the systematic improvement of data quality in the Portland, Oregon Regional Transportation Archive Listing (PORTAL). Proceedings of the 86th Annual Meeting of the Transportation Research Board, Washington D.C.

11. ***Kothuri, S.***, Tufte, K.*, Ahn, S., Bertini, R., 2007. Using archived ITS data to generate improved freeway travel time estimates. Proceedings of the 86th Annual Meeting of the Transportation Research Board, Washington D.C.
12. ***Kothuri, S.***, Tufte, K.*, Ahn, S., Bertini, R.L., 2006. Development of an ITS data archive application for improving freeway travel time estimation. 9th International IEEE Conference on Intelligent Transportation Systems, Toronto, Canada, September 17-20, 2006.

5.4. Refereed Technical Reports

1. Perry, E., Ahn, S., 2018. Developing a Regional Regulatory Approach to Truck Platooning in the MAASTO Region: A Literature Review of the History, Progress, and Benefits of Truck Platooning. MAFC 17 Final Report to Wisconsin Department of Transportation.
2. Srinivasav, A., Chitturi, M., Ahn, S., Rafferty, P., 2018. Analytical methods for work zone travel time reliability. Smart Work Zone Deployment Initiative, InTrans Project 06-277 Final Report.
3. Chen, D., Bang, S., Ahn, S., Noyce, D. 2016. Effects of Heavy Vehicles on Dynamic Traffic Features. CFIRE Project 09-08 Final Report.
4. Hranac, R., Barkley, T., Sambana, K., Derstine, B., Mirchandani, P., Zhou, Z., Ahn, S., 2015. SHRP 2 Reliability Project L33 Report S2-L33-RW-1: Validation of Urban Freeway Models. Transportation Research Board.
5. Ahn, S., **Kandala, S.**, Gettman, D., Arizona emergency vehicle infrastructure integration: field demonstration evaluation and benefit-cost analysis. Final Report, Arizona Transportation Research Center, Arizona Department of Transportation.
6. Tufte, K., Ahn, S., Kothuri, S., Assessment and refinement of real-time travel time algorithms for use in practice, Phase II. Final Report, Oregon Transportation Research and Education Consortium, OTREC-RR-11-13, February 2011.
7. Bertini, R., Ahn, S., **Rayabhari, M.**, Ou, Q., Feng, W., 2010. Characteristics of transitions in freeway traffic. Final Report, Oregon Transportation Research and Education Consortium, OTREC-RR-10-12, September 2010.
8. Monsere, C., Ahn, S., **Zheng, Z.**, 2009. Empirical observation of the impact of traffic oscillations on freeway safety. Final Report, Oregon Transportation Research and Education Consortium, OTREC-RR-08-190, November 2009.
9. Monsere, C., Eshel, O., Ahn, S., Bertini, R.L., 2008. Using archived ITS data to measure the operational benefits of a system-wide adaptive ramp metering system. Final Report, Oregon Department of Transportation SPR Project No. 645, and Oregon Transportation Research and Education Consortium, OTREC-RR-08-190, December 2008.

5.5. Non-Refereed Technical Reports

1. Mauch, M., Chung, K., Ahn, S., Skabardonis, A., 2006. Evaluation of the Bay Area Incident Response System (BAIRS). PATH Research Report, University of California, Berkeley.
2. Mauch, M., Chung, K., Ahn, S., Skabardonis, A., 2006. Evaluation of the Bay Area Incident Response System (BAIRS). PATH Research Report, University of California, Berkeley.
3. Mauch, M., Ahn, S., Chung, K., Skabardonis, A., 2005. Baseline evaluation of the Freeway Service Patrol (FSP) I-710 Big-Rig Demonstration Program. ITS Working Paper, University of California, Berkeley.

4. Ahn, S., Cassidy, M.J., 2002. Identifying density-flow relations on arterial surface streets. California PATH Research Report, University of California, Berkeley.

5.6. Other (Non-Refereed)

1. Ahn, S., **Zheng, Z.**, **Vadlamani, S.**, 2009. From here to there: transportation opportunities for Arizona - Chapter 8: highway travel and congestion. 94th Arizona Town Hall.

6. PRESENTATIONS

Bold represents postdoctoral researchers and students that I advised as a sponsor or a committee chair.
Bold Italic represents other students that I worked closely.
* represents presenter

6.1. Presentations at Conferences

1. Zhang, Z., Ding, F., Zhou, Y., Ahn, S, Ran, B., 2019. Deep long short-term memory network based long-term vehicle trajectory prediction. Accepted for presentation at the 98th Annual Meeting of TRB.
2. Zhou, Y., Ahn, S., 2019. Robust local and string stability for a decentralized car following control strategy for connected automated vehicles. Accepted for presentation at the 98th Annual Meeting of TRB.
3. **Bang, S.**, Ahn, S., 2019. Mixed traffic of connected and autonomous vehicles and human-driven vehicles: Traffic evolution and control using spring-mass-damper system. Submitted for presentation and publication at the 98th Annual Meeting of TRB.
4. **Han, Y.**, Perry, E., Ahn, S., Vorhes, G., 2019. Evaluating regional freight corridors in the mid-America states: a step towards regional prioritization for freight operations and investments. submitted for presentation and publication at the 98th Annual Meeting of TRB.
5. **Srinivasav, A.**, Chitturi, M., Ahn, S., Rafferty, P., 2019. Analytical methods for work zone travel time reliability. Accepted. Proceedings of the 98th Annual Meeting of TRB.
6. Reina, P., Saman, G., Ahn, S., 2019. On the spatial evolution of traffic state transitions: Empirical observations and general features. Accepted. The 98th Annual Meeting of the Transportation Research Board.
7. **Srivastava, A.***, Ahn, S., Chen, D., 2018. CAV control to mitigate stop and go oscillation amplification in mixed traffic with chained asymmetric driver behavior. 2018 Mid-year Meeting of Transportation Research Board's AHB45 Traffic Flow Theory and Characteristics Committee.
8. **Han, Y.***, Ahn, S., 2018. Variable speed release (VSR): Speed control to increase bottleneck capacity. The 97th Annual Meeting of the Transportation Research Board.
9. Chen, D., Ahn, S., 2018. Harnessing connected and automated vehicle technologies to control lane changes at freeway merge bottlenecks. (Poster). The 97th Annual Meeting of the Transportation Research Board.
10. **Bang, S.**, Ahn, S., 2018. Control of connected and autonomous vehicles for cut-in movement by using spring mass damper system. (Poster). The 97th Annual Meeting of the Transportation Research Board.

11. **Chen, D.**, Ahn, S., Chitturi, M., Noyce, D., 2017. Modeling of truck platooning on uphill segments under cooperative adaptive cruise control (CACC). (Poster). 22nd International Symposium of Transportation and Traffic Theory (ISTTT), Chicago, USA.
12. **Bang, S.***, Ahn, S., 2017. Platooning strategy for connected and autonomous vehicles: transition from light traffic. The 96th Annual Meeting of the Transportation Research Board.
13. **Chen, D.**, Ahn, S.*, Chitturi, M., Noyce, D., 2017. Towards vehicle automation: roadway capacity formulation for traffic mixed with regular and automated vehicles. The 96th Annual Meeting of the Transportation Research Board.
14. **Zhou, Y.***, Ahn, S., Chitturi, M., Noyce, D., 2017. Receding horizon stochastic optimal control strategy for ACC and CACC under uncertainty. (Poster). The 96th Annual Meeting of the Transportation Research Board.
15. **Han, Y.***, Ahn, S., 2017. Stochastic modeling of breakdown at freeway merge bottleneck and traffic control strategies using connected/automated vehicle. (Poster). The 96th Annual Meeting of the Transportation Research Board.
16. **Chen, D.***, Ahn, S., Chitturi, M., Noyce, D., 2016. Impacts of Road Grade on CACC Vehicle Platoons. Automated Vehicles Symposium. San Francisco, USA
17. **Han, Y.***, **Chen, D.**, Ahn, S., 2016. Variable speed limit control at fixed freeway bottlenecks using connected vehicles. (Poster). The 95th Annual Meeting of the Transportation Research Board, Washington D.C.
18. **Chen, D.***, Ahn, S., **Bang, S.**, Noyce, D. 2016. Car-following and lane-changing behavior involving heavy vehicles. The 95th Annual Meeting of the Transportation Research Board, Washington D.C.
19. **Reina, P.***, Ahn, S., 2016. Characterizing variations of congested freeway lane flow distribution trends. (Poster). The 95th Annual Meeting of the Transportation Research Board, Washington D.C.
20. Chitturi, M.*, Noyce, D., Ahn, S., 2016. Incorporating Reliability Concepts in Transportation Engineering Curriculum. The 95th Annual Meeting of the Transportation Research Board, Washington D.C.
21. Chen, D.*, Han, Y., Ahn, S., Chitturi, M., Noyce, D., 2015. Design of cooperative lane changes enabled by connected-automated vehicles. Automated Vehicle Symposium 2015, Ann Arbor, Michigan.
22. **Han, Y.**, **Chen, D.**, Ahn, S., Hegyi, A., 2015. Analysis of driver response and traffic evolution under VSL control. (Poster). The 94th Annual Meeting of the Transportation Research Board, Washington D.C.
23. **Chen, D.***, Ahn, S., 2014. Variable speed limit control to increase discharge rates at freeway incident bottlenecks. Traffic Flow Theory and Characteristics Committee (AHB45) 2014 Summer Meeting: Symposium Celebrating 50 Years of Traffic Flow Theory, Portland, Oregon USA, August 11-13, 2014.
24. **Chen, D.**, Ahn, S., Hegyi, A., 2014. A variable speed Limit scheme based on the Kinematic Wave theory. (Poster). The 93rd Annual Meeting of the Transportation Research Board, Washington D.C.

25. **Reina, P.**, Ahn, S., 2014. Prediction of merge ratios using lane flow distributions. (Poster). The 93rd Annual Meeting of the Transportation Research Board, Washington D.C.
26. **Reina, P.***, Ahn, S., 2013. Prediction of merge ratios using lane flow distributions. hEART 2013 – 2nd Symposium of the European Association for Research in Transportation.
27. Chen, D., Ahn, S., Zheng, Z., Laval, J., 2013. Traffic hysteresis and the evolution of stop-and-go oscillations. (Poster). The 92nd Annual Meeting of the Transportation Research Board, Washington D.C.
28. Chen, D., Ahn, S.*, Zheng, Z., Laval, J., 2012. Traffic hysteresis and the evolution of stop-and-go oscillations. 2012 LATSIS Symposium: The 1st European Symposium on Quantitative Methods in Transportation Systems, Lausanne, Switzerland.
29. **Reina, P.**, Ahn, S., Chiabaut, N., Bar-Gera, H., Leclercq, L., 2012. Merge ratios at active merge bottlenecks. (Poster). The 91st Annual Meeting of the Transportation Research Board, Washington D.C.
30. Chen, D.*, Laval, J., **Zheng, Z.**, Ahn, S., 2012. Validation, improvement, and application of a parsimonious traffic oscillation model. The 91st Annual Meeting of the Transportation Research Board, Washington D.C.
31. Duret, A., Ahn, S., Buisson, C., 2012. Lane-flow distribution on a three-lane freeway: Empirical observation and model implementation. (Poster). The 91st Annual Meeting of the Transportation Research Board, Washington D.C.
32. Chen, D., Laval, J., Ahn, S., **Zheng, Z.**, 2012. Traffic hysteresis in traffic oscillations: a driver behavioral perspective. (Poster). The 91st Annual Meeting of the Transportation Research Board, Washington D.C.
33. **Zheng, Z.***, Ahn, S., Chen, D., Laval, J., 2011. Freeway traffic oscillations: microscopic analysis of formations and propagations using wavelet transform. The 19th International Symposium of Transportation and Traffic Theory (ISTTT).
34. **Zheng, Z.**, Ahn, S.*, Chen, D., Laval, J., 2011. Applications of wavelet transform for analysis of freeway traffic: bottlenecks, transient traffic, and traffic oscillations. The 90th Annual Meeting of the Transportation Research Board, Washington D.C.
35. **Zheng, Z.**, Ahn, S.*, Chen, D., Laval, J., 2011. The impact of lane-changing on the immediate follower: anticipation, relaxation, and behavioral change. The 90th Annual Meeting of the Transportation Research Board, Washington D.C.
36. **Zheng, Z.**, Ahn, S.*, Chen, D., Laval, J., 2011. Freeway traffic oscillations: microscopic analysis of formations and propagations using wavelet transform. (Poster). National Science Foundation Civil, Mechanical and Manufacturing Innovation Engineering Research and Innovation Conference.
37. Duret, A., Ahn, S.*, Buisson, C., 2010. Methodology for measuring the impact of lane changing maneuvers on platoon's car-following process under congested regime. WCTRS 2010.
38. **Vadlamani, S.**, Ahn, S.*, 2010. Driver characteristics and their impact on traffic hysteresis and stop-and-go oscillations. Transportation Research Board Mid-year Meeting, Traffic Flow Theory and Characteristics Committee. Annecy, France.
39. Ahn, S., Bar-Gera, H., 2010. Empirical macroscopic evaluation of freeway merge-ratios. (Poster). The 89th Annual Meeting of the Transportation Research Board, Washington D.C.

40. **Zheng, Z.**, Ahn, S., Monsere, C., 2010. Impact of traffic oscillations on freeway crash occurrence. (Poster). The 89th Annual Meeting of the Transportation Research Board, Washington D.C.
41. **Vadlamani, S.**, **Chen, E.**, Ahn, S., Washington, S., 2010. Identifying hot spots of large truck crashes. (Poster). The 89th Annual Meeting of the Transportation Research Board, Washington D.C.
42. Tufte, K.*, Bertini, R., Chee., J., Fernández-Moctezuma, R., Periasamy, S., Sarkar, S., Singh, P., Whiteneck, J., Matthews, S., Freeman, N., Ahn, S., 2010. Portal 2.0: Towards a Next-Generation Archived Data User Service. The 89th Annual Meeting of the Transportation Research Board, Washington D.C.
43. Bar-Gera, H.*, Ahn, S., 2009. Empirical macroscopic evaluation of freeway merge-ratios. INFORMS Annual Meeting.
44. Ahn, S.*, **Rayabhari, M.**, Ou, Q., Bertini, R., 2009. An empirical study of transient freeway traffic states along kinematic waves. The 88th Annual Meeting of the Transportation Research Board, Washington D.C.
45. **Duret, A.**, Ahn, S., Buisson, C., 2009. Spatio-temporal analysis of impacts of lane changing consistent with wave propagation. (Poster). The 88th Annual Meeting of the Transportation Research Board, Washington D.C.
46. Ahn, S., **Kandala, S.**, Uzan, J., El-Basyouny, M., 2009. comparative analysis of input traffic data and the MEPDG Output for flexible pavements in State of Arizona. (Poster). The 88th Annual Meeting of the Transportation Research Board, Washington D.C.
47. Laval, J., Chen, D.*, Ben Amer, K., Guin, A., Ahn, S., 2009. Evolution of oscillations in congested traffic: improved estimation method and additional empirical evidence. The 88th Annual Meeting of the Transportation Research Board, Washington D.C.
48. **Ma, T.**, Ahn, S., 2008. Comparisons of speed-spacing relations under general car-following vs. Lane-changing. (Poster). The 87th Annual Meeting of the Transportation Research Board, Washington D.C.
49. Ahn, S.*, Cassidy, M., Laval, J., 2008. Effects of merging and diverging on freeway traffic oscillations. The 87th Annual Meeting of the Transportation Research Board, Washington D.C.
50. Nodes, S.*, Saleem, F.*, Gettman, D.*, Ahn, S.*, Leader, S., 2008. Vehicle infrastructure integration. Arizona ITE/IMSA Spring Conference.
51. Ahn, S.*, Cassidy, M. J., 2007. Freeway traffic oscillations and vehicle lane-change maneuvers. The 17th International Symposium of Transportation and Traffic Theory, London, 2007.
52. Ahn, S.*, Cassidy, M., Laval, J., 2007. Effects of merging and diverging on freeway traffic oscillations. The 11th World Conference on Transportation Research, Berkeley, USA
53. Ahn, S.*, Bertini, R., **Auffray, B.**, Ross, J., 2007. Evaluation benefits of system-wide adaptive ramp metering system. Arizona ITE/IMSA Spring Conference
54. **Kothuri, S.**, Tufte, K., Ahn, S., Bertini, R.L., 2007. Using archived its data to generate improved freeway travel time estimates. (Poster). The 86th Annual Meeting of the Transportation Research Board, Washington, D.C.
55. Tufte, K., Ahn, S.*, Bertini, R.L., **Auffray, B.**, Rucker, J., 2007. Toward the systematic improvement of data quality in the Portland, Oregon Regional Transportation Archive Listing

(PORTAL). (Poster). The 86th Annual Meeting of the Transportation Research Board, Washington, D.C.

56. **Kothuri, S.**, Ahn, S., Tufte, K., Bertini, R.L., 2006. Improving the accuracy of freeway travel time estimates using archived ITS data. The 13th World Congress on Intelligent Transport Systems, London, October 8–12, 2006.
57. **Boice, S.**, Ahn, S., Bertini, R.L. Bogenberger, K., 2006. Influence of variable speed limit and driver information system on key traffic flow parameters on a German Autobahn. The 13th World Congress on Intelligent Transport Systems, London, October 8–12, 2006.
58. Ahn, S.*, Cassidy, M.J., Laval, J., 2006. How merging and diverging traffic impact freeway traffic oscillations. INFORMS Annual Meeting.
59. **Kothuri, S.**, Tufte, K., Ahn, S., Bertini, R.L., 2006. Development of an ITS data archive application for improving freeway travel time estimation. The 9th International IEEE Conference on Intelligent Transportation Systems, Toronto, Canada, September 17–20.
60. Cassidy, M. J., Ahn, S.*, 2005. Driver turn-taking behavior in congested freeway merges. The 84th Annual Meeting of the Transportation Research Board, Washington, D.C.
61. Ahn, S.*, 2003. Formation and spatial evolution of traffic oscillations. The 9th University of California Transportation Center Annual Conference at University of California, Los Angeles.

6.2. Invited Presentations (Academic)

1. "Stochastic modeling of breakdown at freeway merge bottleneck and traffic control strategies using connected/automated vehicle," Distinguished Lecture, Symposium on Complexity in Transportation Science: Connectivity, Data & Automation, University of Michigan, Ann Arbor, October 2018.
2. "Stochastic modeling of breakdown at freeway merge bottleneck and traffic control strategies using connected/automated vehicle," Arizona State University, April 2018.
3. "Variable speed release (VSR): Speed control to increase bottleneck capacity," Delft University of Technology, The Netherlands, December 2017.
4. "Stochastic modeling of breakdown at freeway merge bottleneck and traffic control strategies using connected/automated vehicle," Delft University of Technology, The Netherlands, December 2016.
5. "Traffic Hysteresis and the Evolution of Stop-and-go Oscillations," University of Wisconsin, Madison, February 2013.
6. "Traffic Hysteresis and the Evolution of Stop-and-go Oscillations," University of South Florida, October 2012.
7. "Traffic Hysteresis and the Evolution of Stop-and-go Oscillations," George Washington University, October 2012.
8. "Freeway Traffic Oscillations: Microscopic Analysis of Formations and Propagations," University of Illinois, Urbana-Champaign, April 2010.
9. "Empirical Macroscopic Evaluation of Freeway Merge-Ratios," University of California, Berkeley, ITS seminar, November 2009.
10. "Characteristics of Transitions in Freeway Traffic," University of Arizona, Systems and Industrial Engineering, April 2009.
11. "Effects of Lane-changing and In-homogeneity on the Behavior of Freeway Oscillations," Université de Lyon, ENTPE-INRETS, Laboratoire d'Ingénierie Circulation Transports LICIT, June 2008.

12. “Formation and Spatial Evolution of Traffic Oscillations,” University of Utah, Salt Lake City, Civil and Environmental Engineering, April 2006.
13. “Formation and Spatial Evolution of Traffic Oscillations,” California Polytechnic State University, San Luis Obispo, Civil and Environmental Engineering, April 2006.
14. “Formation and Spatial Evolution of Traffic Oscillations,” Florida Atlantic University, Civil Engineering, April 2006.
15. “Formation and Spatial Evolution of Traffic Oscillations,” Arizona State University, Civil and Environmental Engineering, March 2006.
16. “Formation and Spatial Evolution of Traffic Oscillations,” University of Missouri, Kansas City, Civil and Mechanical Engineering, March 2006.
17. “Formation and Spatial Evolution of Traffic Oscillations,” Portland State University, Civil and Environmental Engineering, March 2006.
18. “Formation and Spatial Evolution of Traffic Oscillations,” University of Arizona, Tucson, Civil Engineering and Engineering Mechanics, March 2006.
19. “Formation and Spatial Evolution of Traffic Oscillations,” George Washington University, Civil and Environmental Engineering, March 2006.
20. “Formation and Spatial Evolution of Traffic Oscillations,” University of California, Berkeley, Civil and Environmental Engineering, April 2005.
21. “Formation and Spatial Evolution of Traffic Oscillations,” Ohio State University, Civil and Environmental Engineering and Geodetic Science, February 2005.

6.3. Other Invited Presentations

22. “Stop-and-go Traffic Oscillations: Microscopic Analysis of Formations and Propagations using Wavelet Transform,” Advisory Council Meeting, February 2010
23. “A Review of Congestion Management,” City of Scottsdale Transportation Commission, March 2009

7. GRANTS AND CONTRACTS

7.1. Proposals Under Review

7.2. Pending Grants and Contracts

The proposals listed below have been selected for funding, and awards or contracts are being negotiated and established.

1. *CPS: TTP Option: Medium: Identifying, characterizing, and shaping multi-scale cyber-human interactions in mixed autonomous/conventional vehicle traffic*
   NSF, PI, Collaborators: John Lee, Dan Negrut, $1.2M
2. *Collaborative Research: Mixed traffic dynamics under disturbances: Impact of multi-class connected and automated vehicles*
   NSF, Lead-PI, Collaborators: Danjue Chen (UMass, Lowell), Anupam Srivastava (Postdoc Co-author*),* $309,182 ($203,449 for Ahn)

7.3. Current and Past Sponsored Projects

1. *Autonomous Vehicles and their potential to shift transit ridership in urban areas*
   USDOT through The Center for Transportation, Equity, Decisions and Dollars (CTEDD), Co-PI, Collaborator: Andrea Hicks (PI), $69,942 (+ $34,938 match)

2. *Harnessing Mobile Ad Hoc Networks to Improve Vulnerable Road User Safety*
   FHWA-EAR, Co-PI, Collaborators: Kassem Fawaz (PI), Madhav Chitturi, David Noyce, Parameswaran Ramanathan, $924,594

3. Mid-America Freight Coalition (MAFC) – 10 state pooled funds (2017-2019)
   Role: Executive Director
   - *MAASTO Regional Truck Parking Inventory: Over Size and Overweight Vehicle (OSOW) Support for MAASTO Standing Committee on Highway Transport and Motor Carrier Committee, Co-PI (PI: Ernest Perry), $30K*
   - *Freight Data Inventory and Training, Co-PI (PI: Ernest Perry), $80K*
   - *TPIMS Performance Metrics and Data Warehouse, Co-PI (PI: Ernest Perry), $45K*
   - *Identification and Characterization of the MAASTO Region's Multimodal Freight Network*, Co-PI (PI: Ernest Perry), $80K
   - *MAFC Development of Midwest Platooning Regulatory Model*, Co-PI (PI: Ernest Perry), $50K
   - *Identification of Urban Truck Parking Locations in the MAASTO Region*, Co-PI (PI: Ernest Perry), $100K
   - *Value of Multimodal Freight Investments*, Co-PI (PI: Ernest Perry), $100K
   - *Assessment of Multimodal (Marine and Highway) Bottlenecks in the MAASTO Region*, Co-PI (PI: Ernest Perry), $95K

4. *Analytical Methods for Work Zone Travel Time Reliability*
   SWZDI, PI, Collaborators: Madhav Chitturi (Co-PI, TOPS Lab, UW-Madison), 05/2017-05/2018, $68,922

5. *M-VISTA: a Many-Vehicle In-Silico Traffic Analysis tool*
   UW-Madison CoE RIC, Co-PI (Lead PI: Dan Negurut), 09/2016-08/2017, $61,000

6. *Wisconsin Transport & Mobility Systems Institute (TransMoSys)*
   UW-Madison CoE RIC, Co-PI (Lead PI: David Noyce), 09/2016-08/2017, $80,000

7. *Multi-scale, distributed and coordinated control system using connected autonomous vehicles*
   UW-Madison: Office of the Vice Chancellor for Research and Graduate Education
   PI, 09/01/2015-08/31/2018, $38,823

8. *Second Strategic Highway Research Program (SHRP2) Education Connection*
   Federal Highway Administration, Co-PI, Collaborators: David Noyce (PI, UW-Madison), Madhav Chitturi (Senior Personnel, TOPS Lab, UW-Madison), 07/2015-07/2016, $10,000

9. *Vehicular traffic modeling and control in mixed manual and automated environments*
   National Science Foundation, PI, Collaborators: David Noyce (Co-PI, UW-Madison), Madhav Chitturi (Co-PI, TOPS Lab, UW-Madison), Danjue Chen (Postdoc Co-author), 09/2015-08/2018, $393,883

10. *Effects of Heavy Vehicles on Dynamic Traffic Features*
    National Center for Freight & Infrastructure Research & Education, PI, Collaborator: David Noyce (UW-Madison), 09/2014-08/2015, $94,703 (excluding matching amount)

11. *Work Zone Capacity and Diversion Field Studies*
    Wisconsin Department of Transportation, PI, Collaborators: John Shaw, Madhav Chitturi (TOPS Lab, UW-Madison), 07/2014-06/2016, $125,000

12. *SHRP II L33: Validation of Urban Freeway Models*
    Transportation Research Board, SHRP II, Co-PI on subcontract (Lead: Iteris, ASU PI: Pitu

Mirchandani), Collaborators: Ram Pendyala (ASU), George Runger (ASU), 12/2012-05/2014, $500,000 (Ahn's recognition: $78,750)

13. *CAREER: Dynamic state transitions in vehicular traffic and the effects of driver behavior*
National Science Foundation, PI, 03/2012-02/2017, $400,000 (Ahn: $400,000)

14. *2010 National Summer Transportation Institute*
US Department of Transportation, Co-PI (PI: Stephen Rippon), 06/2010-07/2010, $21,450 (Ahn: $10,725)

15. *CODES (Crash Outcome Data Evaluation System)*
Governor's Office of Highway Safety, PI, Collaborator: Simon Washington (Univ. of California, Berkeley), 06/2009-09/2009, $50,000 (Ahn: $50,000)

16. *Collaborative Research: Analysis and Modeling of Traffic Instabilities in Congested Traffic*
National Science Foundation, Lead PI, Collaborator: Jorge Laval (Georgia Tech), 08/2009-07/2011, $270,141 (Ahn: $145,459)

17. *Analysis of Freeway Bottlenecks*
Arizona Department Transportation, Federal Highway Administration, PI, 08/2009-07/2010, $80,000 (Ahn: $80,000)

18. *Countermeasures to Reduce Large Truck Crashes*
Arizona Department Transportation, Federal Highway Administration, PI, Collaborator: Simon Washington (ASU), 02/2008-06/2010, $100,000 (Ahn: $90,000)

19. *Automatic Vehicle Location (AVL) For Maintenance Work Effort Tracking*
Arizona Department Transportation, Federal Highway Administration, Co-PI (PI: Aaron Golub), 02/2008-06/2009, $20,000 (Ahn: $6,600)

20. *Vehicle Infrastructure Integration (VII) Technologies for Emergency/Incident Management: Proof of Concepts*
Arizona Department Transportation, Federal Highway Administration, ASU PI (Lead PI: Pitu Mirchandani (Univ. of Arizona)), Collaborators: Larry Head (Univ. of Arizona), Kimley-Horn and Associates, Aaron Golub (ASU), 01/2008-06/2009, $200,000 (Ahn: $23,450)

21. *Empirical Observation of the Impact of Traffic Oscillations on Freeway Safety*
Oregon Transportation Research and Education Consortium, PI on subcontract (Lead PI: Christopher Monsere (Portland State Univ.)), 10/2007-07/2009, $60,000 (Ahn: $30,298)

22. *Assessment and Refinement of Real-Time Travel Time Algorithms for Use in Practice, Phase II*
Oregon Transportation Research and Education Consortium, PI on subcontract (Lead PI: Kristin Tufte (Portland State Univ.)), 10/2007-09/2008, $57,907 (Ahn: $12,209)

23. *Characteristics of Transitions in Freeway Traffic*
Oregon Transportation Research and Education Consortium, PI on subcontract (Lead PI: Robert Bertini (Portland State Univ.)), 12/2006-08/2008, $53,208 (Ahn: $36,256)

8. TEACHING ACTIVITIES

8.1. Courses Taught at UW – Madison

- Transportation Engineering (Undergraduate)
- Advanced Topics in Transportation Operations (Graduate)
- Advanced Topics in Traffic Flow Theory (Graduate)

8.2. Courses Taught at ASU

- Introduction to Civil Engineering (Undergraduate)
- Transportation Engineering (Undergraduate)
- Transportation Systems Planning (Undergraduate/Graduate)
- Transportation Operations (Graduate)
- Traffic Flow Theory (Graduate)
- Intelligent Transportation Systems (Graduate)

9. STUDENT AND POST DOC ADVISING

9.1. Current Ph.D. Students

1. Wissam Kontar (Co-advised with Prof. Andrea Hicks)
2. Tianyi Chen

9.2. Current M.S. Students

1. Ghazale Jafarsalehi

9.3. Post Docs

1. Anupam Srivastava (2016 – Present)
2. Youngjun Han (2018 – 2019)
3. Danjue Chen (2013 – 2016, Co-supervised with Prof. David Noyce since September 2015) – Assistant Professor, University of Massachusetts, Lowell

9.4. Ph.D. Degrees Awarded

1. Yang Zhou (Spring 2019) – Postdoctoral Researcher, Southeast University and University of Wisconsin-Madison
2. Youngjun Han (Fall 2017) –Researcher, Seoul Institute
3. Soohyuk Bang (Fall 2017) – Transportation Planner, Connetics Transportation Group
4. Paulina Reina (Summer 2015) – Assistant Professor, California State University, Fullerton)
   - Recipient of the 2013 Eisenhower Fellowship
   - Recipient of the WTS Helene M. Overly Memorial/Esther Kmetty Scholarship (2013)
   - Recipient of GK-12 Fellowship (2012-2013)
   - Participant of the Preparing Future Faculty Program (2012-2013)
   - Participant of the USDOT Summer Transportation Internship (2010)
5. Srivatsav Kandala (Summer 2014) – Senior Research Analyst, Arizona State University
   - IRF Fellow (2012)
6. Zuduo Zheng – (Summer 2010) – Associate Professor, University of Queensland, Australia
   - Recipient of Eisenhower Fellowship: Travel Grant (2009)

9.5. M.S. Degrees Awarded

1. Sravani Vadlamani – Spring 2010 (Transportation Planner/Engineer, Maryland DOT)
   - Winner of ITE Paper Competition (2010)
2. Srivatsav Kandala – Spring 2009 (Ph.D. Student at ASU)
3. Tingting Ma – Spring 2009 (Transportation Planner, Capital Region Planning Commission, LA)

4. Manasa Rayabhari – Fall 2008 (Jr. Manager (Highway Design) at GMR Group, India)

9.6. M.S.E. Degrees Awarded (Non-thesis)

1. Brian Wang – Spring 2013
2. Bobby Cottam – Fall 2012
3. Na Zou – Spring 2012
4. Taylor Swanson – Fall 2011
5. Joseph Domino – Spring 2011
6. Paulina Reina – Spring 2011
7. Robert Steele – Spring 2010
8. Erdong Chen – Fall 2009
9. Acharya Muthoju – Fall 2008
10. Ravi Dosapati Chander – Fall 2008
11. Ravi Kantipudi – Fall 2007

9.7. Undergraduate Students

1. Kaitlyn Eck – Fall 2018 – Spring 2019 (Co-advised with Prof. Andrea Hicks)
2. Taylor Ehrick – Spring 2010 (EIT in Roadway Design at Kimley-Horn and Associates, Inc.)

9.8. Visiting Ph.D. Students

1. Jiaming Wu – Fall 2017-Fall 2018

9.9. Student Interns

1. Carlos José Díaz-Reyes – Summer 2019
2. Sam Foster – Summer 2019
3. Morris Smith – Summer 2016 (Student from Georgia Institute of Technology)
4. Daone Santos – Summer 2014 (Exchange Student from Brazil, Senior at University of Evansville, IN)
5. Tu-Uyen Dinh – Summer 2012 (PhD Student at Université de Lyon, ENTPE-INRETS, Laboratoire d'Ingénierie Circulation Transports LICIT)

9.10. Committee Member

At University of Wisconsin – Madison

1. Shen Li (Ph.D.) – Spring 2019
2. Elease McLaurin – Fall 2019
3. Hongjin Jun (Ph.D.) – Fall 2019
4. Zhen Zhang (Ph.D.) – Spring 2019
5. Ibrahim Alsghan (Ph.D.) – Summer 2018
6. Ja Young Lee (Ph.D., Industrial Engineering) – Summer 2018
7. Lei Kang (Ph.D., Computer Sciences) – Summer 2018
8. Hannah Silber (Ph.D.) – Spring 2018
9. Hiba Nassereddine (M.S.) – Fall 2017
10. Kelvin Santiago (Ph.D.) – Fall 2017
11. Yu Han (Ph.D., Delft University of Technology, the Netherlands) – Fall 2017
12. Vindhya Venkatraman (Ph.D., Industrial Engineering) – Fall 2017
13. Xioaxuan Chen (Ph.D.) – Summer 2017
14. Emil Juni (Ph.D.) – Summer 2017

15. Qing Li (Ph.D.) – Fall 2016
16. Kai Yuan (Ph.D., Delft University of Technology, the Netherlands) – Fall 2016
17. James Mahoney (M.S.) – Fall 2016
18. Lang Yu (Ph.D.) – Fall 2016
19. Zhe Xu (Ph.D.) – Fall 2016
20. Xia Wan (Ph.D.) – Fall 2016
21. Kirsten Brose (M.S.) – Summer 2016
22. Fan Ding (Ph.D.) – Summer 2016
23. Dongxi Zheng (Ph.D.) – Summer 2016
24. James Markosian (M.S.) – Spring 2016
25. Qianwen Lu (Ph.D.) – Fall 2015
26. Hannah Silber (M.S.) – Spring 2015
27. Xuan Shi (Ph.D.) – Spring 2015
28. Rui Guo (Ph.D., University of South Florida) – Spring 2015
29. Tao Qu (Ph.D.) – Summer 2014
30. Aroon Aungsuyanon (Ph.D.) – Summer 2014
31. Myunggook Kang (Ph.D.) – Summer 2014
32. Young Jun Yoo (Ph.D.) – Fall 2013
33. John Ash (M.S.) – Summer 2014
34. Li-hong Chiu (M.S.) – Spring 2014
35. Veronica Asare-yeboah (M.S.) – Spring 2014
36. Kevin Scopoline (M.S.) – Spring 2014
37. Alexandria Motl (M.S.) – Spring 2014
38. Daniel Reichl (M.S.) – Fall 2013
39. Luis Galimberti (M.S.) – Fall 2013

At Arizona State University

40. Sarah Ellie Ziems (Ph.D.) – IP
41. Sanjay Paul (Ph.D.) – Summer 2014
42. Karthik Konduri (Ph.D.) – Spring 2012
43. Kangwon Shin (Ph.D.) – Fall 2008
44. Ida Van Schalkwyk (Ph.D.) – Fall 2008
45. Rumpa Dey (M.S.) – Spring 2012
46. Jothan Samuelson (M.S.) – Spring 2011
47. Bhargav Sana (M.S.) – Fall 2010
48. Sarah Ellie Ziems (M.S.) – Fall 2010
49. Daehyun Yoon (M.S.) – Spring 2010
50. Srinath Ravulaparthy (M.S.) – Fall 2007
51. David Ramsey (M.S.E. non-thesis option) – Fall 2012
52. Sanjay Paul (M.S.E. non-thesis option) – Summer 2012
53. Vasu Pavitravas (M.S.E. non-thesis option) – Summer 2012
54. Christopher Gino (M.S.E. non-thesis option) – Summer 2012
55. Sky Gentile (M.S.E. non-thesis option) – Fall 2011
56. Carmen Castilleja (M.S.E. non-thesis option) – Spring 2011
57. Bashir Hassan (M.S.E. non-thesis option) – Fall 2010
58. Sawan Sakale (M.S.E. non-thesis option) – Fall 2010
59. Julian Dresang (M.S.E. non-thesis option) – Fall 2008
60. Sharon Jesu (M.S.E., non-thesis option) – Fall 2007

61. Shirin Mathakari (M.S.E., non-thesis option) – Summer 2008

10. PROFESSIONAL SERVICE

10.1. Editorial

2016 – Present	Associate Editor: Transportation Research Part C: Emerging Technologies
2019 – Present	Editorial Board Editor: Transportation Research Part B: Methodological
2011 – 2018	Editorial Board Member: Transportation Research Part B: Methodological
2016 – Present	Editorial Board Member: International Journal on Transportation Science and Technology
2018 – Present	Guest Associate Editor: Transportation Research Part C: Emerging Technologies *Special Issue- Traffic flow modeling: new data, problems and methods in the era of big data and connected and automated transportation*
2014 – 2015	Editorial Board Member: Transportation Research Part C: Emerging Technologies
2014 – 2015	Guest Associate Editor: Journal of Intelligent Transportation Systems, Special Section on Celebrating 50 Years of Traffic Flow Theory

10.2. Committee Membership

2015 – Present	Chair, Traffic Flow Theory and Characteristics (TFTC) Committee, AHB45, Transportation Research Board (TRB)
2018 – Present	Member, International Advisory Committee for the International Symposium on Transportation and Traffic Theory (ISTTT)
2013 – 2015	Secretary, Traffic Flow Theory and Characteristics (TFTC) Committee, AHB45, Transportation Research Board (TRB)
2009 – Present	Paper Review Coordinator, TFTC Committee, AHB45, TRB
2008 – Present	Member, TFTC Committee, AHB45, TRB

10.3. Conference Activities

2018	Co-chair of Conference Organizing Committee, 2018 TRB Mid-year Meeting, TFTC Committee
2018	Local Organizing Committee Member, 23rd International Symposium on Transportation and Traffic Theory (ISTTT)
2017	International Scientific Committee Member, 2017 Traffic and Granular Flow
2016	Session Organizing Committee Member, 2016 Automated Vehicle Symposium
2014	Session Chair, 2014 TRB Mid-year Meeting, TFTC Committee
2013 – 2014	Conference Organizing Committee, 2014 TRB Mid-year Meeting, TFTC Committee
2014	Presiding Officer, 93rd TRB, TFTC Committee Poster Session
2011	Advisory Committee Member, 19th International Symposium on Transportation and Traffic Theory (ISTTT)
2008 – 2010	Associate Editor, IEEE Intelligent Transportation Systems Society Conference
2010	Session Chair, TRB Mid-year Meeting, TFTC Committee
2009	Session Chair, 6th Pavements/Materials (Transportation) Conference
2007	Session Chair, 11th World Conference on Transportation Research
2006	Session Chair, Annual Meeting of INFORMS

10.4. Review Panels

2010 – 2013, 2015 – 2018	NSF Review Panel, Division of CMMI
2015, 2018 – 2019	NSF Review Panel, Directorate of CISE
2009	NCHRP

10.5. Referee: Journals

- Accident Analysis and Prevention
- ASCE Journal of Transportation Engineering
- Computer Aided Engineering and Infrastructure Engineering
- European Journal of Operations Research
- IEEE Transactions on Intelligent Transportation System
- International Journal of Engineering
- Journal of Advanced Transportation
- Journal of Intelligent Transportation Systems
- KSCE Journal of Civil Engineering
- Transportation
- Transportation Research Record
- Transportation Research Part B
- Transportation Research Part C
- Transportation Research Part D
- Transportation Science
- Transportmetrica A: Transport Science
- Transportmetrica B: Transport Dynamics

10.6. Referee: Proposals

2014 – 2015	UCCONNECT
2009 – 2014	Energy Innovations Small Grant (EISG) Transportation Program
2012	ETH Zurich Research Commission
2012	National Center for Intermodal Transportation for Economic Competitiveness
2012	University of California Transportation Center
2011	Swiss National Science Foundation
2008	METRANS Transportation Center
2007	Oregon Transportation Research and Education Consortium

10.7. Referee: Conferences

- IEEE Intelligent Transportation Systems Society Conference
- IEEE Vehicular Technology Conference
- 12th Conference of the International Association for Travel Behaviour Research
- International Symposium on Traffic and Transportation Theory
- 11th World Conference on Transportation Research
- Annual Meeting of Transportation Research Board: AHB45 Traffic Flow Theory and Characteristics, AHB15 Intelligent Transportation Systems, ANB 20 Safety Data, Analysis and Evaluation; AHB 40 Highway Capacity and Quality of Service

11. SERVICE FOR DEPARTMENT, COLLEGE AND UNIVERSITY

11.1 At University of Wisconsin – Madison

For the University

2015 – 2017	Member, Fall Research Competition Committee for Physical Sciences, Office of the Vice Chancellor for Research and Graduate Education
2018 – Present	Mentor, Women Faculty Mentoring Program

For the College of Engineering

2018	Member, Selection Committee for the University Staff Excellence Award
2015 – Present	Member, Mentoring Committee (Prof. Xin Wang, Industrial and Systems Engineering)
2017	Member, Committee to select Harvey Spangler Award for Technology Enhanced Instruction

For the CEE Department

2017 – Present	Chair, Strategic Hiring Committee
2015 – Present	Member, Elections Committee
2015 – Present	Member, Mentoring Committee (Prof. Andrea Hicks)
2016 – Present	Member, Mentoring Committee (Prof. Daniel Wright)
2017 – Present	Member, Mentoring Committee (Prof. Pavana Prabhakar)
2018 – 2019	Member, Search and Screen Committee: Faculty in Environmental Engineering
2018 – 2019	Member, Mentoring Committee (Prof. Greeshma Gadikota)
2016 – 2017	Member, Hiring Committee
2016 – 2017	Member, Search and Screen Committee: Faculty in Structural Engineering
2014 – 2017	Assistant Professor Teaching Evaluation
2014 – 2015	Faculty Advisor, Chi Epsilon
2014	Member, Search Committee: Faculty in Emerging Areas in Civil and Environmental Engineering

11.2 At Arizona State University

2012 – 2013	Mentor for Junior Faculty
2011 – 2013	CESE Academic Affairs (Curriculum)
2011 – 2013	Search Committee: Beavers Ames Faculty position
2012 – 2013	Search Committee: Faculty in Transportation
2009 – 2010	Scholarship Committee
2008	Search committee: Technical Support Analyst

12. PROFESSIONAL DEVELOPMENT

- Engineer-in-Training
- Certificate of Logistics, University of California, Berkeley, 2004
- *Student Intern*, City of Columbus, Ohio, June 1998 – February 1999

13. PROFESSIONAL AFFILIATIONS

- Transportation Research Board
- Women in Transportation