

# CURRICULUM VITAE

## Chronology of Education

- Ph.D., Transportation Engineering, University of Texas at Austin 2002
  - Dissertation: *Generalized Real-Time Route Guidance Strategies in Urban Networks*
  - Advisor: Prof. Hani S. Mahmassani
- M.S., Transportation Engineering, National Chiao-Tung University 1994
  - Thesis: The Market Demand Analysis for Electric Scooters in Taiwan
- B.S., Civil Engineering, National Taiwan University 1992

## Chronology of Employment

- University of Arizona, Associate Professor 2010- Present
- University of Arizona, Assistant Professor 2006 – 2010
- University of Texas at El Paso, Assistant Professor 2002-2006
- University of Texas at Austin, Research Engineer 2002
- Nortel Networks, Inc. Data Traffic Engineer 2001
- National Chiao-Tung University, Research Engineer 1994-1995

## Honors and Awards

- Metropia selected as the Cool Vendor in Smart City Applications and Solutions by the leading IT research and consulting company Gartner Group, 2017.
- Metropia selected as the Top 100 Company in Government Technology, 2016.
- Metropia selected as the Cool Vendor in Smart City Applications and Solutions by the leading IT research and consulting company Gartner Group, 2015.
- Featured in “Metropia tests Powerful App Which will make El Paso Less Congested, More Connected”, El Paso Inc. 2016.
- Information Technology Innovation Award. Tech Launch Arizona, University of Arizona, 2016.
- Featured in “Now Boarding: Tucson to Phoenix by Bus in 45 Minutes”, Arizona Engineer. 2015.
- Featured in “UA-Born Traffic App Launches in Tucson”, UANews. 2015.
- Featured in “App Could be your Map for Solving Traffic”, UANews. 2014.
- Featured in “Peak gridlock: why fall feels like the absolute worst time of year to be a driver”, National Post, 2013.
- Featured in “UA Engineer to Research Traffic Patterns, Human Behavior”, UANews. 2012.
- Delbert R. Lewis Distinguished Professorship (endowment), University of Arizona, 2012.
- Featured in “The Psychology of the Left-Turn Lane: How Human Behavior Influences Traffic Patterns”, in phys.org, 2012.
- Best Paper Award. PTV, 2009.
- Faculty Advisor, Mondialogo International Engineering Design Award , UNESCO-DaimlerChrysler, Berlin, Germany, 2005.
- Recipient, Grant Proposal Writing Award, University of Texas at El Paso, 2005.
- Faculty Advisor, Best Senior Design Project Award, Dept. of Civil Engineering, University of Texas at El Paso, 2004.
- Research Incentive Award, University of Texas at El Paso, 2004.
- Faculty Advisor, Best Undergraduate Paper Award, International Test and Evaluation Association, 2003 ITEA Modeling and Simulation Workshop, Les Cruces, NM, 2003.
- Faculty Advisor, Best Senior Design Project Award, Dept. of Civil Engineering, University of Texas at El Paso, 2003.
- Faculty Advisor, Best Senior Design Project Award, Dept. of Civil Engineering, University of Texas at El Paso, 2002.
- Recipient, Humvee Grant Proposal Writing Award, University of Texas at El Paso, 2003

- Recipient, Robert Herman Outstanding PhD Student Award, Southwestern Region University Transportation Research Center (SWUTC), 2001.
- Recipient, Professional Development Award, The University of Texas at Austin, 1999
- Member, Omega Rho International Operations Research and Management Science Honor Society
- Recipient, Honorary Citizen of City of Austin, 1998.
- Member, Sigma Xi Scientific Research Society, 1997.
- Member, Phi Tau Phi Scholastic Honorable Society, 1994.

## Service/Outreach

### *Local/State Outreach*

UA Statistics Graduate Interdisciplinary Program (GIDP) 2017: hosted a half-day workshop with six GIDP faculty members led by Math Dept. Professor Helen Zhang about their research interests and collaboration opportunities in NSF related programs.

UA Tech Park (2017): participate in a UA Optical Science and Tech Park initiated Smart Cities collaborations and future pursuit of funding opportunities.

Sun Tran (2016): spent 5+ hours discussing ways to improve local access for companies whose employment site is more than 2 miles away from the nearest bus stop.

Pima Association of Governments (2016): led a CE 460/560 students to assist PAG address their future downtown development scenarios.

Tucson Unified School District (2015): The Tucson Unified School District was seeking ways to improve their school bus operation efficiencies. They recruited a CEEM undergraduate students and I provided 10+ hours of advices to the students for their problem solutions.

UA Retailing and Consumer Sciences (2014): gave a presentation to the UA retailing and consumer science department about how to use incentive to influence behavior in the context of transportation service consumptions.

Tucson SunnySide High School (2014): gave a presentation to Tucson Sunnyside High School teachers who are organizing their student after-school science and engineering program about transportation field and advice which topics may be suitable for the program.

SALEO (2013): gave a presentation to the local logistic organization SALEO (Southern Arizona Logistics Education Organization) about the concept of active demand management.

First Lego League (2012): served as a subject matter expert for a local team who are interested in a transportation research topic.

Odyssey of Minds (2010): served as an assistant/coach/volunteer to a local team.

### *National/International Outreach*

Qatar Science and Technology Park (QSTP), Qatar (2017): invited to give a talk and interact with QSTP and Qatar Computing Research Institute (QCRI) researchers about the emerging trends in urban mobility management and behavior studies.

Ministry of Transportation and Communication, Taiwan (2017): invited to give a talk to directors and undersecretary of MOTC about Mobility-as-a-Service&Tool (MaaS&T) and future mobility trends.

Tongji University, China (2011, 2016, 2017): invited to give several presentations about transportation research at UA and discussed major research trends in the US. Also promote the UA CEEM Certificate to Master Program (CMP) program.

Shanghai Traffic Information, Shanghai, China Center (2016): gave a presentation to the center officials about DTA and how it can be applied to improve the traffic analysis and operations for Shanghai.

Soochow University, Suchow, China (2016, 2017): made several trips and presentation to the university and college officials about the UA CEEM department's Certificate to Master Program (CMP).

Tehran, Iran (2015): served as a US delegation by US Department of States to visit Sharif University of Technology and various transportation agencies about the advancement in transportation system management in the US. Made several presentations on the topics of resilient transportation system management.

Irvin, CA (2014): gave invited presentation and paper for the U.S-Iran Symposium on Resilient Cities, sponsor by the Richard Lounsbery Foundation, U.S. Department of States, and National Academies of Sciences and Engineering.

University of Toronto, Canada (2013): gave a presentation to the transportation group at the CE department about research at UA and how to use DynusT model.

TRB DTA Workshop (2010, 2011): led the organization of the TRB Sunday workshop that was aimed at promoting the awareness of dynamic traffic assignment (DTA).

#### *Departmental Committee(s)*

Certificate to Master Program (CMP) Task Force Lead (2015-present).

Graduate Study Committee (2010-present).

Undergraduate and Graduate Scholarship Committee (2008-2013).

CEEM Search committee: transportation candidate, 2013.

#### *College Committee(s)*

College Advisory Committee, 2017-present.

Participated in various ATLAS Center leadership and management meetings 2009-2016.

Lead: UA Transportation Research Institute Engineering Area.

#### *University Committee(s)*

Participated in Faculty Online Learning Community Forums, 2011.

#### *Other Committees (internal or external)*

Conference Chair, the 8<sup>th</sup> International Symposium on Travel Demand Management, Tucson, AZ, 2015.

Transportation Research Board (TRB) technical standing committee ADB30 Transportation Network Modeling, 2010-present.

Transportation Research Board (TRB) technical standing committee ABR30 Emergency Evacuation, 2015-present.

Primer for DTA Task Force Chair, TRB ADB30 Transportation Network Modeling Committee, 2008-2010.

### **Publications/Creative Activity (# denotes my graduate student)**

Google = items found: 165, citations: 2055, h-index: 24

Web of Science = item found: 49, citations: 463, h-index:13. (AU = Chiu YC, AND (AD = Austin OR El Paso OR Tucson)

#### *Scholarly Books and Monographs*

1. #Zheng, H., Y.-J. Son, Y.-C. Chiu, L. Head, Y. Feng, H. Xi, S. Kim, and M. Hickman, A Primer for Agent-Based Simulation and Modeling in Transportation Applications. 2013.
2. Chiu, Y.-C., J. Bottom, M. Mahut, A. Paz, R. Balakrishna, T. Waller, and J. Hicks, Dynamic traffic assignment: A primer. Transportation Research E-Circular. 2011.

#### *Chapters in Scholarly Books and Monographs*

1. Konduri, K.C., R.M. Pendyala, D. You, Y.-C. Chiu, M. Hickman, H. Noh, P. Waddell, L. Wang, and B. Gardner, The application of an integrated behavioral activity-travel simulation model for pricing

- policy analysis, in *Data Science and Simulation in Transportation Research*, D. Janssens, L. Knapen, and A.-U.-H. Yasar, Editors. 2013, IGI Global. p. 86.
2. #Jang, Y., Y.-C. Chiu, and #H. Zheng, Modeling Within-Day Activity Rescheduling Decisions under Time-Varying Network Conditions, in *Advances in Dynamic Network Modeling in Complex Transportation Systems*, S.V. Ukkusuri and K.M.A. Özbay, Editors. 2013, Springer New York. p. 225-244.
  3. Chiu, Y.-C. and H.X. Liu, Emergency Evacuation, *Dynamic Transportation Models*, in *Encyclopedia of GIS*. 2008, Springer US. p. 261-267.

*Refereed Journal Articles, Published or Accepted in Final Form (\* denote work done as a graduate student)*

1. #Kang, A., Y.-C. Chiu, X. Hu, and X. Chen, A Network Partitioning Algorithmic Approach for Macroscopic Fundamental Diagram Based Hierarchical Traffic Network Management. *IEEE Intelligent Transportation Systems Transactions.*, 2017. Accepted in May 2017, forthcoming.
2. #Arian, A. and Y.-C. Chiu, Evaluating the Promotion of Innovative Mobility Options Using an Agent-Based Modeling and Simulation Approach. *Transportation Research Record: Journal of the Transportation Research Board*, 2017. 2528: p. 78-85.
3. Zhu, X., Y. Yuan, X. Hu, Y.-C. Chiu, and Y.-L. Ma, A Bayesian Network model for contextual versus non-contextual driving behavior assessment. *Transportation Research Part C: Emerging Technologies*, 2017. 81: p. 172-187.
4. #Ranjbari, A., Y.-C. Chiu, and M. Hickman, Exploring factors affecting demand for possible future intercity transit options. *Public Transport*, 2017: p. 1-19.
5. Kim, S., Y.-J. Son, #Y. Tian, Y.-C. Chiu, and C.D. Yang, Cognition-based hierarchical en route planning for multi-agent traffic simulation. *Expert Systems with Applications*, 2017. 85: p. 335-347.
6. #Hu, X., Y.-C. Chiu, J.A. Villalobos, and E. Nava, A Sequential Decomposition Framework and Method for Calibrating Dynamic Origin-Destination Demand in a Congested Network. *IEEE Transactions on Intelligent Transportation Systems*, 2017: p. 1-8.
7. #Hu, X., Y.-C. Chiu, and J. Shelton, Development of a behaviorally induced system optimal travel demand management system. *Journal of Intelligent Transportation Systems*, 2017. 21(1): p. 12-25.
8. Kim, S., Y.-J. Son, Y.-C. Chiu, M.A.B. Jeffers, and C.D. Yang, Impact of road environment on drivers' behaviors in dilemma zone: Application of agent-based simulation. *Accident Analysis & Prevention*, 2016. 96: p. 329-340.
9. Afandizadeh Zargari, S., H. Mirzahosseini, and Y.-C. Chiu, Quick link selection method by using pricing strategy based on user equilibrium for implementing an effective urban travel demand management. *PROMET-Traffic&Transportation*, 2016. 28(6): p. 605-614.
10. #Zhu, L. and Y.-C. Chiu, Transportation Routing Map Abstraction Approach: Algorithm and Numerical Analysis. *Transportation Research Record: Journal of the Transportation Research Board*, 2015(2528): p. 78-85.
11. #Tian, Y. and Y.-C. Chiu, Day-to-Day Market Power and Efficiency in Tradable Mobility Credits. *International Journal of Transportation Science and Technology*, 2015. 4(3): p. 209-227.
12. #Hu, X., Y.-C. Chiu, and #L. Zhu, Behavior insights for an incentive-based active demand management platform. *International Journal of Transportation Science and Technology*, 2015. 4(2): p. 119-133.
13. #Hu, X., Y.-C. Chiu, Y.-L. Ma, and #L. Zhu, Studying driving risk factors using multi-source mobile computing data. *International journal of transportation science and technology*, 2015. 4(3): p. 295-312.
14. #Hu, X. and Y.-C. Chiu, A Constrained Time-Dependent K Shortest Paths Algorithm Addressing Overlap and Travel Time Deviation. *International Journal of Transportation Science and Technology*, 2015. 4(4): p. 371-394.
15. #Zheng, H., #E. Nava, and Y.-C. Chiu, Measuring networkwide traffic delay in schedule optimization for work-zone planning in urban networks. *IEEE Transactions on Intelligent Transportation Systems*, 2014. 15(6): p. 2595-2604.

16. #Zheng, H., Y.-C. Chiu, and P.B. Mirchandani, A heuristic algorithm for the earliest arrival flow with multiple sources. *Journal of Mathematical Modelling and Algorithms in Operations Research*, 2014. 13(2): p. 169-189.
17. #Tian, Y. and Y.-C. Chiu, A variable time-discretization strategies-based, time-dependent shortest path algorithm for dynamic traffic assignment. *Journal of Intelligent Transportation Systems*, 2014. 18(4): p. 339-351.
18. Nassir, N., M. Hickman, #H. Zheng, and Y.-C. Chiu, Network flow solution method for optimal evacuation traffic routing and signal control with nonuniform threat. *Transportation Research Record: Journal of the Transportation Research Board*, 2014(2459): p. 54-62.
19. Khani, A., #B. Bustillos, H. Noh, Y.-C. Chiu, and M. Hickman, Modeling transit and intermodal tours in a dynamic multimodal network. *Transportation Research Record: Journal of the Transportation Research Board*, 2014(2467): p. 21-29.
20. Zhu, X., #X. Hu, and Y.-C. Chiu, Design of Driving Behavior Pattern Measurements Using Smartphone Global Positioning System Data. *International Journal of Transportation Science and Technology*, 2013. 2(4): p. 269-288.
21. #Zheng, H., Y.-C. Chiu, and P.B. Mirchandani, On the system optimum dynamic traffic assignment and earliest arrival flow problems. *Transportation Science*, 2013. 49(1): p. 13-27.
22. Stamos, I., J.M.S. Grau, E. Mitsakis, G. Aifadopoulou, and Y.-C. Chiu, On criticality assessment based evacuation modeling: empirical findings. *Journal of Traffic and Logistics Engineering*, 2013. 1(2): p. 148-152.
23. Machiani, S., P. Murray-Tuite, A. Jahangiri, S. Liu, B. Park, Y.-C. Chiu, and B. Wolshon, No-notice evacuation management: ramp closures under varying budgets and demand scenarios. *Transportation Research Record: Journal of the Transportation Research Board*, 2013(2376): p. 27-37.
24. #Tian, Y. and Y.-C. Chiu, Numerical Analysis for Adaptive Traffic Simulation. *Transportation Research Record: Journal of the Transportation Research Board*, 2012(2316): p. 132-139.
25. Pendyala, R., K. Konduri, Y.-C. Chiu, M. Hickman, H. Noh, P. Waddell, L. Wang, D. You, and B. Gardner, Integrated land use-transport model system with dynamic time-dependent activity-travel microsimulation. *Transportation Research Record: Journal of the Transportation Research Board*, 2012(2303): p. 19-27.
26. #Nava, E.J. and Y.-C. Chiu, A temporal domain decomposition algorithmic scheme for large-scale dynamic traffic assignment. *International Journal of Transportation Science and Technology*, 2012. 1(1): p. 1-24.
27. #Hu, X., S. Gao, Y.-C. Chiu, and D.-Y. Lin, Modeling routing behavior for vacant taxicabs in urban traffic networks. *Transportation Research Record: Journal of the Transportation Research Board*, 2012(2284): p. 81-88.
28. #Zheng, H. and Y.-C. Chiu, A network flow algorithm for the cell-based single-destination system optimal dynamic traffic assignment problem. *Transportation Science*, 2011. 45(1): p. 121-137.
29. Paz, A. and Y.-C. Chiu, Adaptive traffic control for large-scale dynamic traffic assignment applications. *Transportation Research Record: Journal of the Transportation Research Board*, 2011(2263): p. 103-112.
30. #Bustillos, B.I., J. Shelton, and Y.-C. Chiu, Urban university campus transportation and parking planning through a dynamic traffic simulation and assignment approach. *Transportation planning and technology*, 2011. 34(2): p. 177-197.
31. #Bustillos, B. and Y.-C. Chiu, Real-time freeway-experienced travel time prediction using N-curve and k nearest neighbor methods. *Transportation Research Record: Journal of the Transportation Research Board*, 2011(2243): p. 127-137.
32. #Zheng, H., Y.-C. Chiu, P. Mirchandani, and M. Hickman, Modeling of evacuation and background traffic for optimal zone-based vehicle evacuation strategy. *Transportation Research Record: Journal of the Transportation Research Board*, 2010(2196): p. 65-74.

33. Gao, Y., Y.-C. Chiu, #S. Wang, and S. Küçükyavuz, Optimal refueling station location and supply planning for hurricane evacuation. *Transportation Research Record: Journal of the Transportation Research Board*, 2010(2196): p. 56-64.
34. Chiu, Y.-C., #L. Zhou, and #H. Song, Development and calibration of the anisotropic mesoscopic simulation model for uninterrupted flow facilities. *Transportation Research Part B: Methodological*, 2010. 44(1): p. 152-174.
35. Noh, H., Y.-C. Chiu, #H. Zheng, M. Hickman, and P. Mirchandani, Approach to modeling demand and supply for a short-notice evacuation. *Transportation Research Record: Journal of the Transportation Research Board*, 2009(2091): p. 91-99.
36. Chiu, Y.-C., #H. Zheng, #J.A. Villalobos, W. Peacock, and R. Henk, Evaluating regional contra-flow and phased evacuation strategies for Texas using a large-scale dynamic traffic simulation and assignment approach. *Journal of Homeland Security and Emergency Management*, 2008. 5(1).
37. Chiu, Y.-C. and P.B. Mirchandani, Online behavior-robust feedback information routing strategy for mass evacuation. *IEEE Transactions on Intelligent Transportation Systems*, 2008. 9(2): p. 264-274.
38. Chiu, Y.-C., X. Zhou, and #J. Hernandez, Evaluating urban downtown one-way to two-way street conversion using multiple resolution simulation and assignment approach. *Journal of Urban Planning and Development*, 2007. 133(4): p. 222-232.
39. Chiu, Y.-C., #H. Zheng, #J. Villalobos, and #B. Gautam, Modeling no-notice mass evacuation using a dynamic traffic flow optimization model. *IIE Transactions*, 2007. 39(1): p. 83-94.
40. Chiu, Y.-C. and #H. Zheng, Real-time mobilization decisions for multi-priority emergency response resources and evacuation groups: model formulation and solution. *Transportation Research Part E: Logistics and Transportation Review*, 2007. 43(6): p. 710-736.
41. Chiu, Y.-C. and N. Huynh, Location configuration design for dynamic message signs under stochastic incident and ATIS scenarios. *Transportation Research Part C: Emerging Technologies*, 2007. 15(1): p. 33-50.
42. Chen, H.-K., H.-W. Chou, and Y.-C. Chiu, On the modeling and solution algorithm for the reverse logistics recycling flow equilibrium problem. *Transportation Research Part C: Emerging Technologies*, 2007. 15(4): p. 218-234.
43. Bai, S., Y.-C.E. Chiu, and D.A. Niemeier, A comparative analysis of using trip-based versus link-based traffic data for regional mobile source emissions estimation. *Atmospheric Environment*, 2007. 41(35): p. 7512-7523.
44. Gharaibeh, N.G., Y.-C. Chiu, and P.L. Gurian, Decision methodology for allocating funds across transportation infrastructure assets. *Journal of infrastructure systems*, 2006. 12(1): p. 1-9.
45. Huynh, N., \*Y.-C. Chiu, and H. Mahmassani, Finding near-optimal locations for variable message signs for real-time network traffic management. *Transportation Research Record: Journal of the Transportation Research Board*, 2003(1856): p. 34-53.
46. \*Chiu, Y.-C. and H. Mahmassani, Routing profile updating strategies for online hybrid dynamic traffic assignment operation. *Transportation Research Record: Journal of the Transportation Research Board*, 2003(1857): p. 39-47.
47. Tsaor, S.-H., Y.-C. Chiu, and C.-H. Huang, Determinants of guest loyalty to international tourist hotels—a neural network approach. *Tourism Management*, 2002. 23(4): p. 397-405.
48. \*Chiu, Y.-C. and H. Mahmassani, Hybrid real-time dynamic traffic assignment approach for robust network performance. *Transportation Research Record: Journal of the Transportation Research Board*, 2002(1783): p. 89-97.
49. Abdelghany, A., H. Mahmassani, and \*Y.-C. Chiu, Spatial microassignment of travel demand with activity trip chains. *Transportation Research Record: Journal of the Transportation Research Board*, 2001(1777): p. 36-46.
50. Tsaor, S.-H., Y.-L. Chang, and Y.-C. Chiu, Determinants of Guest Loyalty to International Tourist Hotels—A Neural Network Approach. *觀光研究學報*, 1999. 5(1): p. 65-75.

51. \*Chiu, Y.-C. and G.-H. Tzeng, The market acceptance of electric motorcycles in Taiwan experience through a stated preference analysis. *Transportation Research Part D: Transport and Environment*, 1999. 4(2): p. 127-146.

*Refereed Conference Proceedings*

1. #Zhu, L., Y.-C. Chiu, and Y. Chen. Traffic Analysis Network Abstraction Approach: Framework and Numerical Analysis. in *Transportation Research Board 96th Annual Meeting Transportation Research Board*. 2017.
2. Koulakezian, A., H. Abdelgawad, A. Tizghadam, Y.-C. Chiu, B. Abdulhai, and A. Leon-Garcia. Robustness in Roadway Networks: A Hybrid Approach. in *Transportation Research Board 96th Annual Meeting Transportation Research Board*. 2017.
3. #Hu, X., X. Zhu, Y. Yuan, A. Rehan, Y.-C. Chiu, and M. Zmud. A Multi-resolution Approach to Investigate the Impacts of Pre-planned Road Capacity Reduction Based on Smartphone GPS Trajectory Data-A Case Study of MoPac Expressway in Austin, Texas. in *Transportation Research Board 96th Annual Meeting Transportation Research Board*. 2017.
4. #Tian, Y., M. Zmud, Y.-C. Chiu, D. Carey, J. Dale, D. Smarda, R. Lehr, and R. James. Quality Assessment of Social Media Traffic Reports-A Field Study in Austin, Texas. in *Transportation Research Board 95th Annual Meeting*. 2016.
5. #Ranjbari, A., Y.-C. Chiu, and M. Hickman. Flexpress: A Flexible High-Speed Intercity Transit Service. in *International Conference on Transportation and Development 2016*. 2016.
6. #Ranjbari, A., Y.-C. Chiu, and M. Hickman. An Interactive Preference Analysis Method for Evaluating Possible Intercity Transit Options. in *Proceedings of Conference on Advanced Systems of Transportation (CASPT)*. 2015.
7. Koulakezian, A., B. Graydon, H. Abdelgawad, B. Abdulhai, Y.-C. Chiu, and A. Leon-Garcia. Speedup of DTA-based simulation of large metropolises for quasi real-time ITS applications. in *Intelligent Transportation Systems (ITSC), 2015 IEEE 18th International Conference on*. 2015. IEEE.
8. #Tian, Y. and Y.-C. Chiu. A Computational Efficient Approach to Retaining Zone Pair Travel Time Information in Dynamic Traffic Assignment for Activity-based Model Integration. in *Transportation Research Board 93rd Annual Meeting*. 2014.
9. Nassir, N., M. Hickman, #H. Zheng, and Y.-C. Chiu. Network Flow Solution Method for Optimal Integrated Traffic Routing and Signal Timing to Evacuate Urban Networks with Varying Threat Levels. in *Transportation Research Board 93rd Annual Meeting*. 2014.
10. Kim, S., Y.-J. Son, #Y. Tian, Y.-C. Chiu, and C.D. Yang. Hierarchical en-route planning under the extended belief-desire-intention (E-BDI) framework. in *IIE Annual Conference. Proceedings*. 2014. Institute of Industrial and Systems Engineers (IISE).
11. Kim, S., Y.-J. Son, #Y. Tian, and Y.-C. Chiu. Drivers' en-route divergence behavior modeling using Extended Belief-Desire-Intention (E-BDI) framework. in *Proceedings of the 2014 Winter Simulation Conference*. 2014. IEEE Press.
12. Chiu, Y.-C., Y.-L. Ma, and #X. Hu. Identifying Driving Risk Factors to Support Usage-Based Insurance using Smartphone Personalized Driving Data. in *Workshops on Big Data and Urban Informatics*. 2014.
13. #Zheng, H., #E.J. Nava, Y.-C. Chiu, M. Xyntarakis, P. Sabina, and E. Erik. Development and Calibration of Daily Regional Dynamic Traffic Assignment Model: Case Study for Denver, Colorado, Region. in *Transportation Research Board 92nd Annual Meeting*. 2013.
14. #Tokishi, J. and Y.-C. Chiu. Evaluation and Improvement of Consistency of Hybrid and Multi-Resolution Traffic Simulation Models. in *92nd Annual Meeting of the Transportation Research Board, Washington, DC*. 2013.
15. Nassir, N., #H. Zheng, M. Hickman, and Y.-C. Chiu. Optimal traffic routing for large-scale evacuation in urban networks with various threat levels. in *Transportation Research Board 92nd Annual Meeting*. 2013.
16. Konduri, K.C., R.M. Pendyala, D. You, Y.-C. Chiu, M.D. Hickman, H. Noh, P. Waddell, L. Wang, and B. Gardner. Reflecting Impacts of Systemwide Pricing Strategies in an Integrated Continuous-

- Time Prism-Constrained Activity-Travel Simulator of Demand and Supply. in Transportation Research Board 92nd Annual Meeting. 2013.
17. Konduri, K.C., R.M. Pendyala, D. You, Y.-C. Chiu, M.D. Hickman, H. Noh, B. Gardner, P. Waddell, and L. Wang. Network-Sensitive Transport Modeling Framework for Evaluating Impacts of Network Disruptions on Traveler Choices Under Varying Levels of User Information Provision. in Transportation Research Board 92nd Annual Meeting. 2013.
  18. Tung, R. and Y.-C. Chiu. Integration of Dynamic Traffic Assignment and Diurnal Departure Curve Estimation in a Four-Step Framework. in the 4th Innovation in Travel Modeling Conference. 2012.
  19. Noh, H., A. Khani, M. Hickman, #Y. Tian, Y.-C. Chiu, and #J. Villalobos. Integrated vehicle and passenger simulation model considering a multimodal transportation network. in 4th Transportation Research Board Conference on Innovations in Travel Modeling (ITM), Tampa, FL. 2012.
  20. #Nava, E., J. Shelton, and Y.-C. Chiu. Analyzing Impacts of Dynamic Reversible Lane Systems Using a Multiresolution Modeling Approach. in Transportation Research Board 91st Annual Meeting Transportation Research Board. 2012.
  21. #Zheng, H., #E. Nava, and Y.-C. Chiu. Evaluating active traffic and demand management strategies for congested tourism traffic corridor. in Intelligent Transportation Systems (ITSC), 2011 14th International IEEE Conference on. 2011. IEEE.
  22. #Tian, Y., Y.-C. Chiu, and Y. Gao. Variable time discretization for a time-dependent shortest path algorithm. in Intelligent Transportation Systems (ITSC), 2011 14th International IEEE Conference on. 2011. IEEE.
  23. #Tian, Y. and Y.-C. Chiu. Anisotropic mesoscopic traffic simulation approach to support large-scale traffic and logistic modeling and analysis. in Proceedings of the Winter Simulation Conference. 2011. Winter Simulation Conference.
  24. Lin, J., Y.-C. Chiu, S. Vallamsundar, and S. Bai. Integration of MOVES and dynamic traffic assignment models for fine-grained transportation and air quality analyses. in Integrated and Sustainable Transportation System (FISTS), 2011 IEEE Forum on. 2011. IEEE.
  25. #Hu, X. and Y.-C. Chiu. A new approach to calibrating time-dependent origin-destination departure profile for traffic simulation models. in Intelligent Transportation Systems (ITSC), 2011 14th International IEEE Conference on. 2011. IEEE.
  26. #Gao, Y. and Y.-C. Chiu. Hierarchical time-dependent shortest path algorithm for dynamic traffic assignment systems. in Intelligent Transportation Systems (ITSC), 2011 14th International IEEE Conference on. 2011. IEEE.
  27. Chiu, Y.-C., S. Gao, D.-Y. Lin, and #X. Hu. A Routing Behavior Model for Vacant Taxi Cabs in Urban Traffic Networks. in The 11th Asia-Pacific Intelligent Transportation Systems Forums and Exhibits, Kaohsiung, Taiwan. 2011.
  28. #Bustillos, B.I., Y.-C. Chiu, and V. Papayannoulis. Pre-trip and en-route multi-modal travel decisions considering habitual travel times under unexpected incident scenarios. in Intelligent Transportation Systems (ITSC), 2011 14th International IEEE Conference on. 2011. IEEE.
  29. Tung, R., Z. Wang, and Y.-C. Chiu. Integration of dynamic traffic assignment in a four-step model framework—a deployment case study in Seattle model. in Proc., Third Conference on Innovations in Travel Modeling. 2010.
  30. Pendyala, R.M., Y.-C. Chiu, P. Waddell, M. Hickman, K.C. Konduri, and B. Sana. The design of an integrated model of the urban continuum—location choices, activity-travel behavior, and dynamic traffic patterns. in the 12th World Congress of Transport Research, Lisbon, Portugal. 2010.
  31. Pendyala, R.M., Y.-C. Chiu, M. Hickman, P. Waddell, and B. Gardner. Towards an integrated model of location choices, activity-travel behavior, and dynamic traffic patterns. in 3rd TRB Conference on Innovations in Travel Modeling. 2010.
  32. Mirchandani, P.B., D. Anjos, M.D. Hickman, S. Lee, and Y.-C. Chiu. Data Collection and Calibration of Simulation Models of Border Inspection Facilities. in Transportation Research Board 89th Annual Meeting. 2010.



33. #Jang, Y. and Y.-C. Chiu. Within-day schedule adjustment decision process in a dynamic traffic simulation and assignment framework. in The 3rd Conference on Innovations in Travel Modeling, Tempe, Arizona. 2010.
34. #Hernandez, J., Y.-C. Chiu, and H. Yang. Statistical Assessment of Impact of Dynamic Message Signs on Highway Traffic Redistribution. in Transportation Research Board 89th Annual Meeting. 2010.
35. #Villalobos, J.A., Y.-C. Chiu, and P.B. Mirchandani. Numerical performance of spatially and temporally scalable Dynamic traffic simulation and assignment system MALTA. in Transportation Research Board 88th Annual Meeting Transportation Research Board. 2009.
36. Pendyala, R., P. Waddell, Y.-C. Chiu, and M. Hickman. Integrated modeling of the urban built environment and activity-travel behavior in complex multimodal networks: conceptual framework, model design, and operational procedures. in International Association of Travel Behavior Research, Jaipur, India. 2009.
37. Ma, Y.-Y., Y.-C. Chiu, and X.-G. Yang. Urban traffic signal control network automatic partitioning using laplacian eigenvectors. in Intelligent Transportation Systems, 2009. ITSC'09. 12th International IEEE Conference on. 2009. IEEE.
38. Chiu, Y.-C. and #B. Bustillos. A gap function vehicle-based solution procedure for consistent and robust simulation-based dynamic traffic assignment. in Transportation Research Board 88th Annual Meeting Transportation Research Board. 2009.
39. #Shelton, J. and Y.-C. Chiu. Evaluation of managed ramp strategies for incident and congestion management. in Transportation Research Board 87th Annual Meeting. 2008.
40. Chiu, Y.-C. and #J.A. Villalobos. The anisotropic mesoscopic simulation model on the interrupted highway facilities. in symposium on the fundamental diagram. 2008.
41. Bai, S., Y.-C. Chiu, and D. Niemeier. Using Dynamic Assignment to improve regional mobile emissions estimation. in Transportation Research Board 87th Annual Meeting. 2008.
42. #Villalobos, J.A., Y.-C. Chiu, and P.B. Mirchandani. Network Partitioning Algorithm for Spatially Scalable Dynamic Traffic Assignment System. in Transportation Research Board 86th Annual Meeting Transportation Research Board. 2007.
43. #Villalobos, J., Y.-C. Chiu, #H. Zheng, and #B. Gautam. Modeling and solving optimal evacuation destination-route-flow-staging problem for no-notice extreme events. in Transportation Research Board 85th Annual Meeting. 2006.
44. #Villalobos, J.A., Y.-C. Chiu, P.L. Gurian, and J.M.C. Heyman. Development of a multi-resolution large-scale vehicular traffic simulation and assignment model to assess impact of port-of-entry on regional infrastructure. in Computing in Civil Engineering. 2005.
45. Gurian, P.L., F. Castro, and Y.-C. Chiu. A Bayesian Monte Carlo Approach to Model Calibration for Queuing Systems. in The 84th Annual of Meeting of TRB. 2005.
46. Chiu, Y.-C., #L. Zhou, and H.M. Zhang. Modeling Uninterrupted Highway Traffic Flow Using an Anisotropic Mesoscopic Simulation Approach. in Computing in Civil Engineering. 2005.
47. Chiu, Y.-C., P. Korada, and P.B. Mirchandani. Dynamic traffic management for evacuation. in 84th annual meeting of the Transportation Research Board, Washington, DC. 2005.
48. Chiu, Y.-C. and C. Hass. Making ITS communication technology acquisition decisions under uncertainty. in Intelligent Transportation Systems, 2004. Proceedings. The 7th International IEEE Conference on. 2004. IEEE.
49. Chiu, Y.-C. Traffic scheduling simulation and assignment for area-wide evacuation. in Intelligent Transportation Systems, 2004. Proceedings. The 7th International IEEE Conference on. 2004. IEEE.
50. Chiu, Y. Improving Wireless Telecommunication Technology Acquisition Process for Intelligent Transportation Systems Applications Through Knowledge Management. in At the Crossroads: Integrating Mobility Safety and Security. ITS America 2004, 14th Annual Meeting and Exposition. 2004.
51. \*Chiu, Y.-C. and H.S. Mahmassani. Toward hybrid dynamic traffic assignment-models and solution procedures. in Intelligent Transportation Systems, 2001. Proceedings. 2001 IEEE. 2001. IEEE.

52. \*Chiu, Y.-C., N. Huynh, and H.S. Mahmassani. Determining optimal locations for variable message signs under stochastic incident scenarios. in Transportation Research Board 80th Annual Meeting. 2001.
53. Valdez-Diaz, D., \*Y.-C. Chiu, and H. Mahmassani. Optimal time dependent variable message sign diversion strategy. in 79th Annual Meeting of the TRB, Washington DC. 2000.

### Work in Progress

1. #Arian, A., and Chiu, Y.-C. Evaluating Carpooling Opportunities among Multimodal Options Using a Supernetwork Approach. *Transportmetrica A: Transport Science*. Under Review.
2. #Arian, A., and Chiu, Y.-C. How to design a better MaaS system - Insights from a navigation app and Markov Clustering method, *Intelligent Transportation Systems, 2017. ITSC'17. 20th International IEEE Conference on*. Under Review.
3. #Arian, A., Ermagun A., and Chiu, Y.-C. Characterizing Activity Patterns Using Co-Clustering and User-Activity Network. *IEEE Intelligent Transportation Systems (ITSC)*. Under Review.
4. #Tian, Y. and Y.-C. CHIU, A Trajectory-Mining Approach to Derive Travel Time Skim Matrix in Dynamic Traffic Assignment. *Networks and Spatial Economics, 2017*. Under Review.

### Conferences/Scholarly Presentations (# denotes my student)

1. #Arian, A., Chiu, Y.-C., Personalized Multimodal Mobility Options Discovery In A Social Structure, 2016 INFORMS Annual Meeting, Nashville, TN, 2016.
2. #Arian, A., Chiu, Y.-C., Evaluating Start Ups Marketing Strategies Using An Agent Based Modeling And Simulation Approach, INFORMS Annual Meeting, Nashville, TN, 2016.
3. #Arian, A., Chiu, Y.-C., Evaluating Start Ups Marketing Strategies Using An Agent Based Modeling And Simulation Approach, INFORMS Annual Meeting, Philadelphia, PA, 2015.
4. #Arian, A., Chiu, Y.-C., Temporal-Spatial Domain Trajectory Matching Algorithm, INFORMS Annual Meeting, Philadelphia, PA, 2015.
5. #Arian, A., Chiu, Y.-C., How to Attract More Transit Ridership, Lead Generation Targeting Marketing, The 8<sup>th</sup> International Travel Demand Management Symposium, Tucson, AZ, 2015.
6. Chiu, Y.-C., Y.-L. Ma and #X. Hu. Identifying Driving Risk Factors to Support Usage-Based Insurance using Smartphone Personalized Driving Data." *Workshops on Big Data and Urban Informatics, 2014*.
7. Kim, S., Y.-J. Son, Y. Tian and Y.-C. Chiu. Drivers' en-route divergence behavior modeling using Extended Belief-Desire-Intention (E-BDI) framework. *Simulation Conference (WSC), Winter, IEEE. 2014*
8. Xi, H., S. Kim, Y. Feng, Y.-J. Son, L. Head, H. Zheng, Y.-C. Chiu and C. Y. D. Yang. Drivers' Behavior Modeling and Analysis in Dilemma Zone. *Conference on Agent-Based Modeling in Transportation Planning and Operations, Blackberg, Virginia. 2013*.
9. #Hoffer, P. Y.-C. Chiu. A Hierarchical Urban Control Problem. *INFORMS Annual Meeting, 2012*.
10. #Zhu, L. Y.-C. Chiu, On the Link Travel Time Imputation Methods. *INFORMS Annual Meeting, 2011*.
11. Tung. R. Y.-C. Chiu, S. Sun. Integration of Dynamic Traffic Assignment in a Four-Step Model Framework – A Deployment Case Study in PSRC Model. *The 13<sup>th</sup> TRB National Transportation Planning Applications Conference. 2011*.
12. Lin, J. S. Vallamsundar, Y.-C. Chiu, B. Song, E Douglas. Enhancing MOVES Transportation and Air Quality Analyses by Integrating with Dynamic Traffic Assignment Models. *The 13<sup>th</sup> TRB National Transportation Planning Applications Conference. 2011*.
13. Chiu. Y.-C. Analysis, Simulation and Modeling for Intelligent Transportation Systems Planning and Integrated Corridor Management. *International Symposium on ITS Research. Taipei, Taiwan, 2011*.
14. Chiu. Y.-C., S. Gao, D.-Y. Lin, #X, Hu. A Routing Behavior Model for Vacant Taxi Cabs in Urban Traffic Networks. *2011 ITS-AP Conference. Taipei, Taiwan, 2011*.
15. Gao, S., #X. Hu, Y.-C. Chiu, D.-Y. Lin. A Routing Behavior Model for Vacant Taxi Cabs in Urban Traffic Networks. *INFORMS Annual Meeting, 2011*.

16. Zheng, H. #C. Cai, V. Dixit, E. Nava, Y.-C. Chiu, E. Radwan. Optimization of Work-Zone Scheduling with Traffic Equilibrium. INFORMS Annual Meeting, 2011.
17. #Jang, Y., Y.-C. Chiu, Modeling Within-Day Schedule Adjustment Decision Consistent with Time-Varying Network Conditions, INFORMS Annual Meeting, 2011.
18. #Hu, X., Y.-C. Chiu. On a Two-stage Time-dependent OD Calibration Methodology for Matching Link Counts and Speed Profile. INFORMS Annual Meeting, 2011.
19. #Ye, T., Y.-C. Chiu. Variable Time Discretization for Time-Dependent Shortest Path Algorithms. INFORMS Annual Meeting, 2011.
20. #Zheng, H. Y.-C. Chiu, P Mirchandani. New look at system optimal dynamic traffic assignment and earliest arrival flow problems. INFORMS Annual Meeting, 2011.
21. #Zheng, H. Y.-C. Chiu, P Mirchandani. A Heuristic Algorithm for the Earliest Arrival Flow Problem with Multiple Sources. INFORMS Annual Meeting, 2011.
22. Murray-Tuite, P., B. Wolshon, S. Liu, B. Park, R. Venkatanarayana, Y.-C. Chiu, K. Hancock. Developing Origin-Destination Matrices for No-Notice Evacuation Simulation. ICEM11, 2011.
23. Chiu, Y.-C. Evaluating Regional Contra-Flow and Phased Evacuation Strategies for Central Texas Using a Large-Scale Dynamic Traffic Simulation and Assignment Approach. DHS Science Conference – 5th Annual University Network Summit, Washington, D. C. 2011.
24. #Villalobos, J, Y.-C., Chiu, PB Mirchandani, M. Hickman. Multi-Resolution Assignment and Loading of Transportation Activities (MALTA), ITS Arizona Annual Meeting, Phoenix, 2010.
25. #Yang, G., Y.-C. Chiu. Hierarchical Time-Dependent Shortest Path Algorithm (HTDSP) for Dynamic Traffic Assignment (DTA) Models, INFORMS Annual Meeting, 2010.
26. Tung, R, Y.-C. Chiu, Integration of Dynamic Traffic Assignment in a Four-Step Model Framework – A Deployment Case Study in Seattle Model, The 3<sup>rd</sup> Conference on Innovations in Travel Models (ITM2010), Tempe, AZ, 2010.
27. #Jang, Y., Y.-C. Chiu, Modeling Within-Day Schedule Adjustment Decision Consistent with Time-Varying Network Conditions, The 3<sup>rd</sup> Conference on Innovations in Travel Models (ITM2010), Tempe, AZ, 2010.

### Invited Presentations and Talks

1. Chiu, Y.-C. Mobility-as-a-Service & Tool (MaaS&T) – Visions, Challenges, and Insights. Keynote Speaker, the 8<sup>th</sup> International Symposium on Travel Demand Management, Taipei, Taiwan, September 2017. Travel paid for.
2. Chiu, Y.-C. MaaS Up America! ACT TDM Webinar Series, May 2017.
3. Chiu, Y.-C. New Perspectives and Approaches in the Future Urban Mobility Management. Qatar Science and Technology Park and Qatar Computing Research Institute, Doha, Qatar, April 2017. Travel paid for.
4. Chiu, Y.-C. Building Public-Private Win-Win Data Exchange, Workshop on Designing Innovative Transportation Systems Solutions Starting with the Data, Berkeley National Laboratory, UC-Berkeley, May 2017.
5. Chiu, Y.-C., Mobility-as-a-Service and Tool (MaaS&T) – Concept and Implementation. Keynote Speaker, special session to the Ministry of Transportation and Communications, Taipei, Taiwan, April, 2017, travel paid for.
6. Chiu, Y.-C. Real-Time Traveler Information – Government and Business Roles and Delivery Beyond Providing Traveler Information, Tucson, Arizona, Roads and Streets Conference, 2017.
7. Chiu, Y.-C. Moving Dynamic Traffic Simulation and Assignment Models from Laboratory to Trench, and to an Integrated World, Zhejiang University, March, 2017, Travel paid for.
8. Chiu, Y.-C. Bridging Transportation System Management and Operations (TSM&O) and Active Demand Management (ADM) through Mobility Options Discovery and Engagement. Tongji University, Shanghai, China, May 2016.
9. Chiu, Y.-C. Simulation Modeling – Why We Care? How to be Relevant? Smart Mobility Workshop, Oak Ridge National Laboratory, Oak Ridge, November 2016.
10. Chiu, Y.-C. Connected Cities – Mobility Options Discovery and Engagement. IMSE Symposium, University of Texas El Paso, April 2016, Travel paid for.

11. Chiu, Y.-C. Traffic Modeling and Future Mobility Strategies. Shanghai Traffic Information Center, Shanghai, China. November 2015, Travel paid for.
12. Chiu, Y.-C. Achieving System Optimal through Incentive-Based Active Demand Management and Broader Impacts to Transportation Planning and Operations. Tongji University, Shanghai, China, November 2015. Travel paid for.
13. Chiu, Y.-C. Connected and Energy Efficient Cities. National Renewable Energy Laboratory. October 2015.
14. Chiu, Y.-C. Mobility Ecosystem – Personalized Mobility Options Discovery and Behavior Change. CAAPS symposium, New York. July 2015.
15. Ranjbari A., Chiu, Y.-C. High Speed Bus Transit – An Innovative Inter-City Transit Service for the Tucson-Phoenix Corridor, WTS, Tucson, March 2015.
16. Chiu, Y.-C. Lessons and Experiences from an Incentive-Based Active Mobility Management Approach, Travel Reduction Group, Pima Associations of Governments, February 2015.
17. Chiu, Y.-C. Metropia App and Implications for Travel Demand Management, D-STOP Symposium, University of Texas at Austin, March 2015. Travel paid for.
18. Chiu, Y.-C. Moving Dynamic Traffic Simulation and Assignment Models from Laboratory to Trench, and to an Integrated World, the 14<sup>th</sup> CICPT Conference, Changsha, China. July 2015. Travel paid for.
19. Chiu, Y.-C. The Journey and Future of Transportation Mobility Ecosystem, Shanghai Institute of Transportation Engineers, November 2014. Travel paid for.
20. Chiu, Y.-C. The Estimation and Use of Value of Travel Time Reliability for Multi-Modal Corridor Analysis. SHRP2 TCC Meeting, October 2014.
21. Chiu, Y.-C. Big Data by Incentive-based Active Traffic and Demand Management. Austin Technology Council Texas Big Data Conference. September 2014.
22. Chiu, Y.-C. New Concept and Paradigm for Urban Mobility Management – Crowdsourced Data and Beyond. FHWA Crowdsourced Data Benefit Workshop, July 2014.
23. Chiu, Y.-C. Advancements in Regional Transportation Modeling Capability for Emergency Response, Recovery, and Resiliency. National Center for Research on Earthquake Engineering, Taipei, Taiwan, July 2014.
24. Chiu, Y.-C. New Concepts and Paradigm for Urban Mobility Management – An Active Traffic and Demand Management Perspective. Ministry of Transportation and Communication, Taipei, Taiwan, July 2014.
25. Chiu, Y.-C. The Seed – Metropia Synergy for a Better City Live. ThinkBIG Conference, Tucson, May 2014.
26. Chiu, Y.-C. Avoid Traffic, Get Rewarded – Paradigm Shift for Urban Traffic Congestion Management through Active Transportation Demand Management and Mobile Computing. Dept of Civil Engineering, The University of Texas at Austin, February 2014.
27. Chiu, Y.-C. Solving Traffic Congestion Cooperation and Rewards. TEDx, December 2013 (<https://www.youtube.com/watch?v=3O7qE6xLiPk>)
28. Chiu, Y.-C. An Active Traffic and Demand Management Technology through Real-Time Traffic Predication and Incentive. ITS Arizona Annual Conference, Phoenix, Arizona, September 2013.
29. Chiu, Y.-C. Simulation-based Dynamic Traffic Assignment: From the Labs to the Trenches, and Beyond. University of Hong Kong, Hong Kong, China, June 2013.
30. Chiu, Y.-C. Revisiting Vehicle Routing Problems with Dynamic Traffic Assignment. National Taiwan University of Science and Technology, Taipei, Taiwan, May 2013.
31. Chiu, Y.-C. Dynamic Traffic Modeling. Managed-Lane Modeling Practice Workshop, Orlando, FL. May 2013.
32. Chiu, Y.-C. The State of the Art in Urban Regional Transportation Dynamics Modeling – The USA Experience. National Taiwan University. Taipei, Taiwan. April 2013. Travel paid for.
33. Zhang, H., Feng, Y., Chiu, Y.-C., Head, L., Son, Y.-J., Yang, D. Agent-based Simulation and Modeling in Transportation Applications – State of the Art. Agent-Based Simulation Workshop, FHWA. March 2013.

34. Chiu, Y.-C. and Ranjbari, A. High-Speed Bus Transit – Science Fiction or Viable InterCity Transportation Mode for Arizona. Roads and Streets Conference, March 2013.
35. Chiu, Y.-C. Research Experience and Challenges for Integrating Dynamic Traffic Assignment with Activity-Based Model. 2012 DTA Symposium, Martha's Vineyard, June 2012.
36. Chiu, Y.-C. (2011) "Analysis, Simulation and Modeling for Intelligent Transportation Systems Planning and Integrated Corridor Management", ITS Research Symposium, June 11, Taipei.
37. Chiu, Y.-C. (2011) "Large-Scale Multi-Resolution Dynamic Network Simulation and Assignment Models – Opportunities and Applications for Planning and Operations for Asian Countries", National Cheng-Kung University, Tainan, Taiwan, June 7, Travel Paid For.
38. Chiu, Y.-C. (2011) "Large-Scale Multi-Resolution Dynamic Network Simulation and Assignment Models – Opportunities and Applications for Planning and Operations", Jackson State University, Jackson, Mississippi, April 29, Travel Paid For.
39. Chiu, Y.-C. et al. (2011) "Evaluating Regional Contra-Flow and Phased Evacuation Strategies Using a Large-Scale Dynamic Traffic Simulation and Assignment Approach", The fifth University Research Network Department of Homeland Security, Washington, D.C., March 29, Travel Paid For.
40. Chiu, Y.-C. et al. (2011) "Developing Traffic Evacuation Strategies for Large-Scale Public Events", The fifth University Research Network Department of Homeland Security, Washington, D.C., March 29, Travel Paid For.
41. Chiu, Y.-C. (2011) "Network Simulation Approaches to Minimizing Disruption from Transportation Construction Projects", 2011 Roads and Streets Conference, Tucson, AZ.
42. Chiu, Y.-C. (2011) "Simulation-Based Dynamic Traffic Assignment: From the Labs to the Trenches", University of Maryland at College Park, March, College Park, MD, March 11, Travel Paid For.
43. Chiu, Y.-C., (2009) "Dynamic Traffic Assignment Roundtable", TRB Transportation Planning Conference, Houston, May 17-21.
44. Chiu, Y.-C., (2009) "Simulation-Based Dynamic Traffic Assignment Education and Deployment - Status and Future Plans", FHWA Travel Model Improvement Program (TMIP) Webinar Series, April 10.
45. Zheng, H., Chiu, Y.-C., Mirchandani, P, Hickman, M. (2009) "Traffic Management for Events and Cardinal's Games at the University of Phoenix Stadium", 2009 National Conference on Transportation Operations for Planned and Unplanned Events", Phoenix, March 25-26.
46. Chiu, Y.-C., (2009) "Guidelines for Deployment and Validation of DTA Models", TRB Workshop 121 Overview of Dynamic Traffic Assignment Model Guidelines, January.
47. Chiu, Y.-C., Villalobos, J. (2008) "Anisotropic Mesoscopic Traffic Simulation for Uninterrupted and Interrupted Highway Facilities", TRB Symposium on the Fundamental Diagram: 75 Years, Woods Hole, July 8-10.
48. Chiu, Y.-C., Villalobos, J., Mirchandani, P. (2008) "Spatially and Temporally-Scalable Mega-Scale Dynamic Traffic Simulation and Assignment Model MALTA with Anisotropic Mesoscopic Traffic Simulation", Traffic Simulation Workshop, Graz, Austria, June 30 - July 2.
49. Chiu, Y.-C. (2008) "Evacuation Modeling and Traffic Management: Discuss Strategies for Valley Agencies", AZTech Operations Committee Meeting, April 16.
50. Wilson, S. Chiu, Y.-C. (2008) "Applications of Dynamic Traffic Assignment in Twin Cities Area", TRB Innovations in Travel Modeling Conference, June 22-24.
51. Chiu, Y.-C. (2008) "State-of-the-art Traffic Simulation Models for Large-scale Mass Evacuation Modeling - Case Study of Evaluating Contra-flow and Phased Evacuation Operations for Central Texas", Southern Arizona ITE Chapter meeting, Tucson.
52. Chiu, Y.-C. (2007) "Evacuation in Simulation vs. Reality", Annual workshop of Natural Hazard Center, University of Boulder, Boulder, Colorado, July.
53. Chiu, Y.-C. (2007) "Regional Traffic Simulation for Emergency Evacuation Planning and Operations and Border Security Modeling", Common Defense Conference, October 29-30.
54. Chiu, Y.-C. (2007) "Simulation Modeling for Emergency Evacuation Planning and Operations for Arizona", Arizona Emergency Preparedness Oversight Council (EPOC), March 17.

55. Chiu, Y.-C. (2007) “Developments and Applications of Dynamic Traffic Assignment (DTA) Model - DYNASMART-P”, Kittleson & Associates, Inc., August 28.
56. Mirchandani, P., Chiu, Y.-C. (2006) “ Traffic-Adaptive Traffic Management”, Federal Highway Administration, December 9.
57. Chiu, Y.-C. and Mirchandani, P. B. (2006) “Challenges and Opportunities for Developing a Real-Time Challenges and Opportunities for Developing a Real-Time Emergency Evacuation Operation Capability”, ITS Arizona 13th Annual Conference, Phoenix, AZ.
58. Chiu, Y.-C. and Loftus-Otway, L. (2005) “The Impact of Inland Ports on the Maquiladora Industry Trade”, Supply Chain Management: Logistics, Transportation and Distribution Conference, El Paso, December, 2005.
59. Chiu, Y.-C. (2005) “Integrating Transportation Technologies and Strategies into Emergency Planning, Training, Response and Recovery”, the 2nd Annual Border Security Conference – Border Security: Critical Technologies for Security and Trade”, August 15-16, El Paso, Texas, invited by the U.S. Congressman Silvestre Reyes.
60. Gonzalez-Ayala, Chiu, Y.-C. Dominguez, R. (2005) “A Pilot Study to Apply Dynamic Traffic Assignment to Next-Generation Urban Transportation Planning in El Paso Region”, DTA workshop at the 84th Annual Meeting of Transportation Research Board, Washington, D.C.
61. Chiu, Y.-C. and Valdes, D. (2003) “Urban Intermodal Emergency Evacuation Models and Considerations”, Pan-American Conference and Workshop on the Interface between Automobile Traffic Networks under Dynamic Traffic Assignment and Bus Rapid Transit Systems, San Juan, Puerto Rico.
62. Nazarian, S., Chiu, Y.-C. , and Ferregut, C. (2003) “Supporting Regional Transportation Infrastructure Developments through Research – Transportation Infrastructure Research at UTEP”, El Paso Transportation Policy Board Meeting, June.
63. Chiu, Y.-C. and Valdes, D (2003) “Urban Intermodal Emergency Evacuation Models and Considerations”, Pan-American Conference and Workshop on the Interface Between Automobile Traffic Networks Under Dynamic Traffic Assignment and Bus Rapid Transit Systems, May 22-14, San Juan, Puerto Rico.
64. Chiu, Y. –C. (2003) “Incident Management for Critical Infrastructure – Modeling and Application Issues”, Texas Department of Transportation, Texas, January.
65. Chiu, Y. –C. (2002) “Integrated Approach for Evaluating the ITS deployment strategies”, transportation research seminar series, The University of Arizona, Tucson, Arizona, October.
66. Chiu, Y. –C. (2002) “Integrated Approach for Evaluating the ITS deployment strategies”, ITSA seminar series, UT-Austin, Texas, May.
67. Chiu, Y. –C., Huynh, N., Mahmassani, H. S. (2002) “Integrated Corridor Management and Optimal Variable Message Sign Locations”, invited speech at the 81st Annual Meeting of TRB, January, Washington D.C., USA.
68. Mahmassani, H. S., Chiu, Y. –C., Sbayti, H. (2002) “Traffic Management Strategy Evaluation in Work Zone Areas”, invited speech at the 81st Annual Meeting of TRB, January, Washington D.C., USA.
69. Chiu, Y. –C., Mahmassani, H. S., (2001) “Toward Hybrid Online Dynamic Traffic Assignment Procedures for Network Traffic Management”, Hong Kong University of Science and Technology, Hong-Kong, August, 2001.
70. Chiu, Y. –C. (2000) “Intelligent Transportation Network Planning Tool”, HEEP Area Meeting, June, Austin, Texas.

### Awarded Grants and Contracts

Role	Award Title	Prime Sponsor Name	Start Date	End Date	Total Award Amount	Award Amount by Credit Split

PI	(F) Dynamic Modeling	Texas Department of Transportation via Texas Transportation Institute	12/17/2009	4/30/2010	\$10,000	\$10,000
PI	(F) Integrated Corridor Management Tools Strategies & Deployment Support	Federal Highway Administration via Cambridge Systematics	9/12/2006	6/30/2010	\$42,600	\$42,600
Co-PI	(S) Cresta Consortium on Remote Sensing of Traffic Activities - Freight Flows	Arizona Department of Transportation	7/1/2007	7/31/2010	\$349,742	\$349,742
PI	(F) Technical Support for the DYNASmart-P Release and Applications	Federal Highway Administration	9/30/2007	12/31/2010	\$458,335	\$229,945
PI	(S) DynusT Technical Support for Corridor Modeling in Denver	Colorado Department of Transportation	4/1/2010	12/30/2010	\$39,430	\$39,430
PI	(S) Orange County Toll Roads Scenario Analysis	Orange County Toll Authority	4/1/2011	12/31/2011	\$40,138	\$68,287
PI	(S) Dynamic Traffic Assignment (DTA) Simulation Model	Colorado Department of Transportation	4/6/2011	12/31/2011	\$34,474	\$34,474
Co-PI	(F) Enhanced monitoring for remote sensing	United States Department of Transportation	1/4/2010	3/15/2012	\$432,263	\$216,132
PI	(S) Virginia DOT Northern Region Operations Evacuation Transportation Planning Projects - Creation of DynusT Simulation Network by UA	Virginia Department of Transportation via Virginia Center for Transportation Innovation and Research	10/1/2010	3/31/2012	\$73,272	\$73,272
PI	(S) DynusT Model Development and Calibration for DRCOG Regional Network	Denver Region Council of Governments	7/16/2007	8/31/2012	\$61,754	\$61,754
PI	(F) Modeling the Urban Continuum in an Integrated Framework: Location choice, activity-travel behavior, and dynamic traffic patterns	Federal Highway Administration	7/7/2008	12/31/2012	\$230,000	\$230,000
PI	(S) Platform for Emergency Evacuation Strategies- Phase II	Arizona Department of Transportation	1/19/2011	12/31/2012	\$122,647	\$61,358
PI	(F) Creation of Guidebook on Utilization of Dynamic Traffic Assignment (DTA) Modeling	Federal Highway Administration	7/25/2011	1/30/2013	\$39,886	\$40,034
PI	(S) MAG DynusT Regional Operations Planning Model Enhancements	Maricopa Association of Governments	10/12/2011	4/4/2013	\$79,867	\$79,867
PI	(F) SHRP Project C10 - Partnership to develop an integrated, advanced travel demand model and a fine-grained, time-sensitive network	Federal Highway Administration via Cambridge Systematics	9/1/2009	11/15/2013	\$547,295	\$273,648
PI	(F) Strategic Approaches at the Corridor and Network Levels to Minimize Disruption from the Renewal Process	United States Department of Transportation	7/1/2009	12/31/2013	\$245,480	\$245,480
PI	(F) Local Methods for Modeling, economic Evaluation, Justification and Use of the Value of Travel Time Reliability in Transportation Decision Making.	Federal Highway Administration	4/10/2013	9/15/2014	\$246,205	\$196,964

PI	(F) VASTO - Evolutionary Agent System for Transportation Outlook	Federal Highway Administration	5/11/2011	9/30/2014	\$1,400,755	\$1,087,523
Co-PI	(F) Multi-Modal Arterial Performance Measurement Using Multi-Source ITS Data	United States Department of Transportation	10/1/2014	10/31/2016	\$60,000	\$30,000
Co-PI	(F) Green and Resilient Urban Planning		9/21/2015	9/30/2017	\$125,000	\$31,250
Total					\$4,639,144	\$3,401,759

## List of Collaborators and their Organizational Affiliations

Last Name	First Name	Affiliation
Chen	Cynthia	University of Washington
Hickman	Mark	University of Queensland
Hu	Xianbiao	Metropia
Khani	Alireza	University of Minnesota
Kim	Sojung	Texas A&M University - Commerce
Konduri	Karthia	University of Connecticut
Lin	Jane	University of Illinois at Chicago
Mahmassani	Hani	Northwestern University
Nassir	Neema	MIT
Noh	Hyunsoo	Pima Association of Governments
Paz	Alex	University of Nevada
Pendyala	Ram	Arizona State University
Sun	Aichong	Pima Association of Governments
Tian	Ye	Metropia
Waddell	Paul	University of California at Berkeley
Wang	Liming	Portland State University
Wolshon	Brian	Louisiana State University
Yang	David	AAA Foundation
Zheng	Hong	North Central Texas Council of Governments
Zhou	Xuesong	Arizona State University
Zhang	Michael	University of California – Davis