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## EDUCATION

**University of Florida; Gainesville, FL**  
Ph.D. Civil Engineering, *Planned August 2017*

**North Carolina State University; Raleigh, NC**  
M.S. Civil Engineering, August 2012  
B.S. Civil Engineering, May 2010

## EXPERIENCE

**Institute for Transportation Research and Education, NCSU; Raleigh, NC**  
Research Associate, September 2015 – Present  
Graduate Research Assistant, August 2010 – August 2012

**University of Florida; Gainesville, FL**  
Graduate Research Assistant, August 2012 – August 2015

**North Carolina State University; Raleigh, NC**  
Undergraduate Research Assistant, May 2010 – August 2010  
Undergraduate Research Assistant, May 2008 – August 2008

## PEER REVIEWED PUBLICATIONS

### JOURNAL ARTICLES

Zheng, Y., Elefteriadou, L., **Chase, R.T.**, Schroeder, B., & Sisiopiku, V. (2016). Pedestrian Traffic Operations in Urban Networks. *Transportation Research Procedia*, 15, 137-149.

Zheng, Y., **Chase, R. T.**, Elefteriadou, L., Sisiopiku, V., & Schroeder, B. (2016). Driver types and their behaviors within a high level of pedestrian activity environment. *Transportation Letters*, 1-11.

Zheng, Y., **R.T. Chase**, L. Elefteriadou, B. Schroeder, V. Sisiopiku. “Modeling vehicle–pedestrian interactions outside of crosswalks”. *Simulation Modelling Practice and Theory*, Issue 59, 2015, pp 89–101.

Xu, Y., B. Williams, N. Rouphail, **R.T. Chase**. “Methodology for Developing an HCM-based Oversaturated Speed Flow Model”. *Transportation Research Record: Journal of the Transportation Research Board*, Issue 2395, 2013, pp 41–48.

**Chase, R.T.**, B. Williams, N. Rouphail, S. Kim. “Comparative Evaluation of Reported Speeds from Corresponding Fixed-Point and Probe-Based Detection Systems”. *Transportation Research Record: Journal of the Transportation Research Board*, Issue 2308, 2012, pp 110–119.

#### JOURNAL ARTICLES UNDER REVIEW

Warchol, S., **R.T. Chase**, C. Cunningham. *Diverging Diamond Interchange Signal Phasing Scheme Evaluation Using Microsimulation*. Submitted to the Transportation Research Record for review. Proceedings of the 96th TRB Annual Meeting, Washington, DC, January 2017.

Tanvir, S., **R.T. Chase**, N. Rouphail. *Heterogeneity and Consistency of Ecodriving Metrics Using Naturalistic Driving Data*. Submitted to the Transportation Research Record for review. Proceedings of the 96th TRB Annual Meeting, Washington, DC, January 2017.

#### CONFERENCE PROCEEDINGS

Karmakar, N., M. Hartmann, S. Tanvir, **R.T. Chase**, B. Schroeder, S. Aghdashi. *Regional Network Complexity Reduction for Estimating Diversion Effects from Large-Scale Work Zones: Motivation and Lessons Learned* Proceedings of the 96th TRB Annual Meeting, Washington, DC, January 2017.

Zheng, Y., **R.T. Chase**, L. Elefteriadou, B. Schroeder, V. Sisiopiku. *Where Do Pedestrians Jaywalk And How Do Drivers React? -- A Study In A Campus Environment* Proceedings of the 94th TRB Annual Meeting, Washington, DC, January 2015.

**Chase, R.T.**, B. Williams, N. Rouphail. *Detailed Analysis of Travel Time Reliability Performance Measures from Empirical Data*. Proceedings of the 92nd TRB Annual Meeting, Washington, DC, January 2013.

**Chase, R.T.**, A. Hajbabaie, B. Schroeder. *Incorporating Weather Effects in HCM Reliability Analysis*. Proceedings of the 92nd TRB Annual Meeting, Washington, DC, January 2013.

**Chase, R.T.**, B. Williams, N. Rouphail, S. Kim. *Reporting Path Travel Times for ATIS Reliability*. Proceedings of the INSTR 2012 Conference in Hong Kong, December, 2012.

**Chase, R.T.**, B. Williams, N. Roupail, S. Kim. *Comparing Reported Travel Times between Temporally-Stitched and Simultaneous Methods at Various Aggregation Intervals*. Proceedings of the 91st TRB Annual Meeting, Washington, DC, January 2012.

## OTHER PUBLICATIONS

Schroeder, B., L. Elefteriadou, V. Sisiopiku, N. Roupail, K. Salamati, E. Hunter, B. Phillips, **R.T. Chase**, Y. Zheng, S. Mamidipalli. *Empirically-Based Performance Assessment and Simulation of Pedestrian Behavior at Unsignalized Crossings*, Prepared for STRIDE, Final Report, September 2014.

Vandehey, M., J. Zegeer, J. Bonneson, R. Dowling, P. Ryus, W. Kittelson, N. Roupail, B. Schroeder, A. Hajbabaie, B. Aghdashi, **R.T. Chase**, S. Sajjadi, R. Margiotta, L. Elefteriadou. *Incorporating Travel Time Reliability in the Highway Capacity Manual*, SHRP2-L08, Final Report, 2014.

Williams, B., **R.T. Chase**, Y. Xu, S. Kim, D. Craft, N. Roupail, A. Encarnacion, *Mobility and Reliability Performance Measurement*, Prepared for the NCDOT, Final Report, June 2013.

**R.T. Chase**. *Monitoring Freeway Reliability Utilizing Network-Wide Link-Based ITS Data*. Master's Thesis. North Carolina State University. July 2012.

Bugg, Z., **R.T. Chase**, B. Williams. *Initial Investigation of the Potential for Using Video Game Technology to Improve Teen Driver Safety*, Prepared for the NCDOT, Final Report, June 2011.

## PRESENTATIONS

**Chase, R.T.**, L. Elefteriadou. *Simulation of Pedestrian-Vehicle Interaction at Midblock Crosswalks: Validation and Sensitivity Analysis*. Presented at the STRIDE Student Poster Competition, Washington, DC, January 2015.

**Chase, R.T.**, Y. Zheng., L. Elefteriadou. *Instrumented Vehicle Study on Driver Yield Behavior at Midblock Crosswalks*. Presented at the STRIDE Student Poster Competition, Washington, DC, January 2014.

**Chase, R.T.**, Y. Zheng, L. Elefteriadou, B. Schroeder, V. Sisiopiku. *Instrumented Vehicle Study and Microsimulation Models of Pedestrian-Vehicle Interaction at Midblock Crosswalks*. Presented at the STRIDE Annual Conference, Orlando, FL, April 2013 \*First Place- Student Podium Presentation

**Chase, R.T.**, L. Elefteriadou, S. Washburn. *Promoting Sustainable Transportation Design and Operations through Improved Pedestrian Simulation*. Presented at the ESSIE Annual Poster Competition, Gainesville, FL, April 2013.

**Chase, R.T.** *Incorporating Pedestrians and Pedestrian-Vehicle Interaction in the CORSIM Microsimulation Package*. Presented at the STRIDE Student Poster Competition, Washington, DC, January 2013.

**Chase, R.T.** *Travel Time Reliability- Unique or Redundant Information?* Presented at the Florida ITS Annual Meeting, Bonita Springs, FL, November 2012.

Vandehey, M., N. Rouphail, **R.T. Chase**. *Incorporating Travel Time Reliability into the Highway Capacity Manual SHRP2 L08 HCQS Workshop*- Presentation at the 91st TRB Annual Meeting to the Highway Capacity and Quality of Service Committee, Washington, DC, January 2012.

**Chase, R.T.** *Reporting Trip Travel Times from a User Perspective*. Presented at the 2012 NCSITE Student Led Meeting, Raleigh, NC, March 2012.

## PROJECT EXPERIENCE

**(PI)** NCLOS Program Update for the HCM 6th Edition  
2016 – 2017, North Carolina Department of Transportation No. 2017-19

**(Co-PI)** Feasibility and Demonstration of Small Automated Vehicles as a viable Transit Solution in North Carolina  
2016 – 2018, North Carolina Department of Transportation No. 2017-25

Developing Guidelines and Documentation of Engineering Studies for Establishing NC Speed Limits  
2016 – 2017, North Carolina Department of Transportation No. 2017-10

Minimizing Energy Use through Adjustments to Driving Style  
2015 – 2018, National Transportation Center at the University of Maryland, DOE

Planning Level Evaluation of the Effects of Ramp Metering on North Carolina Freeways  
2015 – 2017, North Carolina Department of Transportation No. 2016-11

Guidance for Traffic Signals at Diverging Diamond Interchanges and Adjacent Intersections  
2014 – 2016, National Academies of Science No. NCHRP 03-113

Innovations in Data Visualization using the Research Data Exchange (RDE) and the Weather Data Exchange (WxDE)  
2015 – 2017, Federal Highway Administration Task Order

Guidance for Field and Sensor-based Measurement of HCM and Simulation Performance Measures  
2015 – 2016, National Transportation Center at the University of Maryland

Work Zone Monitoring and Assessment for TIP I-5311/I-5338

2013 – 2016, North Carolina Department of Transportation No. 2014-33

Public Opinions of Roadway Assets using Roadway Reviews and Focus Groups  
2015 – 2016, North Carolina Department of Transportation No. 2016-04

Effects of Late Lane Merges on Travel Times  
2014 – 2016, North Carolina Department of Transportation No. 2015-08

Before and After-Implementation Studies of Advanced Signal Control Technologies in Florida  
2014 – 2016, Florida Department of Transportation No. 977-05

Empirically-Based Performance Assessment and Simulation of Pedestrian Behavior at Unsignalized Crossings  
2012 – 2014, Southeastern Transportation, Research, Innovation, Development and Education Center (STRIDE)

Incorporating Travel Time Reliability into the Highway Capacity Manual  
2010 – 2012, Strategic Highway Research Program 2 L-08

Mobility and Reliability Performance Measurement  
2010 – 2012, North Carolina Department of Transportation No. 2011-07

Initial Investigation of the Potential for Using Video Game Technology to Improve Teen Driver Safety  
2010 – 2011, North Carolina Department of Transportation No. TA-2011-04

## **OTHER ACTIVITIES**

Member, Institute of Transportation Engineers (NCSITE/SDITE/ITE), 2015-Present

President, UF ITE Student Chapter, 2014-2015

Treasurer, UF ITE Student Chapter, 2013-2014

Student Member, Institute of Transportation Engineers, 2009-2015

Student Member, American Society of Civil Engineers, 2007-2010

Reviewer for the following committees and conferences: Highway Capacity & Quality of Service TRB Committee AHB40, Traffic Flow Theory and Characteristics TRB Committee AHB45, Highway Traffic Monitoring TRB Committee ABJ35, International Symposium on Transportation Network Reliability

Friend, Highway Capacity & Quality of Service TRB Committee AHB40

## **HONORS**

2017 Transportation Research Board Joint Traffic Simulation Subcommittee Best Simulation

Application Paper- Warchol, S., R.T. Chase, C. Cunningham. Diverging Diamond Interchange Signal Phasing Scheme Evaluation Using Microsimulation. Presented at the 96<sup>th</sup> TRB Annual Meeting.

2014-2015 ITE Scholar- Scholarship from Department of Civil & Coastal Engineering, University of Florida, May 2015

2013 Transportation Research Board Highway Capacity and Quality of Service Committee Best Paper- Yilun Xu, B. Williams, N. Rouphail, R.T. Chase. Methodology for Developing an HCM-based Oversaturated Speed Flow Model. Presented at the 92nd TRB Annual Meeting and published in the Transportation Research Record.

2013-2014 UF ITE Outstanding Service Award

2013-2014 UF ITE Exceptional Officer Award

First Place Student Podium Presentation- R.T. Chase, Y. Zheng, L. Elefteriadou, B. Schroeder, V. Sisiopiku. Instrumented Vehicle Study and Microsimulation Models of Pedestrian-Vehicle Interaction at Midblock Crosswalks. Presented at the STRIDE Annual Conference, April 2013

TFF Scholar- Scholarship from the Transportation Founders Fund of NCSU, April, 2011.

International ITE Traffic Bowl Runner-Up- August 2014 Florida District ITE Traffic Bowl Champion- June 2014 University of Florida

International ITE Traffic Bowl Grand Champion- August 2013 Florida District ITE Traffic Bowl Champion- June 2013 University of Florida

International ITE Traffic Bowl Grand Champion- August 2012 Southern District ITE Traffic Bowl Champion- April 2012 North Carolina ITE Traffic Bowl Champion- November 2011 NC State

International ITE Traffic Bowl Runner-Up- August 2011 Southern District ITE Traffic Bowl Champion- April 2011 North Carolina ITE Traffic Bowl Champion- November 2010 NC State

## **STUDENT/PEER MENTORING**

Nabaruna Karmakar (September 2015 – Present): Industrial Engineering PhD student, North Carolina State University.

Shams Tanvir (September 2015 – Present): Transportation Engineering PhD student, North Carolina State University.

Kihyun Pyo (September 2015 – August 2016): Transportation Engineering Master's student, North Carolina State University.

Briana Phillips (September 2015 – May 2016): Transportation Engineering Master's student, North Carolina State University.

Larry Dorilus (June 2014 – August 2015): Transportation Engineering Master's student, University of Florida.

Michael Armstrong (June 2014 – August 2015): Transportation Engineering Master's student,

University of Florida.

Yinan Zheng (August 2012 – August 2015): Transportation Engineering PhD student, University of Florida.

Elizabeth Hunter (April 2012 – August 2012): Transportation Engineering Master's student, North Carolina State University.

David Craft (December 2011 – August 2012): Transportation Engineering Master's student, North Carolina State University.

Anthony Encarnacion (December 2010 – May 2012): Transportation Engineering Undergraduate student, North Carolina State University.

Louis Marais (September 2010 – January 2011): visiting scholar at North Carolina State University from University of Stellenbosch, South Africa.