# CSCRS Education/Workforce Development and Professional Development Activities - Ongoing Updates & Tracking

Step 1: Please edit/confirm the below current project information (A & B) to accurately reflect efforts being taken on your campus (including adding details like names of scholarship recipients).

Step 2: Please add basic information (C) about any/all related activities on behalf of or in support of CSCRS, including: classes, courses, presentations, speaking roles, events, etc. Step 3: Keep the information coming! Please update this information at least once a month! (Or send email to info@roadsafety.unc.edu if you'd rather CSCRS staff do the honors.)

#### 2018 TRB Presentations

Please fill out the table below with information about any students/staff members presenting during the 2018 TRB annual conference. This information will be used for the CSCRS newsletter, social media content, and for reporting purposes.

Name/title:	Univer sity affiliati on:	Student/Staff/ Researcher:	Presentation title:	Type of activity (panel, poster, presentation etc.)	TRB conference location and time:
Pedestrians and Automated and Connected Vehicles	UTK	E. Shay, A. Khattak, & B. Wali	Walkability in the Connected & Autonomous Vehicle Era: A U.S. Perspective on Research Needs	Lectern session 871, Paper # 18-00972	Wed 1/10/2018, 4:30 PM-6:00 PM
Pedestrians and Automated and Connected Vehicles	UTK	M. Zhang, A. Khattak & E. Shay	Analysis of Crashes Involving Pedestrians across the United States: Implications for Connected and Automated Vehicles	Lectern session 871, Paper # 18-04721	Wed 1/10/2018, 4:30 PM-6:00 PM

The Search for a Better Way, Part 2: Exploring and Refining Methods in Highway Safety	UTK	M. Kamrani, R. Arvin & A. Khattak	What measures of driving volatilities best explain crash frequency at intersections?	Poster session 834, Paper # 18-00089	Wed 1/10/2018, 10:15 AM-12:00 PM
The Search for a Better Way, Part 1: Exploring New Data and New Applications of Data in Highway Safety	UTK	A. Khattak, B. Wali & H. Bozdogan	How is Driving Volatility Related to Intersection Safety in a Connected Vehicles Environment ?	Poster session 523, paper # 18-00058	Tuesday 1/9/2018 8:00 AM-9:45 AM
Occupant Protection	UTK	K. Boakye, A. Khattak & S. Nambisian	Correlates of Front-Seat Passengers' Non-Use of Seatbelts at Night	Poster session 456, paper #18-00405	Monday 1/8/2018 3:45 PM-5:30 PM
The Search for a Better Way, Part 1: Exploring New Data and New Applications of Data in Highway Safety	UTK	B. Wali, A. Khattak & T. Karnowski	How Driving Volatility in Time to Collision Relates to Crash Severity in a Naturalistic Driving Environment ?	Poster session 523, paper #18-00060	Tuesday 1/9/2018 8:00 AM- 9:45 PM
The Search for a Better Way, Part 2: Exploring and Refining Methods in Highway	UTK	B. Wali, A. Khattak & X. Li	Exploring Non-Linear Dependencie s in Correlates of Roadway Crashes:	Poster session 834, paper # 18-00064	Wed 1/10/2018, 10:15 AM- 12:00 PM

Safety			Application of Generalized Additive & Piecewise Linear Count Data Models		
Highway Safety Performance	UTK	B. Wali, A. Khattak, J. Waters, D. Chimba & X. Li	Development of Safety Performance Functions for Tennessee: Unobserved Heterogeneit y & Functional Form Analysis	Poster session 575- paper # 18-00065	Tuesday 1/9/2018 10:15 AM - 12:00 PM
Connected Vehicle Applications	UTK	M. Zhang & A. Khattak	Identifying and Analyzing Extreme Lane Change Events Using Basic Safety Messages in a Connected Vehicle Environment	Poster session 831- paper # 18-04734	Wed 1/10/2018 10:15 AM - 12:00 PM
Connected and Automated Vehicle Systems in Complex Transportation Systems	UTK	M. Hoque, M. Salman, J. Rios-Torres, A. Khattak & R. Arvin	Impact of Vehicle-to-Ve hicle Communicati on Reliability of Safety Applications: An Experimental Study	Lectern session 755- paper # 18-05532	Wed 1/10/2018 8:00 AM - 9:45 AM
The Search for a Better Way, Part 2: Exploring and Refining	UTK	M. Kamrani, A. Khattak & T. Li	A Framework to Process and Analyze Driver, Vehicle and	Poster session 834 - paper # 18-00979	Wed 1/10/2018 10:15 AM- 12:00 PM

Methods in Highway Safety			Road infrastructure Volatilities in Real-time		
Analysis of Safety Concerns at Highway-Rail Grade Crossings	UTK	B. Wali, A. Khattak & M. Zhang	Injury Severity Analysis of Pedestrian and Bicyclist Trespassing Crashes at Non-Crossing s: Application of Predictive Text Analytics	Poster session 324 - paper # 18-00209	Mon 1/8/2018 10:15 AM -12:00 PM
Connected and Automated Vehicle-Enabl ed Signal Control	UTK	M. Ahmed, M. Hoque & A. Khattak	Intersection Approach Advisory Through V2X Technology Using Signal Phase and Timing (SPaT) Information at Fixed-Time Signalized Intersection	Poster session 572, paper # 18-05804	Tuesday 1/9/2018 10:15 AM- 12:00 PM
Traffic Flow Theory and Characteristic s, Part 1	UTK	R. Arvin, M. Kamrani, A. Khattak & J. Rios-Torres	Safety Impacts of Automated Vehicles in Mixed Traffic	Poster session 522, paper # 18-00088	Tuesday 1/9/2018 8:00 AM- 9:45 AM
Highway Applications of Connected and Automated Vehicle	UTK	M. Salman, M. Hoque, J. Rios-Torres & A. Khattak	A Cooperative Freeway Merge Assistance System using	Poster session 392, paper # 18-05614	Monday 1/8/2018 1:30 PM- 3:15 PM

Systems			Connected Vehicles		
Occupant Protection	UTK	K. Boakye, A. Khattak, B. Wali & S. Nambisian	Are Education and Enforcement Strategies Effective in Increasing Night-Time Seat Belt Use? Evidence from a Large-Scale Before-After Observationa I Study	Poster session 456, paper # 18-06451	Monday 1/8/2018 3:45 PM- 5:30 PM
The Search for a Better Way, Part 1: Exploring New Data and New Applications of Data in Highway Safety	UTK	M. Kamrani, R. Arvin, A. Khattak	Analyzing Highly Volatile Driving Trips and Associated Factors	Poster session 523, paper # 18-00980	Tuesday 8:00 AM- 9:45 AM
Cycling Demand and Cyclist Behavior	UTK	H. Yang, F. Su, X. Liu, C. Cherry, Y. Liu	Motivational factors underlying e-bike users' intention to run the red light	782, paper #18-00893	Wednesday, Jan 10, 2018 8:00AM 9:45AM
Innovations in Transportation Demand Management	UTK	C. Cherry, W. Riggs, B. Appleyard, N. Dhakal, A. Frost, S. Jeffers	New and Unique Aspects of University Campus Transportati on Data to Improve	Session 304. Paper # 18-00651	Monday, Jan 08, 2018 10:15AM 12:00PM

			Planning Methods		
Advanced Analysis to Improve Nonmotorized Transportation Safety	UTK	A. Mohamadi Hezaveh, M. Azad, C. Cherry	Pedestrian Crashes in Tennessee: A Data Mining Approach	Session 394 Paper 18-01507	Monday, Jan 08, 2018 1:30PM 3:15PM
Latest in Bicycle and Pedestrian Data Research	UTK	J. Weber, M. Azad, W. Riggs, C. Cherry	The Convergeren ce of Smartphone Apps and Competition to Increase Cycling	Session 310 Paper 18-02631	Monday, Jan 08, 2018 10:15AM 12:00PM
Advanced Modeling, Recognition, and Classification Methods in Transportation Applications	UTK	Y. Zhang, H. Li, H. Qi, L. Han, C. Cherry	Scheduling for Timely Passenger Delivery in a Large Scale Ride Sharing System	Session 386 Paper 18-06786	Monday, Jan 08, 2018 1:30PM 3:15PM
	UTK	S. Jordan, S. Mishra, M. Gkolias, T. Welch, C. Cherry	Equity of transit connectivity in Tennessee cities	Paper 18-03485	
Bicycle Safety Across the Pillars of the UN's Decade of Action for Road Safety	UCB	O. Grembek	O. Grembek, presiding	Workshop 135	Sun: 1/07/2018, 9:00 AM-12:00 PM
Latest in Bicycle and Pedestrian	UCB	J. Griswold, A. Medury, R. Schneider, &	Comparison of Pedestrian Count	Poster Session 310, Paper #18-05579	Mon: 1/08/2018, 10:15 AM-12:00 PM

Data Research		O. Grembek	Expansion Methods: Land Use Groups Versus Empirical Clusters		
Artificial Intelligence and Machine Learning Tools for Estimation, Detection, and Prediction Applications in Transportation	UCB	A. Mohammadia namiri, N. Nadimi, D. Ragland, & R.I. Nasab	Predicting Crash Severity Based on Its Related Collision Type Using Five Data Mining Techniques	Poster Session 385, Paper #18-02088	Mon: 01/08/2018, 1:30 PM-3:15 PM
Global Road Safety Subcommittee , ANB10(8)	UCB	O. Grembek, & K. Kolody		O. Grembek, Presiding	Mon: 1/08/2018, 6:00 PM-7:30PM
Highway Safety Performance	UCB	P. Vayalamkuzhi , & V. Amirthalinga m	Safety Performance Functions for Divided Four-Lane Intercity Highway Under Heterogeneo us Traffic Flow	Poster Session 575, Paper #18-06548	Tues: 1/09/2018, 10:15 AM-12:00 PM
Speed Effects of Highway Safety Design Features	UCB	C. Song, Z. Guo, O. Grembek, & Y. Chen	Determining the Optimal Location for Truck Escape Ramp in the Vicinity of Expressway Tunnels in Mountainous Areas	Poster session 833, Paper # 18-05642	Wed: 1/10/2018, 10:15 AM-12:00 PM

## A. Current Professional Development Projects

#### PD-1: CSCRS Annual Meeting/Symposium (Led by HSRC with input from all)

This Annual Meeting, which will take place in Fall 2018, will bring together researchers, faculty, students, regional practitioners and elected officials to showcase student and faculty work from the CSCRS and discuss important transportation safety issues.

Edits/updates/additional information:

### PD-2: Webinar Series on Systems Safety (Led by HSRC with involvement from all)

The purpose of this webinar series is to explore core concepts related to safe systems thinking and to highlight case studies and examples from various jurisdictions. This series will also highlight preliminary research findings from CSCRS ongoing efforts and provide a forum for discussing existing and needed research in the area of safe systems. The series will be geared to practitioners and will actively engage both traditional and non-traditional audiences through webinar panels and post-presentation discussions.

#### Edits/updates/additional information:

- CSCRS findings highlighted in a USDOT sponsored webinar given by: A. Khattak (host) and B. Wali (presenter) 10/11/17 <u>The Role of Connected & Automated Vehicles: How Can</u> <u>Urban Areas Use the Data They Create?</u> Talking Technology and Transportation in Education (T3e) Webinars, USDOT, ITS Joint Program Office, https://www.pcb.its.dot.gov/t3 webinars.aspx

### PD-3: Safe Streets Lecture Series (Led by FAU)

In Fall 2017, CSCRS consortium member FAU will host a public lecture series on emerging issues in traffic safety. The purpose of the lecture series will be to advance the discussion of traffic safety issues that affect the South Florida Metropolitan Region, and will be offered in partnership with the Palm Beach Planning Congress, the local chapters of the American Planning Association and the Institute of Traffic Engineers, the Women's Transportation Seminar (WTS), as well as FAU's Center for Urban and Environmental Solutions and the Planning Society at FAU (a student planning organization).

Edits/updates/additional information:

PD-4: Public Health Professional Development Series (Led by UNC-IPRC)

The goal of this project is to 1) identify cross-sector teams with representatives from public health, engineering, and planning to participate in a systems approach training and implementation project, 2) ground public health, engineering, and planning professionals with the ideas and methods of systems thinking, 3) provide examples of systems approach initiatives that group participants can initiate in their own contexts, 4) gather feedback from participants about opportunities and challenges of using a systems approach, 5) Use information from participant experience and feedback to shape further projects, and 6) provide structured peer learning forum for teams to share opportunities, challenges, and solutions to improve projects that take a systems approach.

#### Edits/updates/additional information:

#### PD-5: Engagement at Conferences (several)

Staff from all consortium members will attend conferences to engage the transportation community and exchange ideas and research findings at venues such as TRB, AVS, Urban Street Symposium, RSS, NACTO, etc.

#### Edits/updates/additional information:

- INSERT INFORMATION about conferences you've attended to further CSCRS, safe systems approach; received CSCRS funding to attend; etc.

- David Harkey, UNC HSRC, moderated the opening panel "Reversing the Numbers, an Expert Panel Discussion," at the 2017 Lifesavers conference held March 26-28 in Charlotte, NC.

- David Harkey, UNC HSRC, moderated the session "Rebuilding Our Infrastructure with Technology for Improved Safety" at the Third Annual Summit of University Transportation Centers for Safety held April 6 in Washington, DC.

- Laura Sandt and Caroline Mozingo, UNC - HSRC, attended the 2017 CUTC Annual Summer Meeting June 19 -21 in Buffalo, NY.

- Laura Sandt, UNC-HSRC, Automated Vehicles Symposium (San Francisco, Calif.) July 11–13, 2017

- Kwaku Boakye, Some Impacts of Enforcement and Community-based Outreach & Education Programs on Nighttime Seatbelt Use, Presentation at the 2017 Lifesavers conference held March 26-28 in Charlotte, NC.

- Alexandra Boggs, Truck Parking Facilities and Ramp Parking: Role of Supply, Demand, and Ramp Characteristics, Presentation at the 2017 Lifesavers conference held March 26-28 in Charlotte, NC.

- Asad Khattak, UTK, attended the 2017 CUTC Annual Summer Meeting June 19 -21 in Buffalo, NY.

- Asad Khattak, The Role of Innovations in Improving Transportation Systems, in Plenary Session Invited Talk, 17th COTA International Conference of Transportation Professionals, CICTP. Summer 2017: Tongji University, Shanghai, China.

- Asad Khattak, Promise of Connected & Automated Vehicles: Implications for Sustainability, Keynote Talk, Research Day University of Aveiro, Invited by the American Corner, US Embassy in Lisbon, and Rector of University of Aveiro, Portugal, Summer 2017.

- Chris Cherry, UTK, Interbike Industry Tradeshow Presentation at the Bosch Electric Theater on e-bike safety (Las Vegas, NV), July 19-20, 2017

- Chris Cherry, Amin Mohamadi Hezaveh, Mojdeh Azad, UTK, International Cycling Safety Conference (ICSC-Davis, CA) September 21-22, 2017 (presented CSCRS poster on R4 with co-authors Louis Merlin, Offer Grembek, and Laura Sandt).

- Julia Griswold, UCB, presented "A Behavioral Approach to Bicycle Level of Service" at 2017 International Cycling Safety Conference held September 21-22 in Davis, CA.

- "Predicting Safety: Development and Application of Bicycle Safety Performance Functions in Seattle, WA" by Libby Thomas, Bo Lan of HSRC, and Toole Design Group presented by Rebecca Sanders at 2017 International Cycling Safety Conference held September 21-22 in Davis, CA.

-Chris Cherry, UTK, presented "E-bikes and their role in shared and connected mobility" at the 2017 Korean Research Institute for Human Settlements (KRIHS) International Symposium on Shared-use Mobility to Improve the Sustainability in Metropolitan Areas. Oct 19, 2017.

- Eric Dumbaugh, "Integrating "Safe Systems" into Land Use Planning: Examining the Role of Land Use Codes and Development Regulations on the Incidence and Severity of Traffic-related Death and Injury." 5th Annual University Transportation Centers Conference for the Southeastern Region. Gainesville, Florida, November 16-17, 2017.

- Eric Dumbaugh, The Future of Urban Transportation: A Roadmap to the 21st Century. ACSP 57th Annual Conference. Denver, Colorado, October 12-15, 2017

- Ramin Arvin, "Safety Impact of Autonomous Vehicles in the Mixed Traffic". Presented at 2017 annual INFORMS meeting. Houston, Texas, October 22-25, 2017.

-Chris Cherry, "New probe data sources to measure cycling behavior and safety". Presented at Portland State University Transportation Research and Education Center (TREC) Friday seminar 12/1/2017.

- Offer Grembek, "Moving the Needle on Vision Zero" presented at the San Francisco Vision Zero Workshop: Bold Ideas for Vision Zero. Thursday, November 9, 2017.

- Offer Grembek, presented in breakout session, "Enabling technologies and methodologies for Automated Driving Systems" at the UC Berkeley "Berkeley DeepDrive" event. Thursday, November 30, 2017.

## B. Current Education Projects

### E-1: North Carolina Brown Bag Seminar (Led by UNC)

This discussion series will bring together faculty, staff, and students from universities across the Triangle, NC region and provide a forum for networking and discussing critical issues in transportation safety and systems thinking.

#### Edits/updates/additional information:

#### E-2: Market Research for K-12 Activities (Led by UNC-HSRC)

Perform web-based research, interviews, or potentially surveys to identify evidence-based programs that could be conducive for integrating transportation issues and/or replication with future UTC funds.

#### Edits/updates/additional information:

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### E-3: Robotics Student Symposium (Led by Duke)

The Duke Robotics Student Symposium was held on April 14, 2017, coinciding with National Robotics Week. The Symposium was an opportunity for robotics students from a variety of backgrounds to showcase their work and network with regional peers.

Edits/updates/additional information:

### E-4: Crash Scene Investigation Camp (Led by UTK)

This camp geared for middle school students is designed to engage young minds around traffic safety issues through the reconstruction of a vehicle crash. The CSI team will use science, engineering, math, research, logic, and "eye witness" interviews to investigate a mock crash scene and think about what occurred and why and how it happened.

#### Edits/updates/additional information:

- Currently, UTK researchers are outlining learning objectives and determining the most important concepts to present at the camp. Materials and resources are being gathered from various sources (i.e., Tennessee Highway Patrol, local consulting firms, textbooks, websites) to engage students with learning styles. Dates and location for the camp are being determined.. More information will follow as progress is being made.

### E-5: Weekly Transportation Safety Seminar Series (Led by UTK)

This for-credit transportation seminar, held weekly on the campus of UTK, provides an opportunity for students to engage with faculty and invited experts on key issues in transportation, including safety. The seminars are recorded and broadcast to remote audiences. *Edits/updates/additional information:* 

- Transportation faculty at UT have started the transportation seminar series, with speaker presentations becoming available online. Students are registered for a 1-credit course CE 550-Transportation Seminar. Details about the presentations are as follows:

- September 14 Studying the Impacts of Connected and Automated Vehicles, Dr. Jackie Rios-Torres, Oak Ridge National Laboratory Research Scientist
- September 21 Monitoring Drivers' Vital Signs during Driving, Dr. Aly Fathy, UTK Electrical and Computer Engineering Professor <u>http://mediasite.utk.edu/UTK/Play/8e354f46a1c8401ba7ae695ee405c73a1d</u>

- September 28 Predicting Traffic Flows in the North American Railway Network, Dr. David Clarke, UTK Civil and Environmental Engineering Professor http://mediasite.utk.edu/UTK/Play/ea833751f1d74b339773cd60627f5da31d
- October 12 Big Data Approaches to Understanding the Intersection of Bikesharing and Public Transit, Dr. Candace Brakewood, UTK Civil and and Environmental Engineering Assistant Professor <u>http://mediasite.utk.edu/UTK/Play/421c7d75a2a742bd9f0b37bb15f820d91d</u>
- October 19 Automotive Vehicle Safety: Lessons Learned from Aerospace Systems, Dr. Mark Whorton, University of Tennessee Space Institute Director <a href="http://mediasite.utk.edu/UTK/Play/c6a76ac17f704c5e8467d9f6f622881a1d">http://mediasite.utk.edu/UTK/Play/c6a76ac17f704c5e8467d9f6f622881a1d</a>
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## E-5b: Weekly Transportation Safety Seminar (Led by UCB)

This is a weekly traffic safety seminar @ SafeTREC every Friday, 09:00 – 10:00 AM. It serves as a platform to discuss various research works happening at our center and beyond.

### E-6: Student Scholarships (several)

Innovations PhD fellow and literature review scholars will be selected at UCB; Duke students working on research projects will be designated as fellows; UTK will make five student awards; UNC-DCRP will make one award for a safety student; travel funds will also be available for student conference participation; most of these awards will result in papers or presentations. *Edits/updates/additional information:* 

- INSERT names of scholars, year in school, name of degree she/he is seeking, etc. (and any other information)

- Several UTK students have worked on research papers submitted for the 2018 Transportation Research Board meeting for presentation and/or publication review. Students who have performed well in terms of their papers will be given 5 awards (under consideration are Zhang, Ramin, Wali, Kamrani, Mohammadi, Boggs, and Li). Safety related papers accepted for presentation that involve UTK students are as follows:

- Shay E., Khattak A., & Wali B., Walkability in the Connected & Autonomous Vehicle Era: A U.S. Perspective on Research Needs, 18-00972, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- Kamrani M., Arvin R., & A. Khattak, What measures of driving volatilities best explain crash frequency at intersections? 18-00089, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- Khattak A., B. Wali, & H. Bozdogan, How is Driving Volatility Related to Intersection Safety in a Connected Vehicles Environment? 18-00058, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- 4. Boakye K., A. Khattak, & S. Nambisan, Correlates of Front-Seat Passengers' Non-Use of Seatbelts at Night, 18-00405, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.

- Wali B., A. Khattak, & T. Karnowski, How Driving Volatility in Time to Collision Relates to Crash Severity in a Naturalistic Driving Environment? 18-00060, To be presented at *Transportation Research Board annual meeting,* National Academies, Washington, D.C., 2018.
- Wali B., A. Khattak, & X. Li, Exploring Non-Linear Dependencies in Correlates of Roadway Crashes: Application of Generalized Additive and Piecewise Linear Count Data Models, 18-00064, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- Wali B., A. Khattak, D. Chimba, J. Waters, & X. Li, Development of Safety Performance Functions for Tennessee: Unobserved Heterogeneity & Functional Form Analysis, 18-00065, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- Zhang M., A. Khattak, & E. Shay, Analysis of Crashes Involving Pedestrians across the United States: Implications for Connected and Automated Vehicles, 18-04721, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- Zhang M. & A. Khattak, Identifying and Analyzing Extreme Lane Change Events Using Basic Safety Messages in a Connected Vehicle Environment, 18-04734, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- Hoque A., M. Ahmed, J. Rios-Torres, A. Khattak, & Arvin R., Impact of Vehicle-to-Vehicle Communication Reliability on Safety Applications: An Experimental Study, 18-05532, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- 11. Kamrani M., A. Khattak, & T. Li, A Framework to Process and Analyze Driver, Vehicle and Road infrastructure Volatilities in Real-time, 18-00979, To be presented at *Transportation Research Board annual meeting,* National Academies, Washington, D.C., 2018.
- Wali B., A. Khattak, & M. Zhang, Injury Severity Analysis of Pedestrian and Bicyclist Trespassing Crashes at Non-Crossings: Application of Predictive Text Analytics, 18-00209, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- Ahmed M., A. Hoque, & A. Khattak, Intersection Approach Advisory Through V2X Technology Using Signal Phase and Timing (SPaT) Information at Fixed-Time Signalized Intersection, 18-05804, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- 14. Arvin R., M. Kamrani, & A. Khattak, & J. Rios-Torres, Safety Impacts of Automated Vehicles in Mixed Traffic, 18-00088, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- Ahmed M., M. Hoque, J. Rios-Torres, & A. Khattak, A Cooperative Freeway Merge Assistance System using Connected Vehicles, 18-05614, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.

- 16. Boakye K., A. Khattak, B. Wali, S. Nambisan, Are Education and Enforcement Strategies Effective in Increasing Night-Time Seat Belt Use? Evidence from a Large-Scale Before-After Observational Study, 18-06451, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.
- 17. Kamrani M., Arvin R., & A. Khattak, Analyzing Highly Volatile Driving Trips and Associated Factors, 18-00980, To be presented at *Transportation Research Board annual meeting*, National Academies, Washington, D.C., 2018.

UCB:

### E-7: Support Course Development/Teaching (several)

UCB, UNC-DCRP, and UTK will all be involved in teaching graduate level transportation courses and sharing course outputs.

### Edits/updates/additional information:

- INSERT names of course(s), description, term offered, URL for more info (and any other relevant information)

Currently, the University of Tennessee Transportation Engineering and Science Program has 18 graduate students. In the Fall and Summer months, there were 8 graduate students who graduated from the program with two of them doctoral students. There also 236 undergraduate (sophomore –seniors) in Civil and Environmental Engineering that will be exposed to transportation safety through their required undergraduate transportation course.

The Civil & Environmental Engineering faculty offered these transportation courses during Spring 2017 and Fall 2017:

- CEE 355 Transportation Engineering I
- CE 455- Transportation Engineering II
- CE 456/458 Transportation Engineering II Lab
- CE 550 Transportation Seminar
- CE 551 Traffic Engineering: Characteristics
- CE 553 Geometric Design
- CE 558 Transportation Planning
- CE 559 Transportation Safety
- CE 652 Analysis Techniques for Transportation Planning System II
- CE 653 Intelligent Transportation Systems

### UCB: Fall 2017 Graduate course:

Public Health 285A: INJURY PREVENTION AND CONTROL, 2 units (3 units with a paper). Instructors: David Ragland, PhD, MPH, and Glenn Shor, PhD, MPP. 3 students participated in Fall 2017. Course link: <u>https://safetrec.berkeley.edu/education/injury-prevention-and-control</u> UCB: Spring 2018 Graduate course:

Civil and Environmental Engineering C265 (cross-listed with Public Health C285): TRAFFIC SAFETY AND INJURY CONTROL. 3 units. Instructors: Offer Grembek, PhD, and David Ragland, PhD, MPH. 11 students participating. Course link: <u>https://safetrec.berkeley.edu/education/traffic-safety-and-injury-control</u>

UT: Spring 2018 Graduate course:

CE 559: Transportation Safety. 3 credits graduate/senior undergraduate course. Instructor: Prof. Asad Khattak. 10 enrolled students.

# C. General/other updates from CSCRS Consortium Members

Please add basic information about any/all related activities on behalf of or in support of CSCRS, including: upcoming classes, presentations, upcoming journal articles, webinars, speaking roles, events, etc.

Duke -

FAU

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UCB

- Weekly Group Meetings with Graduate Student Researchers with various opportunities for professional development, including best practices for effectively communicating your research, research presentations, observation visits with practitioner organizations, and utilizing social media to support professional activities.

## - [Pending] E-8: Traffic Safety: A YouTube Series (UCB)

As part of CSCRS's mission to share the research of its members with state and local agencies, practitioners, as well as the general public we'll be developing online videos as an effective way to communicate complex ideas clearly, and YouTube is the best place to publish online video. We're expecting this effort would result in about 2-3 videos per semester

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UNC – DCRP
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UNC – HSRC
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UNC – IPRC
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#### UTK

Generated a safety video and other transportation content for UTK's Freshmen Engineering Fair, aimed to recruit freshmen into civil engineering and ultimately transportation.
The Transportation engineering and science program at UTK is preparing to participate in the "Engineering Day" held each year in the Fall to give university students and faculty time with high school students interested in pursuing engineering degrees. The 2017 Engineers day is expected to have participation from 50+ different high schools in the area. The participants will visit the UTK CEE traffic management center and experience our driving simulator.
University of Tennessee Institute of Transportation Engineers (ITE) won the Best Student Chapter Award in Tennessee Section of ITE and Southern District of ITE (SDITE)
University of Tennessee ITE members won over \$17,000 in scholarships
University of Tennessee Women in Transportation Seminars (WTS) students joined the WTS Western North Carolina Chapter in the Asheville Regional Airport Development Tour

**Need help?** To jumpstart our collective memory, here are the bullets we included in the PPPR #1 to be performed activities for the next reporting period (6/1/17 - 11/30/17):

- Plan and facilitate a CSCRS webinar series, to focus on a systems approach to safety and other CSCRS themes and research topics.
- Begin planning for a fall 2018 Annual CSCRS Summit to engage staff, researchers, students, and regional practitioners and decision makers in discussions about CSCRS related themes and research findings.
- Plan and facilitate a fall seminar series at UNC to bring together researchers and students from varied disciplines (including planning, public health, engineering and robotics) to discuss safety issues and a safe systems approach.
- Implement student scholarship programs and award student fellowships across consortium partner campuses. This will include a Ph.D. level Innovations Fellowship at UCB as well as awards to masters students to conduct literature reviews or masters project related research; up to five scholars will be selected at UTK and up to three scholars will be selected from UNC.
- Evaluate potential improvements to student fellowship applications requirements and revise accordingly for 2018 applications.
- Support student and staff travel to the Automated Vehicle Symposium, International Cycling Safety Conference, TRB Annual Meeting and other safety-related conferences.
- Incorporate a systems approach to safety into the UCB Traffic Safety and Injury Control graduate course. Similarly, begin planning the UNC graduate course on UNC Plan 890:

*Planning and Designing Complete, Safe, and Equitable Streets* (to be taught spring 2018), and integrating systems safety concepts.

- Determine how to proceed with outreach to and involvement with Regional Network Coordinating Organizations as a potential new public health audience for transportation safety efforts.
- As part of efforts to analyze the content of cities' Vision Zero plans and progress reports, provide feedback to the cities regarding how they can engage diverse professional and stakeholder groups in identifying, prioritizing and evaluating the efficacy of safety countermeasures.
- Conduct audit of existing K-12 activities on which CSCRS activities could build and augment. Continue to explore and expand K-12 opportunities across consortium member campuses. For example, determine whether the opportunity to develop K-5 road safety modules is feasible at UCB.
- Launching a University of Tennessee WTS student chapter.
- Launch a weekly traffic seminar series at UTK, broadcasting seminars to CSCRS audiences.
- Begin development of a crash investigation scene camp for middle school students, to be offered by UTK staff.

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