

# Fourth Annual CAMMSE Research Symposium - FINAL PROGRAM

## Day 1: Thursday, November 4 (8:00AM-5:00PM)

8:00-8:15AM

**Welcome and Opening Remarks** (Moderator: Dr. Wei Fan)

8:00-8:10AM **Dr. Robert S. Keynton**, Dean, College of Engineering, UNCC

8:10-8:15AM Dr. Wei Fan, CAMMSE Director

8:15-8:55AM

**Keynote Presentation No. 1** (Moderator: Dr. Wei Fan)

Title: **“Near Term Steps to Accelerate Deep Decarbonization of United States Transportation”**

Speaker: **Dr. Chris Hendrickson**, Carnegie Mellon University

**Registration Link:** [https://uncc.zoom.us/webinar/register/WN\\_QwrGh7NhT3qVjll4P8oYeg](https://uncc.zoom.us/webinar/register/WN_QwrGh7NhT3qVjll4P8oYeg)

**Notes:** Participants can join this Zoom meeting as early as 7:45 AM (EDT); however, our symposium will not start until 8:00 AM (EDT).

8:55-9:00AM

**Break**

9:00-10:20AM

**Technical Session #1: Emerging Mobility Services, Planning and Operations**

*Moderator: Dr. John Ivan, University of Connecticut*

“Developing Smart Traffic Signal Control”

Speaker: Randy Machemehl, Ph.D., P.E., University of Texas at Austin

“Estimation of Pedestrian Compliance at Signalized Intersections Considering Demographic and Geographic Factors”

Speaker: John Ivan, Ph.D., P.E., University of Connecticut

“An Innovative Signal Timing Strategy for Implementing Contraflow Left-Turn Lanes at Signalized Intersections with Split Phasing”

Speaker: Dr. Yi Qi, Texas Southern University

“Exploring the Impacts of Transportation System on Human Behaviors during Disasters using Mobility Data”

Speaker: Jin Zhu, Ph.D., University of Connecticut

**Registration Link:** [https://uncc.zoom.us/webinar/register/WN\\_jG1Rse1gRWmD9KSjS168fw](https://uncc.zoom.us/webinar/register/WN_jG1Rse1gRWmD9KSjS168fw)

**Notes:** Participants can join this Zoom meeting as early as 8:45 AM (EDT); however, our symposium will not start until 9:00 AM (EDT).

10:20-10:30AM

**Break**

10:30-11:50AM

**Technical Session #2: Improving Multimodal Mobility and Equity Using Data Analytics**

*Moderator: Dr. Yi Qi, Texas Southern University*

“Captive Drivers & Choice Riders: The Overlooked Constituencies in Transportation Planning”

Speaker: Carol Atkinson-Palombo, Ph.D., University of Connecticut

“Modeling and Evaluating Public Transit Equity and Accessibility by Integrating General Transit Feed Specification Data”

Speaker: Wei (David) Fan, Ph.D., P.E., University of North Carolina at Charlotte

“Using Computational Biology to Mitigate Path Overlap in Transit Assignment”

Speaker: Timothy James Becker, Ph.D., University of Hartford

“Analysis of Intermodal Vessel-to-Rail Connectivity”

Speaker: Mehdi Azimi, Ph.D., P.E., Texas Southern University

**Registration Link:** [https://uncc.zoom.us/webinar/register/WN\\_fauBxqWSTfaVKA2gconhkw](https://uncc.zoom.us/webinar/register/WN_fauBxqWSTfaVKA2gconhkw)

**Notes:** Participants can join this Zoom meeting at 10:15 AM (EDT); however, this second technical session will not start until 10:30 AM (EDT).

11:50AM-1:00PM

**Lunch**

1:00-1:40PM

**Keynote Presentation No. 2** (Moderator: Dr. Wei Fan)

Title: “Forecasting and Estimating Transportation Metrics in the COVID-19 and CAV Era”

Speaker: **Dr. Laurence Rilett**, Auburn University

1:40-1:45PM

**Break**

1:45-3:20PM

**Invited Speakers’ Session: Connected and Automated Vehicles**

*Moderator: Dr. Wei Fan, University of North Carolina at Charlotte*

“Texas Connected Freight Corridors”

Speaker: Jianming Ma, Ph.D., P.E., Texas Department of Transportation

“CAV Modeling Rising Up with Digital Twin: Transforming the Interconnection between Open data, Researchers and City Planners”

Speaker: Xuesong Zhou, Ph.D., Arizona State University

“System Optimal Vehicle Platooning Control for Eco-driving at Signalized intersection Built upon Hybrid MPC System, Online Learning and Distributed Optimization”

Speaker: Lili Du, Ph.D., University of Florida

“Cooperative Platooning along with Human Driven Vehicles”

Speaker: B. Brian Park, Ph.D., University of Virginia

**Registration Link:** [https://uncc.zoom.us/webinar/register/WN\\_NOsuZfJSl-pcBZBnnMTQg](https://uncc.zoom.us/webinar/register/WN_NOsuZfJSl-pcBZBnnMTQg)

**Notes:** Participants can join this Zoom meeting at 12:45 PM (EDT); however, this second technical session will not start until 1:00 PM (EDT).

3:20-3:30PM

**Break**

3:30-4:50PM

**Technical Session #3: Connected and Autonomous Vehicle and Machine Learning Applications**

*Moderator: Dr. Randy Machemehl, University of Texas at Austin*

“Two-stage Robust Facility Location Problem with Drones”

Speaker: Stephen Boyles, Ph.D., University of Texas at Austin

“Effect of Multimodal Connected Vehicle App on Transit Stop Catchment Area”

Speaker: Xianming Shi, Ph.D., P.E, Washington State University

“Skeleton-Graph: Long-Term 3D Motion Prediction from 2D Observations Using Deep Spatio-Temporal Graph CNNs”

Speaker: Claudel Christian, Ph.D., University of Texas at Austin

“Effect of Connected and Autonomous Vehicles on Supply Chain Performance”

Speaker: Ji Yun Lee, Ph.D., Washington State University

4:50-5:00PM

**Recap of Day 1** (Dr. Wei Fan, CAMMSE Director)

**Registration Link:** [https://uncc.zoom.us/webinar/register/WN\\_PBb1ymuoQ6-Vht5X9hHmLg](https://uncc.zoom.us/webinar/register/WN_PBb1ymuoQ6-Vht5X9hHmLg)

**Notes:** Participants can join this Zoom meeting at 3:15 PM (EDT); however, this third technical session will not start until 3:30 PM (EDT).

5:00PM

**End of Day 1**

**Notes:** - End of Day 1 marks the end the keynotes and faculty presentations component of the CAMMSE Research Symposium. Student research presentations will be offered in Day 2.

**Day 2: Friday, November 5 (8:00AM-12:00PM)**

8:00-8:05AM

**Opening Remarks** (Dr. Wei Fan, CAMMSE Director)

8:05-9:35AM

**Student Lightning Presentations: Session #1**

*Moderator: Mr. Li Song, University of North Carolina at Charlotte  
(See Student Lightning section in Page 29 of this booklet for more information on presentation titles. For the abstracts see pages 31 to 39.)*

9:35-9:45AM

**Break**

9:45-11:15AM

**Student Lightning Presentations: Session #2**

*Moderator: Mr. Shaojie Liu, University of North Carolina at Charlotte  
(See Student Lightning section in Page 29 of this booklet for more information on presentation titles. For the abstracts see pages 40 to 48.)*

11:15 -11:30AM

**Break**

11:30-11:50AM

**Student Awards Ceremony**

**Notes:** - Announcement of Student Lightning Presentation Awards (Top 8) will be made.

11:50-12:00PM

**Closing Remarks** (Dr. Wei Fan, CAMMSE Director)

12:00PM

**Conference Ends**

**Registration Link:** [https://uncc.zoom.us/webinar/register/WN\\_75sm396\\_SKuJtoqKSwqSSA](https://uncc.zoom.us/webinar/register/WN_75sm396_SKuJtoqKSwqSSA)

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