### TRB Truck and Bus Safety Committee (ACS60)

#### April 2025

### CHAIR'S MESSAGE



**AS** we wrapped up our successful participation in the 104th TRB Annual Meeting, including ACS60's committee and subcommittee meetings, podium, and poster sessions, I welcome

you to a new chapter with our members and 'friends' in 2025. You will find our committee meeting minutes, including some presentations, on our <u>committee website</u>. We have some exciting committee engagements ahead!

I sincerely appreciate the dedication and fresh enthusiasm of our subcommittee chairs, Paper Review Coordinator (PRC), Committee Communication Coordinator (CCC), and Committee Research Coordinator (CRC), and all the volunteers both members and 'friends' of ACS60.

Your contributions, whether through Research Needs Statements (RNS), thoughtful suggestions, or professional insights towards developing webinars and workshops, and a strong presence in social media are incredibly valuable to our work. If you're interested in becoming a member or a 'friend' of ACS60, we'd love to hear from you!

This April, in recognition of *Distracted Driving Awareness Month* and *National Work Zone Awareness Week*, we emphasize the critical need for attentive driving among commercial motor vehicle (CMV) operators and the elevated risks heavy trucks face in work zones. We welcome research, case studies, and outreach efforts that enhance visibility, training, enforcement, and infrastructure design to better protect all road users. We encourage you to bring your ideas and energy by volunteering for various committee/subcommittee activities within ACS60. If you'd like to contribute to this newsletter with short stories, lessons learned, or get involved in other innovative ways, please don't hesitate to reach out to me or our editor, Jack Kong.

Stay happy, healthy, and curious!

Mouyid Islam, PhD, RSP Chair, Truck and Bus Safety Committee (ACS60) <u>mouyid.islam@gmail.com</u>

#### Edítor's message

Welcome to the third edition of the TRB ACS60 Committee Newsletter! We are excited to share the latest updates, member spotlights, and initiatives from our community, all aimed at inspiring collaboration and dialogue. Our committee remains deeply committed to advancing truck and bus safety through research, innovation, and shared learning. In this issue, our Chair, Dr. Mouvid Islam, highlights Distracted Driving Awareness Month and emphasizes the critical importance of promoting attentive driving among commercial motor vehicle operators. For our member spotlight, we interviewed Sharon Newnam, who shares her journey into the truck safety field and her involvement with the committee. This edition also features a special article by Brenda Lantz on the Western Regional Commercial Vehicle Safety Summit, held in December 2024 in Denver, Colorado. Additionally, we have included links to the 2025 TRB event materials of our committee, which can be accessed in the RESOURCES section. We hope you enjoy this issue and find valuable insights to support our shared mission of improving transportation safety.

Jack Kong Ph.D. TTI

## ANNOUNCEMENT

- <u>TRB Conference on Data and AI for Transportation Ad-</u> vancement
- <u>Transportation Research Forum Events</u>
- <u>Commercial Vehicle Safety Alliance Annual Conference</u> and Workshops
- SAE Events
- ITS America Events
- ITS Canada Events
- <u>Fires in Vehicles Conference</u>
- American Bus Association Events
- American Trucking Association Events

## ACS60 CONTACT INFO

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## MEMBER SPOTLIGHTS



Sharon Newnam

Head of School Faculty of Health, School of Psychology & Counselling, QUT

#### Motivation to pursue a focus on truck/heavy vehicle safety

My background is in organisational psychology, with a particular interest in road safety. The complexities of driving a vehicle for work-related purposes are often underestimated. From a safety management standpoint, leaders face significant challenges in managing safety because traditional methods for encouraging behavioural change are less effective when direct observation and timely feedback are difficult. Additionally, there are a system of factors motivating unsafe driving behaviours including driver remuneration. These challenges present important problems to solve.

#### Most significant contribution(s) to ACS60

As Chair of the Carrier Safety Management subcommittee, I have organised the agendas for the annual committee meetings. These meetings address the critical challenges facing the sector, emphasising the system of factors that contribute to safety in the road transport industry, rather than solely focusing on driver behaviour and the need for change. I was also involved in writing the Centennial report in 2019.

Fun or memorable moments from the ACS60 committee or subcommittee meetings at TRB I enjoyed my conversations with Ron Knipling. He always showed interest and had thoughtful questions.

The most influential quote or proverb that has shaped your journey There is nothing more practical than a good theory – Kurt Lewin

#### Hobbies Running

#### Advice for ACS60 "Members" and "Friends"

The road safety transport is a complex and dynamic environment. Safety will not be improved if we continue to focus solely on the behaviour of the driver and ignore the system of factors that contribute to an unsafe system.

MEMBER INSIGHTS Highlights from the Western Regional Commercial Vehicle Safety Summit

By Dr. Brenda Lantz

**T**echnologies designed to promote safe driving behaviors and crash analysis tools for identifying high-risk corridors for deployment of crash-preventing countermeasures were the focus of the 4th Western Regional Commercial Vehicle Safety Summit December 4-5, 2024 in Denver, Colorado. More than 150 representatives from law enforcement, driver licensing agencies, universities, and industry attended to share best practices, resources, research findings, and partnerships. The Summit was hosted by the Upper Great Plains Transportation Institute (UGPTI) at North Dakota State University (NDSU) and co-hosted by the Colorado State Patrol. Funding was provided through a cooperative agreement with the Federal Motor Carrier Safety Administration. Summit topics were suggested by state law enforcement and driver licensing agencies and included the following:

• Priorities and challenges to improve commercial motor vehicle (CMV) safety (from federal, regional, state, and industry





Updates on FMCSA research and grant opportunities;

• Two roundtable discussions on state-specibc issues and the main takeaways from the Summit.

#### **Online Summit Resources**

and

UGPTI's Commercial Vehicle Safety Center website includes all of the presentations and Summit presenter biographies (https:// www.ugpti.org/outreach/cvsc/). The Center serves as a point of contact for universities, law enforcement, and driver licensing agencies seeking assistance to establish partnerships to improve commercial vehicle safety. It also hosts webinars and maintains a resources page with articles and reports related to commercial vehicle safety. In addition, all of the presenter biographies and presentations from the previous Commercial Vehicle Safety Summits are accessible through the site.

#### Key Takeaways from the 2024 Summit

Attendee comments regarding key takeaways from the Summit included:

• The event was a great platform for discussing potential collaborations and building connections with professionals across various sectors.

• Learning the challenges from different states – some are similar in nature and can help in future collaborations to solve regional issues.

• Being collaborative will get us all farther than working independently.

• There are many different researchers looking for ways to leverage data in a way that will reduce CMV crashes.

• While technology can help improve trafPc safety, the effectiveness of these technologies relies heavily on the CMV driver and other roadway user acceptance of these technologies.

• You can change driver behaviors by changing the approach you take in relation to their belief system.



#### **Opening Session**

The Colorado State Patrol Color Guard kicked off the opening session with the posting of the colors, which was followed by the National Anthem. Brenda Lantz, NDSU-UGPTI associate director, and Lt. Colonel Joshua Downing, Region 3 commander for the Colorado State Patrol, welcomed attendees. To provide background for the Summit, Tom Keane, FMCSA associate administrator for the OfPce of Research and Registration, reviewed CMV-involved crashes, injuries, and accidents. Sue Lawless, the FMCSA executive director and chief safety ofPcer, used her keynote address to outline goals and priorities for improving CMV safety.

#### Priorities and Challenges to Improve CMV Safety

During the Prst plenary session, attendees participated in a roundtable discussion of priorities and challenges to improving CMV safety. Attendees shared the priorities and challenges from their perspective within federal, regional, and state agencies and within the CMV industry.

Captain Brian Cocagne from the California Highway Patrol gave an overview of priorities and challenges from the state of California perspective. Alex Leslie, a senior research associate with the American Transportation Research Institute, presented information on the Top Industry Issues report for 2024; and Scott Hernandez, the regional Peld administrator for the FMCSA Western Service Center, provided a regional perspective.



#### Resources and Technologies

The next plenary session focused on resources and technologies. Lauren Rafferty, management and program analyst with the Volpe National Transportation Systems Center, provided an overview and demonstration of the FMCSA Analysis & Information Crash Statistics Visualization Tool (https://ai.fmcsa.dot.gov/CrashStatistics/Visualization). Gary Johnson, head of safety and compliance strategy for Motive, discussed using telematics, artiPcial intel-



<sup>1</sup>ligence, and video to identify both high-risk and safe drivers; and Gina Mía Espinosa-Salcedo, regional administrator for the National Highway Traffic Safety Administration (NHTSA), presented information on NHTSA's recent Countermeasures That Work (https://www.nhtsa.gov/book/countermeasures/countermeasures-that-work) and discussed partnership efforts between FMCSA and NHTSA.

#### State Best Practices

One of the Summit's most popular sessions focused on sharing state best practices. In that session, Dan Cooke, administrator for the Licensing, Endorsements, and Traffic Safety Program at the Washington State Department of Licensing, described the Washington Law and Justice Program that creates partnerships across multiple agencies to support courts and law enforcement. Captain Joseph Romero of the New Mexico State Police gave a lively presentation on their high-crash-corridor effort based on integrated real-time data, and Dr. Denver Tolliver, the NDSU-UGPTI director, provided an overview of a current study examining the prospects and challenges of autonomous trucking in North Dakota. J.J. Rogers Lewis, program manager for the Transportation Research and Education for Driving Safety Center at the University of California San Diego, provided infor-

		Ratings Recalls	Risky Driving 🕶	Road Safety -	Vehicle Safety	✓ More –
Search You can also sert pages by filters.	٩	Countermeasures				
Table of Contents						
Countermeasures That Work						
About This Guide				11		
Alcohol-Impaired Driving	-	A Highway Safety Countern	neasure Guide	for State		
Drug-Impaired Driving	-	Highway Safety Offices			Book Builder	What is this?
Seat Belts and Child Restraints	-					
Speeding and Speed Management	-	Countermeasures That Work is intended to be a reference guide for State Highway Safety Offices to help select effective, science-based traffic safety countermeasures to address highway safety				
Distracted Driving	-	problem areas in their States. Add to My Ho				y BOOK

mation on two current research projects examining the use of artificial intelligence supported cameras and targeted messaging in California to improve CMV safety.

#### Research and Partnerships

The second day of the Summit opened by highlighting research and partnerships. Eva Shipp, senior research scientist with the Texas A&M Transportation Institute, discussed data innovations to reduce high-risk driving for CMVs on rural Texas roadways and the Statewide CMV Profile Map they have developed (https://ttishiny.shinyapps.io/FMCSA\_CMV\_Profile/). Lt. Luke Hendrickson, commander of Motor Carrier Operations with the North Dakota Highway Patrol, and Kimberly Vachal, program director of UGPTI's Rural Transportation Safety and Security Center, provided an entertaining and informative overview of their partnership on a project examining safe truck mobility for



North Dakota winter roads. Alex Leslie, senior research associate with the American Transportation Research Institute, discussed a research project focused on issues and opportunities with driver-facing cameras.

#### State and Industry Coordination Efforts

In a session focused on coordination efforts, Casey Matlock, motor carrier manager for the California Highway Patrol, discussed the California Commercial Vehicle Safety Summit and Industry Day events; and Kari Finley, director and research scholar with the Center for Health and Safety Culture at Montana State University, provided an overview of the Traffic Safety Culture Pooled Fund study, a national research consortium focused on creating tools to positively promote and change culture. Finley also presented information on growing positive traffic safety culture by changing beliefs to support safer behaviors, and she provided a resource to reduce risky driving behaviors (https://www.mdt. mt.gov/research/projects/trafficsafety-rrb.aspx). The session concluded with Bill Bland, managing partner for Medidas Technologies, highlighting an innovative approach they have developed to shift driver behavior.

### FMCSA Research, Technology, and Commercial Driver's License (CDL) Updates

The final plenary session of the Summit focused on FMCSA updates and included a discussion from Tom Kelly, senior transportation specialist with the FMCSA Advanced Technology Division, on current research in roadside and onboard technology solutions, including advanced driver-assistance systems, autonomous vehicles, and Level VIII inspections. Updates and hot topics related to CDL were covered by Nikki McDavid, chief of the FMCSA CDL Division, who discussed the Drug and Alcohol Clearinghouse and the Safe Driver Apprenticeship Pilot Program. Kelly Stowe, general engineer with the FMCSA Applied Research



#### **Resources and Tools to Reduce Multi-Risk Driving Behaviors**

This project was completed under the Traffic Safety Culture Transportation Pooled Fund (TPF) project TPF-5(444). For more information on this TPF please visit the Traffic Safety Culture webpage.

There is growing recognition that drivers involved in fatal crashes are often engaged in multiple risky behaviors – not wearing a seat belt, speeding, and driving impaired. Research has established associations between impulsivity and multiple risky driving behaviors. While the association between impulsivity and various risky driving behaviors is established in the literature, there is limited understanding about how to address impulsivity and the underlying belfest and behaviors of fluidvikulas engaging in multiple risky driving behaviors. This research seeks to address this gap by creating and testing an intervention designed to address traffic impulsivity to improve driver behaviors.



Division, provided an overview of new entrant training and testing research; and Dan Meyer, transportation specialist with FMC-SA Crash Data Analytics, discussed the Crash Causal Factors Program. Each presenter also provided information regarding FMCSA grant opportunities (https://www.fmcsa.dot.gov/grants).

#### Roundtable Discussion of State Topics

The Summit wrapped up with a final roundtable discussion of any topics that had not yet been covered, including successful hiring practices, CDL training for clerks of court, a modernized credentialing and registration system, and a CMV-involved crashes reference booklet.

## RESOURCES



## FEATURED RESEARCH

# **1** Unveiling the speeding behavior: Assessing the speeding risks and driver injury severities in single-heavy truck crashes

his <u>research</u> article, authored by Dr. Mouyid Islam and Dr. Asif Mahmud and published in Safety Science, examines the growing problem of speeding-related crashes involving long-haul heavy trucks. Focusing on six years (2018-2023) of single-heavy truck crash data in Pennsylvania, where fatalities in such crashes are rising, the study uses a mixed logit model with heterogeneity in means and variances to identify key risk factors. Twenty-seven significant factors were found, with five-overturning crashes, curved road segments, middle-aged drivers (30-49 years old), unbelted drivers, and 70 mi/hr speed limits—common to both speeding and non-speeding crashes. The results show that speeding-related crashes are far more likely to result in severe or minor injuries. To mitigate these risks, the study recommends comprehensive countermeasures such as installing roadside barriers, enhancing curve signage with flashing lights, conducting regular inspections and maintenance, enforcing speed limiter policies, and providing targeted driver training, all in alignment with the National Road Safety Strategy.

#### **2** Assessing Truck Parking Capacity Usage to Inform Truck Parking Needs Assessments and Determine the Feasibility and Benefits of Truck Parking Capacity Management Platforms

his <u>report</u> addresses truck parking capacity challenges along the I-80 and I-94 corridors in the Mid-America region, analyzing truck parking usage patterns, identifying unauthorized parking locations, and evaluating the feasibility of using technology platforms for managing parking capacity. The study utilized data from Truck Parking Information Management Systems (TPIMS), telematics, and a Bluetooth-enabled app pilot at rest areas. Findings highlight unmet overnight parking demand, widespread unauthorized parking, and the technical feasibility and benefits of digital parking management platforms like ParkUnload. Although such platforms are cost-effective, quick to deploy, and beneficial for diversifying and optimizing parking resources, driver participation and compliance remain significant barriers. The research suggests feasible applications in private truck stops, smaller rest areas, oversize/overweight load reservations, and future electric charging infrastructure management.

## ${\bf 3}$ Automated CMV Inspection Demonstrations and Evaluations

This report presents the final findings for the Federal Motor Carrier Safety Administration (FMCSA) Automated Commercial Motor Vehicle (CMV) Evaluation (ACE) project, which demonstrated and evaluated methods for conducting roadside inspections and law enforcement interactions with automated driving systems (ADS)-equipped commercial vehicles. The study developed and tested six operational scenarios including electronic communication of ADS health and status, predictive maintenance data, enhanced pre-trip inspection status, compliance with weigh station instructions, integration with roadside inspection applications, and responses to emergency vehicle lights. The results showed that automated CMVs can successfully interact with existing roadside inspection systems and law enforcement procedures using wireless communication and newly developed ADS-related data elements. This research provides insights and recommendations to facilitate effective inspections and promote consistent practices for future automated CMV integration.

