

# Human Factors in ADS-equipped CMVs

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Federal Motor Carrier Safety Administration

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ANALYSIS,  
RESEARCH, &  
TECHNOLOGY  
FORUM

VIRTUAL EVENT



# Background

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- Automated Driving System (ADS)-equipped CMVs hold the promise of increased safety—but are not without risks, particularly for Level 2/3 ADS operation
- Some areas to explore:
  - CMV driver behaviors of interest (such as driver distraction) as they relate to takeover readiness and performance.
  - Transfer and sharing of control that examines the interaction effects among and between individual characteristics, system characteristics, secondary tasks, driving environments, and time to collision.
  - Highly automated driving training for drivers in general is lacking. The development and testing of unified education and training programs for CMV drivers that focus on ADSs is warranted.
- Additional research is needed to understand how ADAS and ADS features affect drivers' safety performance and ability to safely control the CMV

# Overall Study Objectives

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1

Determine the effect of secondary tasks on CMV drivers in an SAE Level 2 CMV.

2

Determine the effect of transfer of control on CMV drivers in an SAE Level 3 CMV.

3

Develop and evaluate a distraction training program designed to decrease the levels of CMV driver inattention.

# Human Factors in ADS-equipped Commercial Motor Vehicles

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- Approach: Simulator-based studies and training program
- Goal of 100 total participants
- Status: Completing the Information Collection Request to gain OMB approval for the data collection
- Expect to gain a better understanding of how drivers interact with L2 and L3 systems
- Will develop recommendations for training drivers on these systems



# Contact Information

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