Johns Hopkins Institute for Assured Autonomy and the Department of Computer Science

Present

Assessing Human-Autonomy Interaction in Driving Assist Settings

January 19, 2021 | 11:00 am-Noon Click <u>here</u> to access this virtual event <<u>https://bit.ly/Missy-Cummings</u>> Password: 841671



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ABSTRACT

In order to determine how the perception, Autopilot, and driver monitoring systems of Tesla Model 3s interact with one another, and also to determine the scale of between- and within-car variability, a series of four on-road tests were conducted. Three sets of tests were conducted on a closed track and one was conducted on a public highway. Results show wide variability across and within three Tesla Model 3s, with excellent performance in some cases but also likely catastrophic performance in others. This presentation will not only highlight how such interactions can be tested, but also how results can inform requirements and designs of future autonomous systems.

BIO

Professor Mary (Missy) Cummings received her B.S. in Mathematics from the US Naval Academy in 1988, her M.S. in Space Systems Engineering from the Naval Postgraduate School in 1994, and her Ph.D. in Systems Engineering from the University of Virginia in 2004. A naval officer and military pilot from 1988-1999, she was one of the U.S. Navy's first female fighter pilots. She is currently a Professor in the Duke University Electrical and Computer Engineering Department, and the Director of the Humans and Autonomy Laboratory. She is an American Institute of Aeronautics and Astronautics (AIAA) Fellow, and a member of the Defense Innovation Board. Her research interests include human supervisory control, explainable artificial intelligence, human-autonomous system collaboration, human-robot interaction, human-systems engineering, and the ethical and social impact of technology.

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