PennState College of Engineering | Systems, Controls, and Robotics Seminar Series

Connected Autonomous Vehicles (CAV) Safety and Mobility

Professor Azim Eskandarian

Alice T. and William H. Goodwin Jr. Dean of the College of Engineering

Endowed Professor of Mechanical Engineering

Virginia Commonwealth University, Richmond, VA

Seminar: Friday, Feb. 23, 2:00-3:00 PM, 125 Reber

ABSTRACT

Autonomous vehicles promise enhanced vehicle safety and comfort. Vehicle connectivity also provides several added safety benefits and traffic, energy, and environmental efficiencies. In the foreseeable future, driving will be a mixed environment of manual, connected, and autonomous vehicles in which safety considerations are paramount. Connected Autonomous Vehicles (CAVs) provide the best that autonomy and connectivity can offer. The significant extended benefit of autonomy in traffic comes from the connectivity through communications among vehicles, vehicle and infrastructure, and vehicle and other road users (also known as V2V, V2I, and V2X.) This talk presents a few advanced methods and algorithms that demonstrate some benefits and challenges of CAVS through simulation and laboratory experiments.

BIOGRAPHY

Dr. Azim Eskandarian is the Alice T. and William H. Goodwin Jr. Dean of the College of Engineering at Virginia Commonwealth University (VCU) and an endowed Chair/Professor of Mechanical Engineering since August 2023. Previously, he was the Department Head (since 2015,) and Nicholas and Rebecca Des Champs Chair/Professor of the Mechanical Engineering Department at Virginia Tech (VT), where he established the Autonomous Systems and Intelligent Machines laboratory to research intelligent and autonomous vehicles and mobile robotics. Before that, he was a Professor of Engineering and Applied Science at George Washington University (GWU) and the founding Director of the Center for Intelligent Systems Research (1996-2015), the Director of the “Transportation Safety and Security” University Area of Excellence (2002-2015), and the co-founder of the National Crash Analysis Center (1992) and its Director (1998-2002 & 5/2013-7/2015). Earlier, he was an Assistant Professor at Pennsylvania State University, York, PA (1989-92) and worked as an engineer/project manager in the industry (1983-89.) He has nearly four decades of academic and engineering experience and has conducted pioneering research in dynamics and control, intelligent systems, and applied mechanics, with applications in intelligent vehicles, vehicle dynamics and control, automotive safety, neuroengineering, and robotics.