



## DEPARTMENT OF COMPUTER SCIENCE

TEXAS TECH  
Whitacre College of Engineering

### Vehicle Computing: A New Computing Paradigm in the Era of Autonomous Driving

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3:30 p.m.

T Fuller Petr Eng Research 00208



**Abstract:** Vehicles have been used mainly for transportation in the last century. With the proliferation of onboard computing and communication capabilities, we envision that future connected and autonomous vehicles (CAVs) will serve as a mobile computing platform in addition to their conventional transportation role for the next century. In this presentation, Dr. Shi will present the vision of Vehicle Computing, a new era for the automotive industry, followed by two vital enabling technologies: autonomous driving and edge computing. Finally, he will talk about the recent development of D-STAR, a live and evolving testbed for vehicle computing on the STAR campus at the University of Delaware.

**Bio:** Dr. Weisong Shi is an Alumni Distinguished Professor and Department Chair of Computer and Information Sciences at the University of Delaware (UD). He leads the Connected and Autonomous Research (CAR) Laboratory. Dr. Shi is the Honorary Center Director of a recently funded NSF eCAT Industry-University Cooperative Research Center (IUCRC) (2023-2028), focusing on Electric, Connected, and Autonomous Technology for Mobility. He is an internationally renowned expert in edge computing, autonomous driving, and connected health. His pioneer paper, "Edge Computing: Vision and Challenges," has been cited over 10k times. He is the Editor-in-Chief of IEEE Internet Computing Magazine and the founding steering committee chair of several conferences, including the ACM/IEEE Symposium on Edge Computing (SEC), IEEE/ACM International Conference on Connected Health (CHASE), and IEEE International Conference on Mobility (MOST). He is a fellow of IEEE and a member of CRA's Computing Community Consortium (CCC) Council.