

Dan Work

Professor of Civil and Environmental Engineering at Vanderbilt University

Nashville, TN, US

Expert in self-driving cars and traffic management.

Biography

Dan Work is a Chancellor Faculty Fellow and professor in civil and environmental engineering, computer science, and the Institute for Software Integrated Systems at Vanderbilt University. He has held research appointments at the University of Illinois at Urbana-Champaign (2010-17), Institute for Pure and Applied Mathematics (2015, 2020), Microsoft Research Redmond (2009), and Nokia Research Center Palo Alto (2007-09). Dr. Work pioneered methods for monitoring and controlling road traffic using vehicles, rather than fixed infrastructure, to sense and control road congestion. In 2015 he and his collaborators were the first to experimentally demonstrate that "phantom" traffic jams, which seemingly occur without an obvious cause but are due to human driving behavior, can be eliminated via control of a small fraction of automated vehicles in the flow. Work is a recognized transportation expert whose work has appeared in media outlets including ABC's Good Morning America, Reuters, Wired, and MIT Technology Review. Dr. Work received a 2018 Gilbreth Lectureship from the National Academy of Engineering and a 2014 CAREER Award from the National Science Foundation. He earned a BS from Ohio State in 2006, and an MS (2007) and Ph.D. (2010) from UC Berkeley, all in civil and environmental engineering.

Areas of Expertise

Adaptive Cruise Control, Traffic, Inverse Modeling, Connected and Autonomous Vehicles, Traffic Estimation and Control, Transportation Cyber Physical Systems, Self-Driving Cars, Transportation Data Analysis, Mathematical Models of Traffic, Mobile Sensing, Cruise Control

Education

University of California, Berkeley

Ph.D. Civil and Environmental Engineering

University of California, Berkeley

M.S. Civil and Environmental Engineering

The Ohio State University

B.S Civil and Environmental Engineering

Accomplishments

2018 Pioneers
Connected World

NAE Gilbreth Lecturer
National Academy of Engineering, 2018

NAE China US Frontiers of Engineering Symposium Speaker
National Academy of Engineering, 2017

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