



“The Role of Innovations in Achieving Sustainability”

Prof. Asad J. Khattak, PhD

Beaman Distinguished Professor

Department of Civil and Environmental Engineering

The University of Tennessee

Thursday, March 24th, 2022 — 3:00 PM (EDT)

Meeting Link: <https://umich.zoom.us/j/93935374338> (Passcode: NGTS)

Abstract:

The presentation attempts to answer a fundamental question: How can societal goals of safety and sustainability be achieved by harnessing innovations? We envision a broad range of intelligent transportation system strategies—including connected and automated vehicles, transformations from petroleum-based fuels, and smart growth that can have substantial sustainability impacts. Enabled by the growing computational power, ubiquity of sensors, big data, and Artificial Intelligence, cities have new opportunities to be more accessible, energy efficient, cleaner, and supportive of more diverse emerging technologies. The presentation will discuss the value of various strategies to better manage urban systems and explore the role of powerful modeling, simulation, and visualization techniques in terms of analyzing big data generated by large-scale urban systems. Specific topics include understanding driving volatility to provide driver feedback, the role of alternative fuel vehicles using a combination of behavioral and sensor data, and the impact of smart growth developments on traveler behavior. The presentation will highlight the promise and the challenges/uncertainties inherent in transitioning to a more technologically advanced system.

Bio:

Dr. Asad J. Khattak is Beaman Distinguished Professor of Civil & Environmental Engineering at The University of Tennessee, Knoxville. He serves as the Coordinator for the Transportation Group in the Department, and is Associate Director for the Collaborative Sciences Center for Road Safety—a National University Transportation Center, based at UNC-Chapel Hill. Dr. Khattak’s research focuses on various types of innovations related to intelligent transportation technologies, transportation safety, and sustainable transportation. Dr. Khattak received his Masters and Ph.D. degrees in Civil Engineering from Northwestern University. He serves as Editor of Science Citation Indexed Journal of Intelligent Transportation Systems, with a 2-year impact factor of 4.277.