ABSTRACT: With increasing attention focused on connected and automated vehicles, this presentation will discuss the opportunities and challenges for their development and deployment. How can they transform various processes in the transportation system, especially through the data they generate? Will they have a profound impact on mobility, safety and the environment? We will present a framework for analysis and demonstrate the use of modeling and simulation techniques. We will discuss work undertaken in a National Science Foundation sponsored study on how higher driving volatility, e.g., hard accelerations or hard braking relates to mobility, safety and the environment. The implications of our analysis for travel behavior changes, future vehicle use, and transportation system performance will be discussed.

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