

## **Anticipating a World of Automated Vehicles: Cost, Energy, & Urban System Implications**

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Connected and (fully-) automated vehicles (CAVs) are set to disrupt the ways in which we travel. Shared AVs (SAVs) will offer many people access to such technologies at relatively low cost (e.g., \$1 per mile), with empty-vehicle travel on the order of 10 to 15 percent of fleet VMT. If SAVs are smaller and/or electric, and dynamic ride-sharing is enabled and regularly used, emissions and energy demand may fall. If road tolls are thoughtfully applied, using GPS across all congested segments and times of day, total VKT may not rise: instead, travel times - and their unreliability - may fall. If credit-based congestion pricing is used, traveler welfare may rise and transportation systems may ultimately operate near-optimally. This presentation will present research relating to all these topics, including forecasts of land use change across the Austin region.