

# Towards Scaling and Deploying mixed Autonomy Traffic

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## **Abstract:**

The mixture of automated and human driven vehicles poses a multitude of technical challenges, but holds opportunities for congestion mitigation and safety. Motivated by recent successes achieving system-level congestion elimination on small idealized traffic settings using deep reinforcement learning, this talk addresses two major remaining obstacles: scaling to a diverse array of traffic scenarios, and near-term concerns around the robustness and trust of automated vehicles. To overcome these challenges, the work studies: 1) the potential of transfer learning for generalizing knowledge across diverse traffic scenarios, and 2) the potential for human drivers to emulate learned congestion-mitigating control laws. These results have implications for sustainability and the near-term impact of mixed fleets.