

# MODEL PREDICTIVE CONTROL FOR VEHICLE GUIDANCE

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## **Abstract**

This talk will cover the use of MPC in conjunction with path-planning to achieve high performance control for vehicle guidance, including examples of work on spacecraft, Unmanned Air Vehicle teams, and robotic rovers. These examples will be used to illustrate how MPC has been tailored to suit the vehicle guidance problem, covering issues such as distributed and cooperative MPC, robustness and safety (to be defined), fast implementation, and performance prediction.