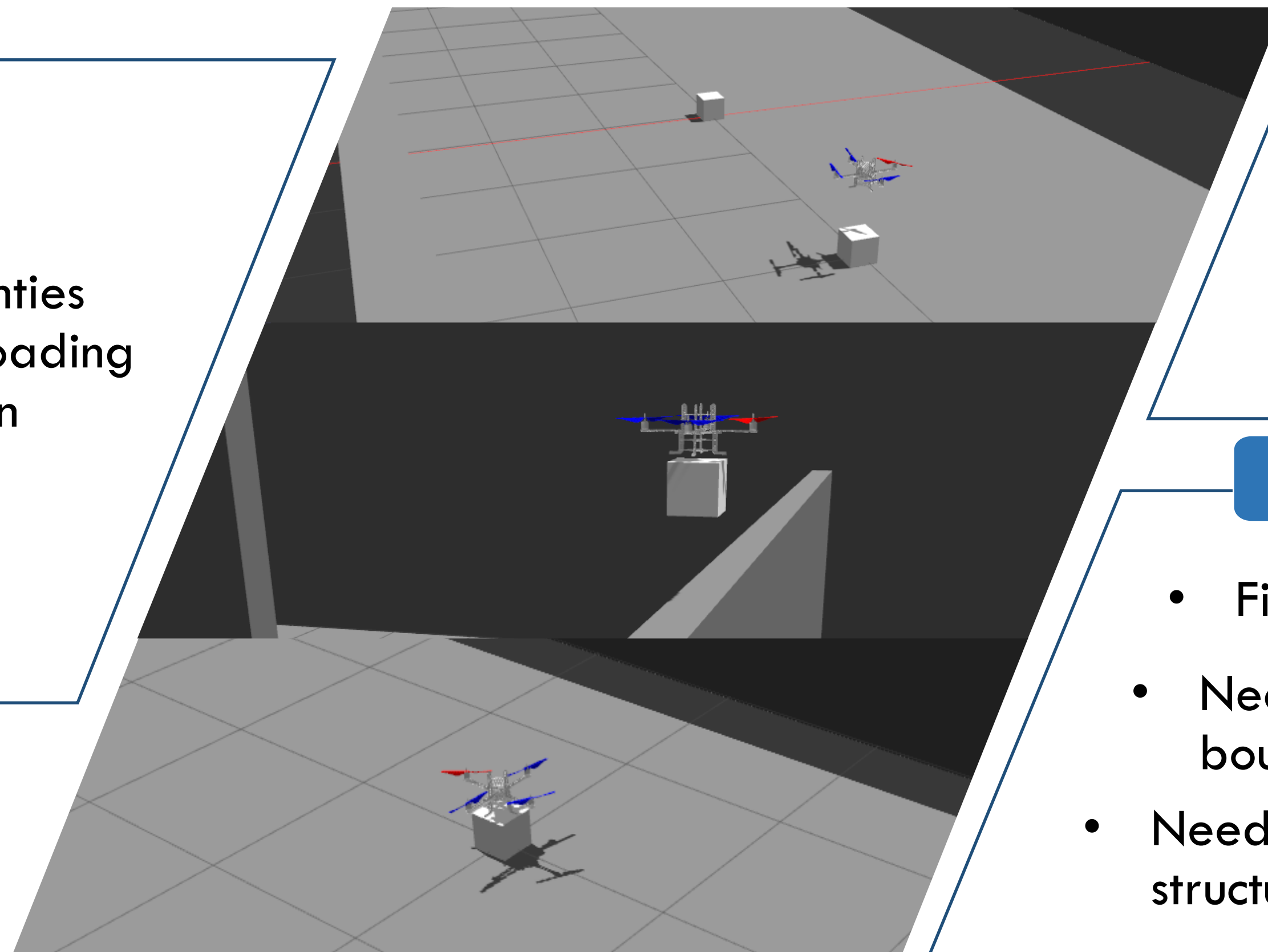
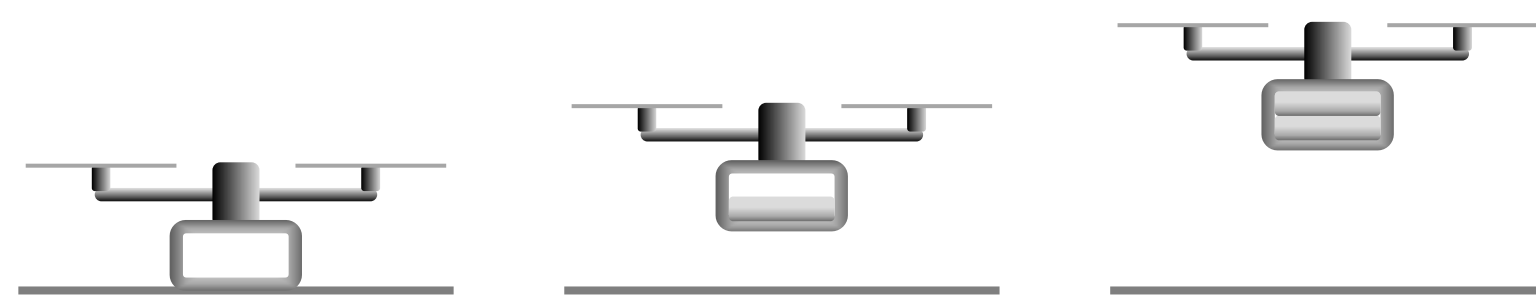




Aerial Transportation of Unknown Payloads: Adaptive Path Tracking for Quadrotors

Problem Statement

- Designing an adaptive controller for quadrotor with variation in dynamic parameters due to parametric uncertainties caused by external disturbances, and loading and unloading of payload with unknown mass and inertia.
- Ensuring boundedness of closed-loop trajectories



Controllers Designed

- Adaptive sliding mode controller
- Switched mode adaptive controller

Advantages

- Finite time convergence
- Needs no constraint on the bounds of the uncertainties
- Needs no knowledge about the structure of dynamic parameters