

# Advances in Deferred-Decision Trajectory Optimization (DDTO)

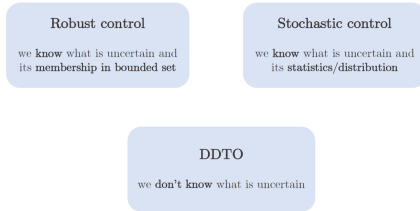


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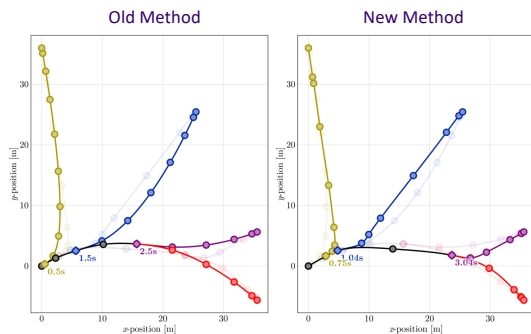
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## Overview

- ▶ **DDTO Philosophy:** Deferring decision affords more time to understand/model/quantify *uncertainties* in the environment.
- ▶ **DDTO-SCP Algorithm:** Advancement to solve more complex problems with *Sequential Convex Programming (SCP)*

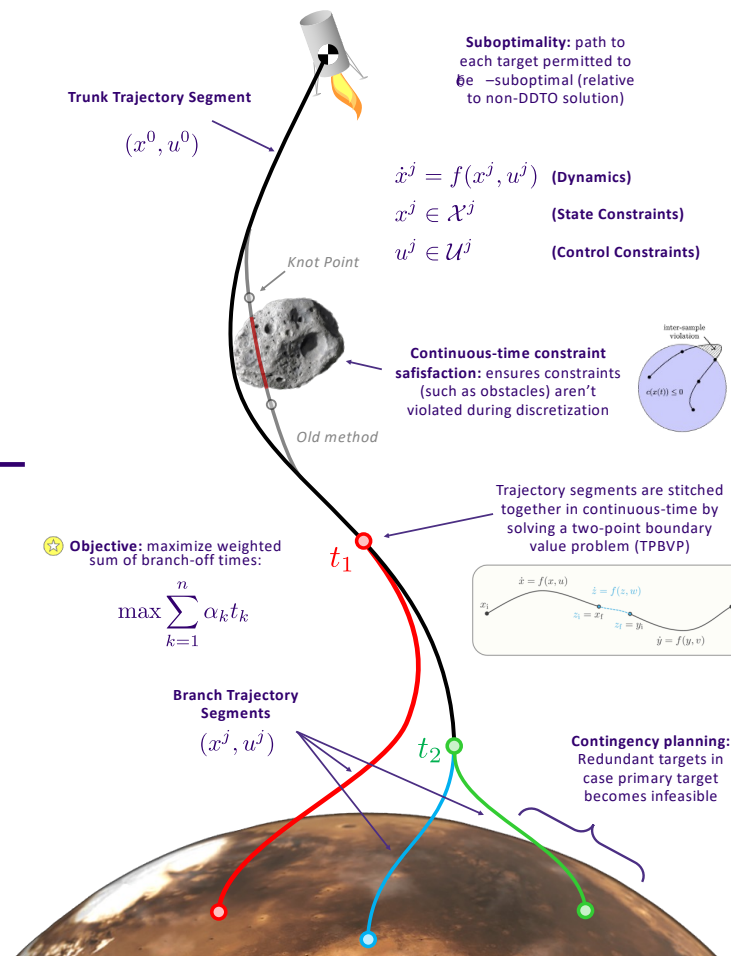


## Comparisons to Previous Method



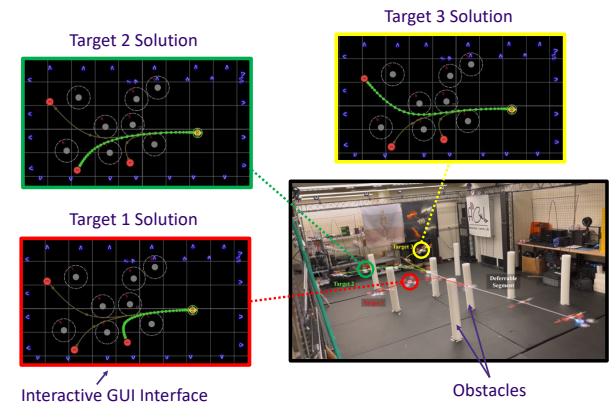
- Nonlinear Dynamics
- Nonconvex Constraints
- Free-final-time
- Less Restrictive Design
- May be Locally Optimal
- More hyperparameters

## The DDTO-SCP Framework



## Hardware Testing

Multirotor Obstacle Avoidance



## High-Fidelity Simulation

Multirotor Landing (HALO framework)

