**Present:**

Daniel Williams, Professor Eric Kerrigan, Ian McInerney

**Outcomes:**

Literature Survey

* Read IROS 2018 papers
* In the literature survey: look for common threads from goal to outcome

Explore optimal control

* Be aware of balance between optimality and computational feasibility
* Be aware of the distinction between what you want to solve and what is solvable
* Read Matthew Kelly’s tutorial paper: An Introduction to Trajectory Optimization
* Project certain to involve non-linear optimal control, investigate ICLOCS 2 package

Tips about solution design

* Be aware that the estimation problem (of the leader’s pose with respect to the follower) can be formulated as a control problem
* Investigate PID controller and optimal controller performance in parallel (the former as a benchmark)
* Investigate whether the design problem can be formulated as a **regulation problem**?
* Look at the bigger picture for cooperative transportation (in addition to aerial platforms)

Reference materials

* Consult John Betts’s Practical Methods for Optimal Control
* Consult Nocedal and Wright’s Numerical Optimization
* Consult Boyd’s Introduction to Convex Optimization (Lecture videos available online)