

Problem 4

Skimmed

Problem 5

The Dual SLAM Problem

There are a lot of interesting optimization problems in the task of Simultaneous Localization and Mapping (SLAM). [This paper](#) investigates the formulation of a dual problem for SLAM and uses it for verification. I would propose perhaps implementing the paper or trying to extend it in some way. I would be interested in trying to leverage something about this duality for finding a solution as opposed to just verification.

Robotic Path Planning Through Convex Optimization

Convex optimization methods for robotic path planning in some interesting context.

Alternate Approaches for Training Neural ODEs

I am not really sure what this would entail, but I think these types of networks ([NODE](#), [ANODE](#), [LTC](#), etc.) are very interesting. I propose potentially investigating alternate methods of training.

Problem 6

Project Partner -> Jaden Wang

It is my understanding that Jaden talked to you about us being in a group together and just listing the other's name, but that I should explicitly remind you here.