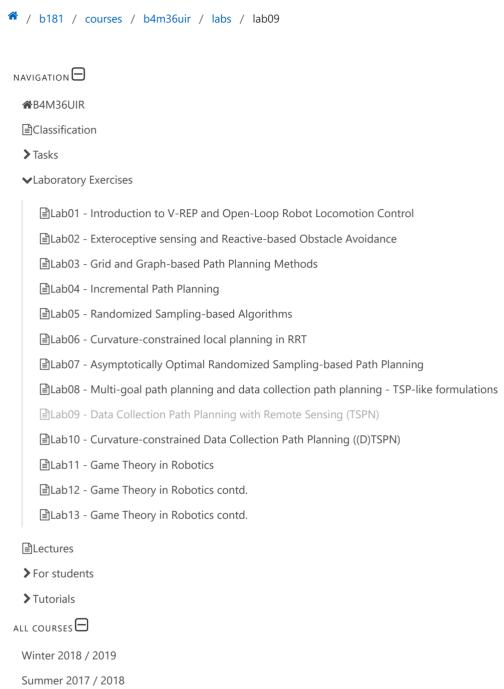
CourseWare Wiki



B4M36UIR & BE4M36UIR

Older

Lab09 - Data Collection Path Planning with Remote Sensing (TSPN)

Motivations and Goals Become familiar with approaches for for TSPN and (D)TSP Be able to implement Noon-Bean transformation Tasks (teacher)

Motivations and Goals

Familiarize with the provided codes and implement any version of a decoupled approach.

Resources

Lab10-Maze TSPN in an environment with obstacles

Lab10-Dubins Dubins TSP

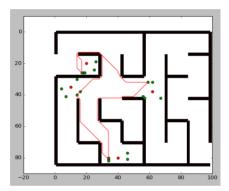
Neighborhoods in maze scenario

1. Decoupled approach

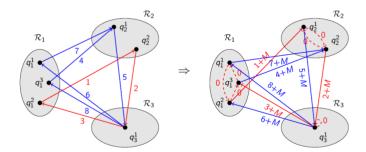
- 1. First, find the goal sequence by the ETSP. Then, find the final trajectory.
- 2. First, find the goal sequence by the TSP utilizing the found shortest paths between centres of the given regions. Then, find the final trajectory.

2. Sampling-based approach

1. Create samples in the goal neighborhoods and all shortest paths. Then, transform the problem to the ATSP by the Noon-Bean transformation



Noon-Bean transformation



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