# EE631 Project 1 Assignment

Please select one of the following project options:

1. In Stage/Player environment, implement D* and simulate the multi-robot motion planning algorithm presented in class.
   Helpful tips: You can use the posted sample D* codes in C/C++, and run it using C/C++ compiler. Based on that, implement the multi-robot motion planning algorithm in Stage/Player according to the flow-chart showed in class.

2. In Stage/Player environment, implement the dynamic collision avoidance algorithm using parameterized polynomials.
   Helpful tips: You can use the posted sample codes in Matlab for the algorithm. Run it in Matlab, and then work on its implementation in Stage/Player.

3. Develop a new path planning or motion planning method, for any robot platforms including autonomous ground vehicle (AGV), autonomous underwater vehicle (AUV), or autonomous aerial vehicle (AAV).
   Helpful tips: If you choose this option, you can continue it to the final project. In the stage of project 1, you need to formulate the problem, state assumptions and constraints of the problem, then propose a preliminary algorithm. You may continue to implement and simulate the algorithm in the final project development.

For any one of the options, you need to submit a report to summarize the work, and attach codes if apply. In the report, you must have the sections to introduce the objective of the project, to illustrate briefly the algorithm, to show simulation results (except option 3), to summarize lessons learned, and/or to suggest improvement and future work.

Due: Two weeks from assignment.