

ME 449 Robotic Manipulation
Spring 2014
Problem Set 5
Due Friday May 29 at beginning of class

1. Chapter 10 exercise 1.
2. Exercise 2.
3. Exercise 3.
4. Exercise 4.
5. Exercise 7.
6. Exercise 8.
7. Exercise 9.
8. Exercise 10. Turn in your program results for an example with $N = 10$ and $E = 20$ and where a solution exists. Turn in your well-commented code, too.
9. Exercise 11. Run the code with the original heuristic and the modified heuristic on at least 100 different graphs with 20 nodes and 100 edges and report the average, maximum, and minimum of both (1) the running time of the search (e.g., in milliseconds) and (2) the distance of the solutions found. Also report the number of times there is no solution. (Note: you should write code to do these experiments for you automatically!) Turn in the results for one particular graph using both the original heuristic and the modified heuristic. This example should be “typical” of the results.