

Discrete Mathematics Journal

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In this week we will introduce a new concept: Approximation Algorithms, or algorithms with performance guarantee. Please do the following:

1. Generate an instance of the Traveling salesman Problem (TSP) of size 12. (Use the graph generation program in the supplements folder of Week-5). On it find a MCST. Draw the tree on a paper. Double every edge of the tree and construct an eulerian cycle on this graph.

BRING IT TO CLASS!

2. The 2 hours mid-term will take place during class on Tuesday, 08 Nov.
3. The folders have been reorganized, a table of contents has been placed in the web site. Many weeks include a Supplements folder with many samples and review exercises. Study them.
4. Topic list:
 - a. The assignment problem.
 - b. Graphs (basic notions)
 - c. Trees, spanning trees, labeled trees.
 - d. Graph traversals, MCST, Shortest Path algorithms.
 - e. Bipartite graphs.
 - f. Matchings, general and in bipartite graphs.
 - g. SDR's
 - h. Eulerian cycles, applications.
 - i. Euclidean TSP and algorithms with performance guarantee.
 - e. Linear Programming.

Everything in the lecture notes or the supplements is "fair game."