INFO 6205, spring 2016

Homework 3 ---- Question 1 Possible Points --- 50

Due Feb 15 11:59 PM

The purpose of the homework assignment is to learn how to do empirical analysis of algorithms based on scientific principles. The traditional matrix multiplication algorithm performs very well for small matrices and does poorly on problems of large sizes. On the other-hand, Strassen's matrix multiplication algorithm is performing efficiently on problem sizes that are large. You are to combine the two algorithms into one program where for large matrix sizes, the program will execute Strassen's and as the problem size gets smaller the program will switch to the traditional method. In your empirical examination, you must determine the optimum breakeven point. We need to see good data gathering, evidence of fact, method used, how you dealt with the fluctuations in measurements, graphs, predictions, etc. Also, studying other algorithms with even more efficiencies than Strassen's.

--- **50 Points**