Homework set 7: Due November 24, at midnight.

1. Implement a Cholesky factorization routine in Matlab more or less as the algorithm is given in the Trefethen-Bau’s text. Then, rewrite it using recursion in Matlab.

2. Write a Matlab program to solve tridiagonal systems of linear equations. Start by developing it for a case where we know that pivoting is not required, e.g., for diagonally dominant matrices, and then rewrite to allow partial pivoting. Start your work by designing a reasonable data structure and make sure that you describe your storage scheme in comments in your program.