

# ME 578 Theory and Applications of Wavelets

Take-Home Examination #2; Due Date: February 11, 2009

**Problem#1.** Solve all problems of Chapter 2 of Kaiser.

**Problem#2.** Write a Matlab code for the solved example problem(s) on WFT in Kaiser Chapter 2. Generate results and compare them with Figs. 2.1 to 2.6 of Kaiser. You are encouraged to consult with other students but you must write your own code and do the computation experiments yourself.

**Problem#3.**

- (a) In this part of the problem, experiment with the effects of sampling time and small discontinuities on the Fourier coefficients. You are encouraged to consult with other students to choose the example problems but you must write your own code and do the experiments yourself.
- (b) Repeat the above with two-dimensional problems.