Numerical Methods HW9
(Due 4/11/2011)

1. Pick a favorite image. It could be a Picasso, a face,
Rembrandt, WMAP data, a galaxy, Brooklyn bridge,
etc ...and digitize it (convert the image into pixel
data).
Hint: You can use any software to do digitization. One
suggestion is using the function ImageData in Mathematica.

2. Using FFTs and wavelets (choose your own wavelet
filters) to manipulate the data. Print out the
transformed data matrix. Then reconstruct the image using
the reverse transformation. You should get the original
image.
Hint: You can use the function Image in Mathematica to
reconstruct the image from data files.

3. Compress the image using both FFT and wavelets. Try to
compress to a similar size for FFT and wavelets, and
compare the quality of the images.

Don't spend vast amounts of time on this. It is meant to
be fun!!