1033-41-241 **David W Roach*** (david.roach@murraystate.edu), Department of Mathematics and Statistics, Murray State University, Murray, KY 42071. *Wavelet Parameterizations and Image Compression.*

In this talk, we will present a complete parameterization of the length eight and ten wavelets with no parameter constraints. These parameterizations contain wavelets with varying numbers of vanishing moments as well as the standard Daubechies wavelets, "least asymmetric" wavelets, coiflets, and some tight frames. Using an image compression scheme, we will demonstrate how the shape of the frequency response is the best indicator of the compression performance rather than the number of vanishing moments. Additionally, we will give several wavelets with only one vanishing moment that perform better than the Daubechies wavelets and the biorthogonal FBI 9/7 wavelet for some particular images. (Received September 11, 2007)