

1145-F1-320

Eric Stachura* (estachur@kennesaw.edu) and **Andrew K Hunter**. *A Quantitative method for choosing optimal Daubechies wavelets.*

I will discuss an undergraduate senior thesis project on the analysis of wavelets. In particular, I will discuss work with a previous student of mine (A. K. Hunter) on the development of new inequalities useful for choosing wavelets for applications. Such applications include the numerical analysis of partial differential equations and the visualization of signals. For functions of various smoothness (differentiability), we prove a new inequality which shows how well such a function can be approximated by its wavelet transform. (Received August 31, 2018)