1145-46-2369 **Cameron Louis Williams*** (`williacl@potsdam.edu`), **Nikhil N Pandya**, **Donald J Kouri** and **Bernhard G Bodmann**. *Coupled Supersymmetries and Associated Fourier-Like Transforms: New Generalizations of the Quantum Harmonic Oscillator and Fourier Transform.*

Coupled supersymmetry is a specific subclass of supersymmetries that more accurately reflect the properties of the harmonic oscillator. Coupled supersymmetries have exactly solvable eigenfunctions and eigenvalues, uncertainty principles, and coherent states. The harmonic oscillator eigenfunctions, eigenvalues, uncertainty principles, and coherent states may be realized as special cases. Additionally, there exist associated Fourier-like transforms for coupled supersymmetries. In this talk, I will develop coupled supersymmetry and establish some of the basic results therein, including eigenfunctions, eigenvalues, uncertainty principles, and their associated Fourier-like transforms. (Received September 25, 2018)