1171-35-133 **Mathew Johnson*** (matjohn@ku.edu), 1460 Jayhawk Blvd., 405 Snow Hall, Lawrence, KS 66049. *Stability of Periodic Lugiato-Lefever Waves.*

In this talk I will describe recent advances in the stability analysis of T-periodic stationary solutions of the Lugiato-Lefever equation, a damped nonlinear Schrodinger type equation with forcing that arises in nonlinear optics. Several recent works have studied the stability of such waves to so-called "subharmonic" perturbations, i.e. NT-periodic perturbations for some natural number N. These results, however, lack uniformity in both the perturbation decay rates and the allowable size of the initial perturbation. The goal here is to introduce a new methodology by which one can obtain subharmonic stability results which are uniform in N. This is joint work with Mariana Haragus and Wesley Perkins. (Received August 09, 2021)