## 1161-35-219 **Jason A Kurz\*** (jkurz@clemson.edu). The Mindlin Timoshenko Plate Model and Related Carleman Estimates.

In this talk we consider the Mindlin-Timoshenko (MT) model which is a system of three strongly coupled second-order hyperbolic partial differential equations that describe the motion of a thin plate under certain considerations. In particular, we provide Carleman type estimates for the MT system by properly diagonalizing the principle part of the equations and applying Carleman estimates for coupled systems of wave equations. Such estimates may lead to applications ranging from inverse problems for determining certain coefficients in the system to presenting a more tangible path for establishing observability inequalities for the system, and therefore the corresponding exact boundary controllability results. (Received August 18, 2020)