1139-35-118   **Shijun Zheng*** (`szheng@georgiasouthern.edu`), Department of Mathematical Science, Georgia Southern University, Statesboro, GA 30460, and **Christopher Leonard**. *Sharp condition on stability for rotational NLSE in 3D.*

I will discuss our recent work concerning finding a criterion that determines the regimes for stability and instability for mass-critical nonlinear Schödinger equation with rotation in three dimensions. The technical challenges come from the symmetry breaking between the rotational term and anisotropic trapping potential, where the angular moment of a particle is not conserved in time. The analysis involves a virial type identity that requires careful estimation along with an application of certain comparison theorem. This is joint work with Christopher Leonard. (Received February 05, 2018)