

1173-42-260

**Ben Jaye\*** (bjaye3@gatech.edu), School of Math, Georgia Tech, Atlanta, GA 30332.

*Uncertainty principles associated to sets satisfying the Geometric Control Condition.*

In this talk, we shall discuss some forms of the uncertainty principle suggested by problems in control theory. We obtain a version of the classical Paneah-Logvinenko-Sereda theorem for the annulus. More precisely, we show that a function with spectrum in an annulus of a given thickness can be bounded, in L2-norm, from above by its restriction to a neighborhood of a set satisfying the Geometric Control Condition, with constant independent of the radius of the annulus. We apply this result to obtain energy decay rates for damped fractional wave equations. Joint work with Walton Green (Wash U St Louis) and Mishko Mitkovski (Clemson). (Received September 21, 2021)