1145-35-464   **Gigliola Staffilani*** (`gigliola@mit.edu`), MIT room 2-251, Cambridge, MA 02139, and **Bobby Wilson**. *On long time instability of the zero solution to a certain Nonlinear Schrodinger equation.*

The aim of this talk is to analyze the long time instability of the zero solution of the 2D periodic defocusing cubic NLS, while outlining the differences between the dynamics on rational versus irrational tori. In particular we will analyze the structure of the resonance sets in these two different set ups. This instability can also be related to well known phenomena such as energy transfer and forward cascades. (Received September 06, 2018)