

1151-35-135

Tristan Leger* (tleger@cims.nyu.edu), 251 Mercer Street, New York, NY 10012. *Long-time behavior of NLS with potentials.*

Equations with potentials appear naturally in physics when an external force is present, since said force is often modelled by a potential term. Moreover, the question of the asymptotic behavior for such equations is closely related to the stability of special solutions (traveling waves, solitons, ...).

The talk will focus on the long-time behavior of NLS in 3D with quadratic nonlinearity and two types of potentials (electric time dependent on one hand, and electromagnetic time independent on the other). The methods that will be described consist in bringing together the space-time resonance theory with tools used in the study of the linear Schrödinger equation (Strichartz and smoothing estimates, boundedness and representation of wave operators). (Received August 15, 2019)