Global well-posedness and scattering for the defocusing, L^2 -critical, nonlinear Schrödinger equation when $d\geq 3$

May 27, 2010

In these talks we will investigate the L^2 critical Schrödinger initial value problem

$$iu_t + \Delta u = |u|^{4/d}u,$$

 $u(0,x) = u_0.$ (0.1)

in dimensions $d \ge 3$. We prove this using the concentration compactness method. We use an interaction Morawetz estimate localized to low frequencies.