

MIT/HARVARD ANALYSIS SEMINAR

Gang Zhou

Toronto

will speak on:

"On Solitons Dynamics in Nonlinear Schrödinger Equations with potential"

Date : *Friday, February 10, 2006*

Time : *4:15pm*

Location: *Science Center, Room 222*

Abstract: Nonlinear Schrödinger equations with external potentials arise in condensed matter physics, nonlinear optics, plasma physics, theory of water waves and in other areas of physics and applied mathematics. For strong nonlinearities such equations have solitons trapped near minima of the potentials. We prove, under certain conditions on the potentials and initial conditions, that trapped solitons are asymptotic stable. The dynamics law of motion of the soliton is close to Newton's equation but with a dissipative term due to radiation of the energy to infinity.