



Speaker: Jean-Claude Saut
Universite de Paris-Sud and CNRS

Tuesday, March 19, 2013
11:00 AM
258 Hurley Hall

Title: "Dispersive blow-up for Schrödinger type equations"

Abstract:

The systems describing the evolution of surface or interface water waves are not derived from first principles but by asymptotic expansions with respect to some small parameters, starting from the full Euler system with free surface(s). Their solutions are thus not supposed to be physically relevant for all time but on some "large" time intervals of length, for instance $1/\epsilon$ if ϵ is small.

It turns out that establishing such a result is not obvious for *systems* (for scalar models like KdV, KP, Benjamin-Ono, ..., an appropriate local theory combined to conservation laws imply the global well-posedness).

We will present large time existence results for Boussinesq type systems and for a variant of the *Full dispersion* system of surface water waves (joint work with Xu Li).