MIT/HARVARD ANALYSIS SEMINAR

Jonathan Mattingly

Duke University

will speak on:

"Stochastic Navier Stokes: Spectral gaps and Ergodicity"

Date : *Friday, March 3, 2006*

Time : *4:15pm*

Location: *MIT 2-142*

I will discuss recent progress in understanding mixing and ergodicity in stochastically forced PDEs. I will use the 2D stochastic Navier Stokes equation as my primary example. I will concentrate on the case where the forcing is degenerate in that all of the degrees of freedom are not directly agitated stochastically. This hyopelliptic setting will require an infinite dimensional version of Hormander's "sum of squares theorem". The discussion will include the use of ideas from Malliavin calculus and a replacement for the classical strong Feller property for Markov semi-group.