Jonathan C Mattingly* (jonm@math.duke.edu), Department of Mathematics, Physics Building, Duke University, Durham, NC 27708. Long Time Behavior of Stochastically Forced PDEs.

I will discuss the ergodic behavior of stochastically forced partial differential equations. I will touch on the question of what makes an SPDE elliptic versus hypo-elliptic and how this is reflected in their qualitative behavior. I will use a number of examples of physical and modeling interest to illustrate my discussion. Including the 2D Navier-Stokes equations and reaction diffusion equations. (Received September 22, 2009)