1056-37-1929   **Jonathan C Mattingly*** (`jonm@math.duke.edu`), Department of Matthematics, 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 verses hypo-elliptic and how this is reflected in their qualitative behavior. I will use a number of example of physical and modeling interest to illustrate my discussion. Including the 2D Navier- Stokes equations and reaction diffusion equations. (Received September 22, 2009)