

P. Giulietti, "*Linear response for dynamical systems with noise*"

We present some results on dynamical systems with random noise. By studying an annealed transfer operator, we show that noise allows for linear response under very mild assumptions on the dynamical system. The key argument revolves around controlling the operator by pairs of norms, such as a Wasserstein-type norm and L^1 , which take into account both the long-term behavior of the system and the regularization effect of the noise. Time permitting, I will show how linear response can be proven if assisted by rigorous numeric for some systems which are still out of reach by analytical methods. (joint work with S. Galatolo).