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Random Iteration of Functions

The dynamics of the iteration of some function is a classical area of study within dynamical systems, iteration of complex polynomials being a particularly striking example. It is no surprise then that adding randomness is a natural thing to do, particularly since many Markov chains can be viewed a random iteration of functions.

In this talk we give a brief background on general results in the area of convergence theorems for random iteration of functions, with particular attention to the case of families of random contractions. After this we concentrate on some results on a simple model of time inhomogeneous random iteration. As is the case for Markov chains, allowing the dynamics to vary with time presents new complications.