

Iterated Random Functions

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Technical Report number (Dept. of Statistics, Stanford University): **1998-12**

Date: **August 1998**

Abstract:

Iterated random functions are used to draw pictures or simulate large Ising models, among other applications. They offer a method for studying the steady state distribution of a Markov chain, and give useful bounds on rates of convergence in a variety of examples. The present paper surveys the field and presents some new examples. There is a simple unifying idea: the iterates of random Lipschitz functions converge if the functions are contracting on the average.