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Ergodic Theory Dynam Syst 26(4):1203-1224 Google Scholar 90.
Maass A, Martínez S, Pivato M, Yassawi R (2006) Attractiveness of the Haar measure for the action of linear cellular automata in abelian topological Markov chains.

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Ergodic Theory of Cellular Automata | SpringerLink (1975). The ergodic theory of CA is important for several reasons: • CA are topological dynamical systems. We can gain insight into the topological dynamics of a CA by identifying its invariant measures, and then studying the corresponding measurable dynamics (see also Chaotic Behaviour of CA and Topo-

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Ergodic theory is often concerned with ergodic transformations. The intuition behind such transformations, which act on a given set, is that they do a thorough job "stirring" the elements of that set (e.g., if the set is a quantity of hot oatmeal in a bowl, and if a spoonful of syrup is dropped into the bowl, then iterations of the inverse of an ergodic transformation of the oatmeal will not ...

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Ergodic theory - Wikipedia

The main contribution of this paper is an easy-to-check necessary and sufficient condition for a linear cellular automaton over Z^m to be ergodic. We prove that, for general cellular automata, ergodicity is equivalent to topological chaos (transitivity and sensitivity to initial conditions).

On ergodic linear cellular automata over Z^m | SpringerLink

An Introduction to Ergodic Theory (Springer: Berlin, 1982). [14]
Wang, H. . Proving theorems by pattern recognition II Bell System Tech. J. 40 (1961), 1 - 41 .

The topological entropy of cellular automata is ...

This textbook provides a broad introduction to the fields of dynamical systems and ergodic theory. Motivated by examples throughout, the author offers an approachable entry-point to the

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dynamics of ergodic systems. Applications complement the theory, ranging from financial fraud to virus dynamics.

Ergodic Dynamics - From Basic Theory to Applications ...

Ergodic theory In a series of papers published in 1932, von Neumann made foundational contributions to ergodic theory, a branch of mathematics that involves the states of dynamical systems with an invariant measure.

John von Neumann - Wikipedia

Ergodic theorem, ergodic theory, and statistical mechanics PNAS 2015 112:1907 . Core Concept. Steven Ashley Core Concept: Ergodic theory plays a key role in multiple fields PNAS 2015 112:1914 . Classic Article. J. v. Neumann Proof of the Quasi-Ergodic Hypothesis PNAS 1932 18:70 . Classic Article. George D. Birkhoff

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PNAS Classics | PNAS

The application of formal language theory to the dynamical behaviour of cellular automata. A dissertation presented to the faculty of Princeton University in Candidacy for the degree of Doctor of Philosophy (1988).

On the sofic limit sets of cellular automata | Ergodic ...

Some more results about ergodic properties of surjective cellular automata are obtained Let X be a closed translationally invariant subset of the d -dimensional full shift $P^{\mathbb{Z}^d}$, where P is a finite set, and suppose that the \mathbb{Z}^d -action on X by translations has positive topological entropy. Let G be a finitely generated group of polynomial growth.

On the ergodic theory of cellular automata and two ...

Theoretical Computer Science ELSEVIER Theoretical Computer Science 205 (1998) 135-144 - Ergodic characterization of linear

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cellular automata over Z^m Tadakazu Sato Department of Information and Computer Science, Toyo University, 2100, Kujirai, Kawasoe, Saitama, Japan Received May 1996; received in revised form February 1997 Communicated by M. Ito Abstract In this paper, we introduce a set $E(\alpha)$ which consists of all points $x \in X$ such that the composite map α^n of a shift transformation ...

Ergodic characterization of linear cellular automata over ...

As a byproduct, we get that for linear cellular automata ergodicity is equivalent to topological transitivity. Finally, we prove that for 1-dimensional linear cellular automata over Z^m , regularity (denseness of periodic orbits) is equivalent to surjectivity.

Ergodicity, transitivity, and regularity for linear ...

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RIGIDITY RESULTS IN CELLULAR AUTOMATA THEORY ...

[27] B. Hellouin de Menibus and M. Sablik, Characterization of sets of limit measures of a cellular automaton iterated on a random configuration, Ergodic Theory and Dynamical Systems 38 (2018), no. 2, 601–650.

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Marcovici , Sablik , Taati : Ergodicity of some classes of ...

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