An algebraic framework for random satisfiability. Preliminary report.

We introduce the ‘truncator’ map as a dynamical system on the space of configurations of a random Boolean network. We represent the resulting symbolic dynamics as a non-commutative ring and attempt to classify its periodic orbits. We construct a stochastic model on the space of endomorphisms of the resulting algebraic structures, and use it to probe the complexity of random satisfiability problems. (Received September 16, 2013)