

# Adding machine, Automata and Julia sets

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Abstract.

A stochastic adding machine (defined by P. R. Killeen and T. J. Taylor) is a Markov chain whose states are natural integers, which models the process of adding the number 1 but where there is a probability of failure in which a carry is not performed when necessary. In this lecture, we will talk about dynamical, spectral and probabilistic properties of extensions for the stochastic adding machine and their connections with other topics as Julia sets, Automata and Dynamical Systems on Banach spaces