

From Reachability in Markov chains to termination of linear loop programs (via number theory)

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In this talk, I will consider a problem on linear recurrence sequences that has widespread impact on many problems from easy-sounding probabilistic reasoning questions to hard program termination problems. After building several connections, I will present some recent results on the complexity theoretic hardness of the problem as well as links to safety and verification problems for probabilistic dynamical systems.