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Digit distributions in non-linear difference equations

The statistical behaviour of numerical signals recorded from a linear dynamical system is quite simple: Generically, any such signal shows one and only one logarithmic distribution of significant digits a.k.a. Benford's Law. For non-linear systems, the situation naturally is far less clear-cut. Even when the dynamics in question is trivial, determining typical digit distributions may nevertheless be delicate. The talk will discuss a few recent results and (counter-)examples in this regard.