

# Automatic sequences fulfill the Sarnak conjecture

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We use analytic tools to prove that the dynamical system corresponding to any automatic sequence fulfils the Sarnak conjecture. In particular, any complex valued automatic sequence is orthogonal to the Mobius function. In this talk we describe a method to reduce the treatment of automatic sequences to a structure combining synchronizing and invertible aspects. We use (and adopt) a method developed by Mauduit and Rivat, as well as combine ideas for invertible automata by Drmota and Morgenbesser and synchronizing automata by Deshouillers, Drmota and myself. Furthermore, we prove a prime number theorem for many automatic sequences.

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