

# The complexity of real numbers in independent bases

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Some natural properties of real numbers, such as having a periodic expansion or being computable, do not depend on the integer base one chooses to represent them. In contrast, it is expected that having a (non- periodic) low complexity expansion is strongly base-dependent. One typical example is the conjecture that an irrational real number cannot be generated by a finite automaton in two multiplicatively independent integer bases. It is completely open. In this talk, I will explain how this conjecture can be attacked by using Mahler's method in several variables. This is a joint work with Colin Faverjon.