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Joel Henningsen* (jah1728@jagmail.southalabama.edu) and **Armin Straub**
(straub@southalabama.edu). *Sequences Modulo Primes and Finite State Automata.*

A sequence is k -automatic if its values $a(n)$ are determined by a finite-memory function of the base- k digits of n . Rowland and Zeilberger describe two algorithms to obtain, given a sequence as a constant term of powers of Laurent polynomials, the finite state automaton describing its values modulo a power of p . We discuss and analyze these algorithms, and consider examples that include the Catalan numbers, the Motzkin numbers and other famous combinatorial sequences. In particular, we make a conjecture on the number of states of some of the resulting recurrence schemes. (Received January 21, 2019)