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Function-field symmetric functions: in search of a $GF(q)[T]$ -combinatorics

The ring of symmetric functions is more than a ring: It also carries two coalgebra structures and a notion of plethysm (and much more). From an algebraic viewpoint, these structures can be combined to a "plethory" in the sense of Berger and Wieland; roughly speaking, this is a ring whose elements can be evaluated at "alphabets" (actual and reals), as symmetric functions can. This allows some alternative definitions of this ring; in particular, we can view the symmetric functions as the representing object of the functor of big Witt vectors. I introduce an analogue to big Witt vectors when the integers are replaced by monic univariate polynomials over a finite field; this analogue is a representable functor, and its representing object can be viewed as a function-field analogue of the ring of symmetric functions. Unfortunately, combinatorial structures (e.g., an e -, h - or s -basis) in this analogue have so far proven elusive, but some properties can be proven and some computations made.