Brendan Pawlowski* (br.pawlowski@gmail.com). Chromatic symmetric functions via the group algebra of $S_n$.

The chromatic symmetric function of a (hyper)forest (or any chordal graph) can be expressed as the Frobenius characteristic of an element of the group algebra of $S_n$ with a simple factorization. We deduce Schur positivity of some chromatic symmetric functions from linear algebraic properties of these group algebra elements. In particular, we resolve a conjecture of Taylor which implies the Schur positivity of the formal group law $f^{-1}(f(x_1) + f(x_2) + ...)$ associated to some generating functions $f(x)$. (Received January 30, 2019)