1147-05-927        **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)

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