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Christine Ruey Shan Lee* (crslee@southalabama.edu) and **Roland van der Veen.**

Cancellations in the degree of the colored Jones polynomial.

The colored Jones polynomial is a link invariant generalized from the Jones polynomial using ideas from representation theory and physics. The coefficients and the degrees of the polynomial have been shown to relate to topological and geometric properties of the knot such as boundary slopes and volume. We propose an expansion of the colored Jones polynomial which recovers the degree formulas previously obtained by the authors and S. Garoufalidis for Montesinos knots. We will discuss how it can be used to obtain the degrees of the polynomial for many new examples, and we will also discuss the application of this expansion to computing the stable coefficients of the colored Jones polynomial. (Received February 22, 2020)