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Neal W Stoltzfus* (stoltz@math.lsu.edu), Dept. Math., Louisiana State Univ., Baton Rouge, LA 70803, and **Jordan Keller** and **MurphyKate Montee**. *Recursive Behavior of Ribbon Graph Polynomials and applications to link polynomials*. Preliminary report.

The transfer method of generating functions is applied to the ribbon graph rank polynomial $R(\mathbb{D}; X, Y, Z)$ (due to Bollobás, Riordan, Whitney and Tutte) of a sequence of ribbon graphs, \mathbb{D}_n constructed by successive amalgamation with a fixed pattern ribbon graph. By the transfer method this sequence of rank polynomials is shown to be recursive: that is, polynomials $R(\mathbb{D}_n; X, Y, Z)$ satisfy a linear recurrence relation with coefficients in $\mathbb{Z}[X, Y, Z]$.

Applying the work of Dasbach et al. showing that the Jones polynomial is a specialization of the ribbon graph rank polynomial, we apply this method to the Jones polynomials of certain families of links. (Received August 27, 2012)