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Schur-positivity of Gessel's tree symmetric function and the Catalan arrangement.

Gessel introduced a multivariate formal power series tracking the distribution of ascents and descents in labeled binary trees. In addition to showing that it was a symmetric function, he conjectured that it was Schur-positive. I will discuss connections between specializations of Gessel's tree symmetric function and Frobenius characteristics of symmetric group actions on certain deformations of Coxeter arrangements. I will also describe briefly an interpretation of this function in terms of the Stanley-Reisner ring of the Boolean complex. (Received September 24, 2017)