Quasisymmetric functions distinguishing trees

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Based on joint work with Jean-Christophe Aval and Karimatou Djenabou

A famous conjecture of Stanley states that his chromatic symmetric function distinguishes trees. As a quasisymmetric analogue, we conjecture that the chromatic quasisymmetric function of Shareshian and Wachs and of Ellzey distinguishes directed trees. This latter conjecture would be implied by an affirmative answer to a question of Hasebe and Tsujie about the P-partition enumerator distinguishing posets whose Hasse diagrams are trees. They proved the case of rooted trees and our results include a generalization of their result.