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**John Shareshian** and **Michelle Wachs\*** ([wachs@math.miami.edu](mailto:wachs@math.miami.edu)). *Chromatic quasisymmetric functions and regular semisimple Hessenberg varieties, Part I.*

We defined a refinement of Stanley's chromatic symmetric function and conjectured that, for certain graphs  $G$ , our symmetric function is the Frobenius characteristic of a representation of the symmetric group on the cohomology of a variety naturally associated to  $G$ . Our conjecture was proved recently by T. Chow and P. Brosnan. We will discuss some combinatorial and representation theoretic consequences of this result and some remaining problems. (Received January 19, 2016)