1077-05-2254   **John Shareshian** and **Michelle L Wachs*** (`wachs@math.miami.edu`), Department of Mathematics, University of Miami, Coral Gables, FL 33124. *Chromatic quasisymmetric functions and Hessenberg varieties.*

We discuss three distinct topics of independent interest; one in enumerative combinatorics, one in symmetric function theory, and one in algebraic geometry. The topic in enumerative combinatorics concerns a q-analog of a generalization of the Eulerian polynomials, the one in symmetric function theory deals with a refinement of the chromatic symmetric functions of Stanley, and the one in algebraic geometry deals with Tymoczko's representation of the symmetric group on the cohomology of the regular semisimple Hessenberg variety of type A. Our purpose is to explore some remarkable connections between these topics. (Received September 21, 2011)

1