1143-05-17 **Elizabeth Drellich*** (edrelli1@swarthmore.edu). *Posets of Hessenberg Varieties.*

Hessenberg varieties have become a powerful tool for tackling combinatorial problems, but Hessenberg varieties themselves are also intriguing combinatorial objects. A Hessenberg variety is a collection of full flags determined by an element X in the Lie algebra $\mathfrak{g}$ and a Hessenberg space H which is an upper order ideal in the root decomposition of $\mathfrak{g}$. By fixing X but varying H, the Hessenberg varieties form a poset of algebraic varieties, ordered by containment. The analogous poset for Schubert varieties is isomorphic to the Bruhat order, but for Hessenberg varieties, the containment poset is a coarsening of the poset of upper order ideals. This talk will discuss recent results about the structure of these posets of Hessenberg varieties. (Received May 29, 2018)