1108-14-452   **Martha Precup*** (`martha_precup@baylor.edu`). *The geometry of semisimple Hessenberg varieties.*

In this talk, we consider certain closed subvarieties of the flag variety known as semisimple Hessenberg varieties. Like Schubert varieties, semisimple Hessenberg varieties are paved by affines and their structure can be studied using the combinatorics of the associated root system. We give a connectedness criterion for these varieties generalizing a criterion previously only known in the regular semisimple case due to Anderson and Tymoczko. Time permitting, we'll discuss other geometric properties of semisimple Hessenberg varieties and related open questions. (Received January 19, 2015)