

1086-05-2977 **Nicholas Teff*** (nicholas-teff@uiowa.edu), University of Iowa, Department of Mathematics, 14 MacLean Hall, Iowa City, IA 52242. *Divided difference operator on highest root Hessenberg varieties*. Preliminary report.

In this talk we construct a family of flow-up classes in the equivariant cohomology of highest root Hessenberg varieties, a smooth subvariety of the full flag variety. This construction is via a generalized divided difference operator using the GKM presentation of equivariant cohomology. This work generalizes earlier work for full flag variety where the analogous flow-up classes are Schubert classes. As in the classical case the definition of the divided difference operator depends heavily the Weyl group action, the Bruhat order and the root system. (Received September 26, 2012)