1026-14-157 **Julianna Tymoczko*** (`tymoczko@umich.edu`), Department of Mathematics, 2074 East Hall, 530 Church Street, Ann Arbor, MI 48109. *Divided difference operators for Grassmannians.*

Divided difference operators are degree-lowering rational operators on cohomology that are commonly thought to exist only for flag varieties. We construct divided difference operators for Grassmannians. More precisely, we give an explicit combinatorial formula for divided difference operators on the equivariant cohomology of G/P, for any parabolic subgroup P and any complex reductive linear algebraic group G. One application generalizes a flag-variety result of Sara Billey's to compute the localizations of equivariant Schubert classes for G/P.

These divided difference operators are constructed using GKM (Goresky-Kottwitz-MacPherson) theory, which gives a combinatorial construction of equivariant cohomology for suitably nice algebraic varieties. We will focus on how the theory works for Grassmannians of k-planes in complex n-dimensional space. (Received February 25, 2007)