1139-14-702 **Julianna Tymoczko***, Department of Mathematics and Statistics, Smith College, Northampton, MA 01063. *Affine Schubert calculus and Hessenberg varieties.*

Given a linear operator, its "eigenflags" can be thought of as the set of flags fixed by the linear operator. Hessenberg varieties are a family of subvarieties of the flag variety that generalize this idea, namely the flags that a linear operator shifts in a restricted way. The affine Grassmannian is an infinite-dimensional analogue of the Grassmannian. Both Hessenberg varieties and affine Grassmannians have a kind of Schubert decomposition, and both decompositions can be described by similar linear algebra and combinatorics. We show explicit ways to construct affine Schubert cells as pieces of Hessenberg varieties, thus realizing affine Schubert calculus as a special case of Hessenberg Schubert calculus.

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