

1128-14-227

Hiraku Abe, Lauren DeDieu, Federico Galetto* (galetttof@math.mcmaster.ca) and
Megumi Harada. *Towards Newton-Okounkov bodies of Hessenberg varieties.*

The theory of Newton-Okounkov bodies provides a method to associate combinatorial objects to an algebraic variety. We are interested in computing Newton-Okounkov bodies of Hessenberg varieties, certain subvarieties of the flag variety. I will describe a flat family with reduced fibers degenerating a regular semisimple Hessenberg variety to a regular nilpotent Hessenberg variety. This degeneration leads to a degree formula for regular nilpotent Hessenberg varieties with respect to a Plücker embedding and, in the special case of the two-dimensional Peterson variety, to the computation of Newton-Okounkov bodies corresponding to such embeddings. (Received February 27, 2017)