

1139-22-54

Peter Crooks* (peter.crooks@math.uni-hannover.de), Institute of Differential Geometry, Gottfried Wilhelm Leibniz University Hannover, Welfengarten 1, 30167 Hannover, Germany, and **Hiraku Abe**. *Slodowy slices and Hessenberg varieties*.

Toda systems and related algebraic integrable systems have been studied at the interface of algebraic geometry, holomorphic symplectic geometry, and representation theory. One instance of this involves fixing a complex semisimple algebraic group G with Borel subgroup B , in which setting Kostant studied the Toda system on the coadjoint B -orbit of a regular nilpotent element.

I will discuss embeddings of Kostant's Toda system into integrable systems on two larger varieties. The first of these varieties will be a holomorphic symplectic variety constructed via Slodowy slices, while the second will be a certain well-studied family of Hessenberg varieties. If time permits, I will discuss some implications of the two embeddings.

This represents previous work with S. Rayan and ongoing work with H. Abe. (Received January 24, 2018)