

1129-51-32

Christopher Allen Manon*, 4400 University Drive MS: 3F2, Fairfax, VA 22030. *Contraction of a Hamiltonian K -space with applications to free group character varieties.*

I will describe how to construct the contraction X_0 of a Hamiltonian K -space X . The contraction X_0 manages to be very close to X yet it comes equipped with a Hamiltonian $K \times T$ action for $T \subset K$ a maximal torus. Contraction emerges algebraically from the horospherical contraction operation of Popov, and it has a close relationship to recent work of Harada and Kaveh on Newton-Okounkov bodies. As an application I show how the free group SL_2 character varieties are very close to being toric varieties in an infinite number of ways in bijection with the facets of Culler and Vogtmann's outer space. Some of this is joint work with Joachim Hilgert and Johan Martens. (Received January 25, 2017)