
YIANNIS LOIZIDES, University of Toronto

Norm-square localization for Hamiltonian LG-spaces

Let $\psi : \mathcal{M} \rightarrow L\mathfrak{g}^*$ be a proper Hamiltonian LG -space. Dividing out by the free action of the based loop group L_0G , yields a finite dimensional quasi-Hamiltonian space $\Phi : M \rightarrow G$. It is possible to define twisted Duistermaat-Heckman (DH) measures for (M, Φ) , which are distributions on G encoding cohomological pairings on reduced spaces. Similar to the Hamiltonian case, these can be computed using abelian localization. We will discuss an analogue of norm-square localization—as initiated by Witten and studied in depth by Paradan—for twisted DH-measures of quasi-Hamiltonian spaces, where the terms of the formula are indexed by the components of the critical set of $\|\psi\|^2$.