1127-55-21 **Mentor Stafa*** (mstafa@iupui.edu). *The topology of some representation spaces.*

Spaces of group homomorphisms $Hom(\pi, G)$ from a discrete group to a Lie group have been studied in various contexts. We study the space of pairwise commuting n-tuples, i.e. π is free abelian of rank n, in a compact and connected Lie group G, from the topological viewpoint. We will describe a way to stabilize spaces of homomorphisms by introducing an infinite dimensional topological space, reminiscent of a Stiefel variety, that assembles the spaces of commuting tuples into a single space. Hilbert-Poincare series will be also described, in addition to other properties. (Received December 26, 2016)