Daniel A Ramras and Mentor Stafa* (mstafa@tulane.edu). Homological stability of representation spaces.

We study the spaces of pairwise commuting $n$-tuples in a Lie group $G$, that is $\text{Hom}(\mathbb{Z}^n, G)$, and their homological, when the group $G$ is in a sequence of classical Lie groups. We show that for $n \geq 1$ these spaces, and other analogues, satisfy homological stability as $G$ varies in a sequence of classical Lie groups. Moreover, we find a bound for the stable range. In our work we use the theory of representation stability and FI-modules. (Received September 13, 2018)