Jan Jaworowski*, *Indiana University, Bloomington, IN, USA*

Degrees of maps of free G-manifolds

Suppose that G is a compact Lie group, M and N are orientable, connected, smooth, free G-manifolds. We show that for certain class of maps $f : M \to N$, including equivariant maps, the degree of f satisfies a formula involving data given by the classifying maps of the orbit spaces M/G and N/G. In particular, if f is equivariant, and if the generator of the top dimensional cohomology of M/G with integer coefficients is in the image of the cohomology map induced by the classifying map for M, then the degree of f is one. We also study the degree of maps $f : M \to N$ that are "equivariant up to an exponent", or equivariant "up to a homomorphism".

*This is a joint work with Neža Mramor-Kosta