

# TOPOLOGICAL GEOMETRIC INVARIANT THEORY

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Geometric Invariant Theory (aka GIT) is a powerful set of algebraic tools that allows to consider quotients of algebraic varieties under group actions. However, GIT quotients do not behave well with generalized Euler characteristics (i.e. ring homomorphisms from the K-theory of algebraic varieties into some ring) as they do not respect stratifications.

In order to overcome this problem, in this talk we will explore a weaker notion of algebraic quotient called pseudo-quotient. The topological nature of pseudo-quotients allows them to preserve stratifications and, thus, to have a nice interplay with generalized Euler characteristics. As an application, we will show how to compute the Deligne-Hodge polynomials of some character varieties using pseudo-quotients.

*Joint work with M. Logares and V. Muñoz.*