

Complex Adams invariants of sphere bundles associated to complex vector bundles over U -framed quasitoric manifolds

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In 1974, L. Smith gave a formula for the real Adams invariant of a reframed sphere bundle associated to a stably trivial real m -plane bundle over n -sphere, where $m + n = 4k$.

In the talk we give a formula for the complex Adams invariant of a reframed sphere bundle associated to a complex vector bundle of rank q over any U -framed closed $2n$ -manifold M , and show that $q \leq 2$ holds.

If M is a quasitoric manifold over a simple polytope P , then the existence of a U -framing on M turns out to be equivalent to the n -colorability of P .

The talk is based on the ongoing project with Ivan Limonchenko.