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.