

Equivariant Lefschetz formulas for smooth actions of compact groups

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The classical Lefschetz-Hopf fixed-point formula equates two different computations for the trace of a self-map of a smooth compact manifold: one side computes it locally and geometrically, the other side globally and homologically. In a series of papers, Heath Emerson and Ralf Meyer generalize the geometric side to equivariant self-maps – or even self-correspondences – of a compact manifold acted upon by a compact Lie group. This invariant lives in the representation ring of the group. In joint work, we compute it homologically by way of topological equivariant K-theory. In particular, the formula simplifies to rather pleasing forms for finite groups and Hodgkin Lie groups. The constructions and proofs use equivariant Kasparov theory in an essential way.

Mots Clés / Keywords

Lefschetz-Hopf fixed-point formula; equivariant Kasparov theory

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