

Polar actions

Abstract:

An isometric action of a Lie group on a Riemannian manifold is called polar if there is a section, i.e. a submanifold which meets all orbits orthogonally. One may think of a polar action as a generalization of the usual polar, spherical or cylindrical coordinates to general Riemannian manifolds. I will talk about fundamental examples, classification results and a recently proved conjecture concerning polar actions on compact symmetric spaces.