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Title:	Zero sets of equivariant maps from products of spheres to Euclidean spaces
Authors:	Singh, Mahender (/jspui/browse?type=author&value=Singh%2C+Mahender)
Keywords:	Antipodal map Cohomological dimension Continuous cohomology Equivariant map
Issue Date:	2016
Publisher:	Elsevier
Citation:	Topology and its Applications, 202, pp. 7-20
Abstract:	Let $E \rightarrow B$ be a fiber bundle and $E' \rightarrow B$ be a vector bundle. Let G be a compact group acting fiber preservingly and freely on both E and E' , where 0 is the zero section of $E' \rightarrow B$. Let $f: E \rightarrow E'$ be a fiber preserving G -equivariant map, and let $Z_f = \{x \in E \mid f(x) = 0\}$ be the zero set of f . It is an interesting problem to estimate the dimension of the set Z_f . In 1988, Dold [5] obtained a lower bound for the cohomological dimension of the zero set Z_f when $E \rightarrow B$ is the sphere bundle associated with a vector bundle which is equipped with the antipodal action of $G = \mathbb{Z}/2$. In this paper, we generalize this result to products of finitely many spheres equipped with the diagonal antipodal action of $\mathbb{Z}/2$. We also prove a Bourgin-Yang type theorem for products of spheres equipped with the diagonal antipodal action of $\mathbb{Z}/2$.
Description:	Only IISERM authors are available in the record.
URI:	https://www.sciencedirect.com/science/article/pii/S0166864115005969 (https://www.sciencedirect.com/science/article/pii/S0166864115005969) http://hdl.handle.net/123456789/2434 (http://hdl.handle.net/123456789/2434)
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