# FIXED POINT INDEX
# FOR $G$-EQUIVARIANT MULTIVALUED MAPS

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## Introduction

The goal of this paper is to extend the construction of the index, which was defined for a class of nonacyclic multivalued maps in [6], to the $G$-equivariant case ($G$ is a finite group). Our index $\lambda_G(\Phi)$ is an element of the Burnside ring $A(G)$. We use some properties of the Burnside ring to prove several relations between the indices of the map $\Phi$ restricted to various sets of fixed points of a $G$-action.

We partially base on the ideas of Marzantowicz [10]. The congruences we obtain are similar to the results proved by Komiya [8] for single-valued maps.

The organization of this paper is as follows. In the first and second sections we review some of the standard facts on $G$-actions and multivalued maps. Section 3 contains a sketch of the definition of the index for a broad class of nonacyclic maps. Section 4 presents the construction of the $G$-chain approximation. In the last section we define the $G$-index (Def. (5.5)) and prove Komiya-type relations between indices.

## 1. Finite group actions

Let $G$ be a finite group. If $H \subset G$ is a subgroup, we denote by $G/H$ the space of left cosets $Hg$.