

# Algebraic formulae for equivariant indices of vector fields on singular varieties

For a holomorphic vector field on  $\mathbb{C}^n$  the index of an isolated singular point can be defined in terms of local linear algebra. Namely, the index is equal to the dimension of the algebra considered as  $\mathbb{C}$ -vector space (V.P. Palamodov, 1967). There are generalizations of this formula to the case of vector fields or 1-forms on hypersurface singularities (X. Gomez-Mont, 1998) and isolated complete intersection singularities (H.-Ch. Graf von Bothmer, W. Ebeling. X. Gomez-Mont, 2005).

My project is devoted to generalizations of these formulae for indices of vector fields or 1-forms to the case of singular varieties with a finite group action. During the talk I will introduce the main points of the project and discuss the recent results for the non-singular case.