

Publication

Application of multihomogeneous covariants to the essential dimension of finite groups

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We investigate essential dimension of finite groups over arbitrary fields and give a systematic treatment of multihomogenization, introduced by H.Kraft, G.Schwarz and the author. We generalize the central extension theorem of Buhler and Reichstein and use multihomogenization to substitute and generalize the stack-involved part of the theorem of Karpenko and Merkurjev about the essential dimension of p -groups. One part of this paper is devoted to the study of completely reducible faithful representations. Amongst results concerning faithful representations of minimal dimension there is a computation of the minimal number of irreducible components needed for a faithful representation.

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