

Geometry and Topology

Endotrivial modules via homotopy theory

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In the modular representation theory of finite groups, a special class of interesting modules are those kG -modules which upon restriction to a Sylow p -subgroup split as the trivial module plus a projective module. Isomorphism classes of these form a group under tensor product, a key subgroup inside the group of all so-called endotrivial modules, whose classification has been a long-term goal in modular representation theory. In my talk I'll show how this subgroup can be calculated via homotopy theory.