

Equivalences of categories in representation theory of finite groups

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Broué's abelian defect group conjecture is one of the most important conjectures in the modular representation theory. It states that if a is a block idempotent with abelian defect group D of the group algebra kG (where k is an algebraically closed field of characteristic $p > 0$), and the block idempotent b of $kN_G(D)b$ is its Brauer-correspondent, then the derived categories of the block algebras kGa and $kN_G(D)b$ are equivalent as triangulated categories.

In this talk we give an introduction to Broué's abelian defect group conjecture and to other related open problems. We also present some of the methods and the achievements on this subject.

References

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