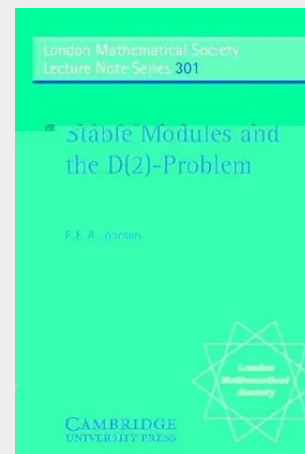


Stable Modules and the D(2)-Problem

This 2003 book is concerned with two fundamental problems in low-dimensional topology. Firstly, the D(2)-problem, which asks whether cohomology detects dimension, and secondly the realization problem, which asks whether every algebraic 2-complex is geometrically realizable. The author shows that for a large class of fundamental groups these problems are equivalent. Moreover, in the case of finite groups, Professor Johnson develops general methods and gives complete solutions in a number of cases. In particular, he presents a complete treatment of Yoneda extension theory from the viewpoint of derived objects and proves that for groups of period four, two-dimensional homotopy types are parametrized by isomorphism classes of projective modules. This book is carefully written with an eye on the wider context and as such is suitable for graduate students wanting to learn low-dimensional homotopy theory as well as established researchers in the field.

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