

Jon F. Carlson

Modules and Group Algebras

Notes by Ruedi Suter

Birkhäuser

Modules And Group Algebras

Peter Landrock



Modules And Group Algebras:

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Modules and Group Algebras Jon F Carlson, 1996-02-29 *Induced Modules over Group Algebras* G. Karpilovsky, 1990-03-01 In 1898 Frobenius discovered a construction which in present terminology associates with every module of a subgroup the induced module of a group This construction proved to be of fundamental importance and is one of the basic tools in the entire theory of group representations This monograph is designed for research mathematicians and advanced graduate students and gives a picture of the general theory of induced modules as it exists at present Much of the material has until now been available only in research articles The approach is not intended to be encyclopedic rather each topic is considered in sufficient depth that the reader may obtain a clear idea of the major results in the area After establishing algebraic preliminaries the general facts about induced modules are provided as well as some of their formal properties annihilators and applications The remaining chapters include detailed information on the process of induction from normal subgroups projective summands of induced modules some basic results of the Green theory with refinements and extensions simple induction and restriction pairs and permutation modules The final chapter is based exclusively on the work of Weiss presenting a number of applications to the isomorphism problem for group rings *Finite Group Algebras*

and Their Modules P. Landrock, 1983-12-29 This book is concerned with the structure of group algebras of finite groups over fields of characteristic p dividing the order of the group or closely related rings such as rings of algebraic integers and in particular their p -adic completions as well as modules and homomorphisms between them or such group algebras Our principal aim has been to present some of the more recent ideas which have enriched and improved this theory This text is not restricted to particular methods be they ring theoretic or character theoretic while presenting approaches or proofs which are distinguished by being fast elegant illuminating with potential for further advancement or all of these at the same time This text hopes to attract non specialists perhaps algebraic topologists and group theorists who might use the tools of modular representations more frequently *Algebras and Modules I* Idun Reiten, Sverre O.

Smalø, Øyvind Solberg, Canadian Mathematical Society, 1998 Surveys developments in the representation theory of finite dimensional algebras and related topics in seven papers illustrating different techniques developed over the recent years For graduate students and researchers with a background in commutative algebra including rings modules and homological algebra Suitable as a text for an advanced graduate course No index Member prices are 31 for institutions and 23 for individuals and are available to members of the Canadian Mathematical Society Annotation copyrighted by Book News Inc Portland OR **Induced Modules Over Group Algebras** Gregory Karpilovsky, 1990 **Finite Group Algebras and Their Modules** Peter Landrock, 2014-05-14 Originally published in 1983 the principal object of this book is to discuss in detail the structure of finite group rings over fields of characteristic p p -adic rings and in some cases just principal ideal domains as well as modules of such group rings The approach does not emphasize any particular point of view but aims to present a smooth proof in each case to provide the reader with maximum insight However the trace map and all its properties have been used extensively This generalizes a number of classical results at no extra cost and also has the advantage that no assumption on the field is required Finally it should be mentioned that much attention is paid to the methods of homological algebra and cohomology of groups as well as connections between characteristic 0 and characteristic p

A Course in Finite Group Representation Theory Peter Webb, 2016-08-19 This graduate level text provides a thorough grounding in the representation theory of finite groups over fields and rings The book provides a balanced and comprehensive account of the subject detailing the methods needed to analyze representations that arise in many areas of mathematics Key topics include the construction and use of character tables the role of induction and restriction projective and simple modules for group algebras indecomposable representations Brauer characters and block theory This classroom tested text provides motivation through a large number of worked examples with exercises at the end of each chapter that test the reader's knowledge provide further examples and practice and include results not proven in the text Prerequisites include a graduate course in abstract algebra and familiarity with the properties of groups rings field extensions and linear algebra *Modules Over Group Algebras which are Free on Restriction to a Maximal Subgroup* R. C. Andrews, University of

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