Record Nr. UNINA9910309662603321 Autore Passi Inder Bir Singh **Titolo** Automorphisms of Finite Groups / / by Inder Bir Singh Passi, Mahender Singh, Manoj Kumar Yadav Singapore:,: Springer Singapore:,: Imprint: Springer,, 2018 Pubbl/distr/stampa **ISBN** 981-13-2895-1 Edizione [1st ed. 2018.] 1 online resource (231 pages) Descrizione fisica Springer Monographs in Mathematics, , 1439-7382 Collana Disciplina 512.2 Soggetti Group theory Topological groups Lie groups Functions of complex variables Number theory **Group Theory and Generalizations** Topological Groups, Lie Groups Several Complex Variables and Analytic Spaces **Number Theory** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- p-groups -- Fundamental exact sequence of Wells --Automorphism groups of finite groups -- Groups with Divisibility Property-I -- Groups with Divisibility Property-II -- Groups without Divisibility Property. The book describes developments on some well-known problems Sommario/riassunto regarding the relationship between orders of finite groups and that of their automorphism groups. It is broadly divided into three parts: the first part offers an exposition of the fundamental exact sequence of Wells that relates automorphisms, derivations and cohomology of groups, along with some interesting applications of the sequence. The

second part offers an account of important developments on a conjecture that a finite group has at least a prescribed number of automorphisms if the order of the group is sufficiently large. A non-abelian group of prime-power order is said to have divisibility property

if its order divides that of its automorphism group. The final part of the book discusses the literature on divisibility property of groups culminating in the existence of groups without this property. Unifying various ideas developed over the years, this largely self-contained book includes results that are either proved or with complete references provided. It is aimed at researchers working in group theory, in particular, graduate students in algebra.