

1. Record Nr.	UNINA9910968203903321
Autore	Stanojkovski Mima
Titolo	Intense Automorphisms of Finite Groups
Pubbl/distr/stampa	Providence : , : American Mathematical Society, , 2021 ©2021
ISBN	9781470468118 9781470450038
Edizione	[1st ed.]
Descrizione fisica	1 online resource (132 pages)
Collana	Memoirs of the American Mathematical Society ; ; v.273
Classificazione	20D1520D4520F2820E1820E36
Disciplina	512/.23
Soggetti	Finite groups Automorphisms Nilpotent groups Group theory and generalizations -- Abstract finite groups -- Nilpotent groups, p -groups Group theory and generalizations -- Abstract finite groups -- Automorphisms Group theory and generalizations -- Special aspects of infinite or finite groups -- Automorphism groups of groups Group theory and generalizations -- Structure and classification of infinite or finite groups -- Limits, profinite groups Group theory and generalizations -- Structure and classification of infinite or finite groups -- Automorphisms of infinite groups
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover -- Title page -- List of Symbols -- Chapter 1. Introduction -- Chapter 2. Coprime Actions -- 2.1. Actions through characters -- 2.2. Involutions -- 2.3. Jumps and width -- Chapter 3. Intense Automorphisms -- 3.1. Basic properties -- 3.2. The main question -- 3.3. The abelian case -- Chapter 4. Intensity of Groups of Class 2 -- 4.1. Small commutator subgroup -- 4.2. More general setting -- 4.3. The extraspecial case -- Chapter 5. Intensity of Groups of Class 3 -- 5.1. Low intensity -- 5.2. Intensity given the automorphism -- 5.3. Constructing intense automorphisms -- Chapter 6. Some Structural Restrictions -- 6.1. Normal subgroups -- 6.2. About the third width --

6.3. A bound on the width -- Chapter 7. Higher Nilpotency Classes --
7.1. Class 4 and intensity -- 7.2. Class 5 and intensity -- Chapter 8. A
Disparity between the Primes -- 8.1. Regularity -- 8.2. Rank -- 8.3. A
sharper bound on the width -- Chapter 9. The Special Case of 3-
groups -- 9.1. The cubing map -- 9.2. A specific example -- 9.3.
Structures on vector spaces -- 9.4. Structures and free groups -- 9.5.
Extensions -- 9.6. Constructing automorphisms -- 9.7. Intensity --
Chapter 10. Obelisks -- 10.1. Some properties -- 10.2. Power maps
and commutators -- 10.3. Framed obelisks -- 10.4. Subgroups of
obelisks -- Chapter 11. The Most Intense Chapter -- 11.1. The even
case -- 11.2. The odd case, part I -- 11.3. The odd case, part II --
11.4. Proving the main theorems -- Chapter 12. High Class Intensity --
12.1. A special case -- 12.2. The last exotic case -- 12.3. Proving the
main theorem -- Chapter 13. Intense Automorphisms of Profinite
Groups -- 13.1. Some background -- 13.2. Properties and intensity --
13.3. Non-abelian groups, part I -- 13.4. Two infinite groups -- 13.5.
Non-abelian groups, part II -- 13.6. Proving the main theorems and
more -- Bibliography -- Index -- Back Cover.

Sommario/riassunto

"Let G be a group. An automorphism of G is called intense if it sends each subgroup of G to a conjugate; the collection of such automorphisms is denoted by $\text{Int}(G)$. In the special case in which p is a prime number and G is a finite p -group, one can show that $\text{Int}(G)$ is the semidirect product of a normal p -Sylow and a cyclic subgroup of order dividing $p - 1$. In this paper we classify the finite p -groups whose groups of intense automorphisms are not themselves p -groups. It emerges from our investigation that the structure of such groups is almost completely determined by their nilpotency class: for $p \geq 3$, they share a quotient, growing with their class, with a uniquely determined infinite 2-generated pro- p group"--
