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| Record Nr. | UNINA9910779339103321 |
| Autore | Davis Michael <1949 Apr. 26-> |
| Titolo | The geometry and topology of coxeter groups [[electronic resource] /] / Michael W. Davis |
| Pubbl/distr/stampa | Princeton, : Princeton University Press, c2008 |
| ISBN | 1-283-85128-8 |
| | 1-4008-4594-7 |
| Edizione | [Course Book] |
| Descrizione fisica | 1 online resource (601 p.) |
| Collana | London Mathematical Society monographs series |
| Classificazione | SK 260 |
| Disciplina | 512/.2 |
| Soggetti | Coxeter groups |
| | Geometric group theory |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references (p. [555]-572) and index. |
| Nota di contenuto | Frontmatter -- Contents -- Preface -- Chapter One. INTRODUCTION AND PREVIEW -- Chapter Two. SOME BASIC NOTIONS IN GEOMETRIC GROUP THEORY -- Chapter Three. COXETER GROUPS -- Chapter Four. MORE COMBINATORIAL THEORY OF COXETER GROUPS -- Chapter Five. THE BASIC CONSTRUCTION -- Chapter Six. GEOMETRIC REFLECTION GROUPS -- Chapter Seven. THE COMPLEX -- Chapter Eight. THE ALGEBRAIC TOPOLOGY OF U AND OF -- Chapter Nine. THE FUNDAMENTAL GROUP AND THE FUNDAMENTAL GROUP AT INFINITY -- Chapter Ten. ACTIONS ON MANIFOLDS -- Chapter Eleven. THE REFLECTION GROUP TRICK -- Chapter Twelve. IS CAT(O): THEOREMS OF GROMOV AND MOUSSONG -- Chapter Thirteen. RIGIDITY -- Chapter Fourteen. FREE QUOTIENTS AND SURFACE SUBGROUPS -- Chapter Fifteen. ANOTHER LOOK AT (CO)HOMOLOGY -- Chapter Sixteen. THE EULER CHARACTERISTIC -- Chapter Seventeen. GROWTH SERIES -- Chapter Eighteen. BUILDINGS -- Chapter Nineteen. HECKE-VON NEUMANN ALGEBRAS -- Chapter Twenty. WEIGHTED L2-(CO) HOMOLOGY -- Appendix A: CELL COMPLEXES -- Appendix B: REGULAR POLYTOPES -- Appendix C: THE CLASSIFICATION OF SPHERICAL AND EUCLIDEAN COXETER GROUPS -- Appendix D: THE GEOMETRIC REPRESENTATION -- Appendix E: COMPLEXES OF GROUPS -- Appendix F: HOMOLOGY AND COHOMOLOGY OF GROUPS -- Appendix G: ALGEBRAIC TOPOLOGY AT INFINITY -- Appendix H: THE NOVIKOV AND |

Sommario/riassunto	The Geometry and Topology of Coxeter Groups is a comprehensive and authoritative treatment of Coxeter groups from the viewpoint of geometric group theory. Groups generated by reflections are ubiquitous in mathematics, and there are classical examples of reflection groups in spherical, Euclidean, and hyperbolic geometry. Any Coxeter group can be realized as a group generated by reflection on a certain contractible cell complex, and this complex is the principal subject of this book. The book explains a theorem of Moussong that demonstrates that a polyhedral metric on this cell complex is nonpositively curved, meaning that Coxeter groups are "CAT(0) groups." The book describes the reflection group trick, one of the most potent sources of examples of aspherical manifolds. And the book discusses many important topics in geometric group theory and topology, including Hopf's theory of ends; contractible manifolds and homology spheres; the Poincaré Conjecture; and Gromov's theory of CAT(0) spaces and groups. Finally, the book examines connections between Coxeter groups and some of topology's most famous open problems concerning aspherical manifolds, such as the Euler Characteristic Conjecture and the Borel and Singer conjectures.