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Nota di contenuto	Frontmatter -- Contents -- Acknowledgments -- Chapter One Introduction -- Chapter Two CAT(0) Cube Complexes -- Chapter Three Cubical Small-Cancellation Theory -- Chapter Four Torsion and Hyperbolicity -- Chapter Five New Walls and the B(6) Condition -- Chapter Six Special Cube Complexes -- Chapter Seven Cubulations -- Chapter Eight Malnormality and Fiber-Products -- Chapter Nine Splicing Walls -- Chapter Ten Cutting X -- Chapter Eleven Hierarchies -- Chapter Twelve Virtually Special Quotient Theorem -- Chapter Thirteen Amalgams of Virtually Special Groups -- Chapter Fourteen Large Fillings Are Hyperbolic and Preservation of Quasiconvexity -- Chapter Fifteen Relatively Hyperbolic Case -- Chapter Sixteen Largeness and Omnipotence -- Chapter Seventeen Hyperbolic 3-Manifolds with a Geometrically Finite Incompressible Surface -- Chapter Eighteen Limit Groups and Abelian Hierarchies -- Chapter Nineteen Application Towards One-Relator Groups -- Chapter Twenty Problems -- References -- Index
Sommario/riassunto	This monograph on the applications of cube complexes constitutes a breakthrough in the fields of geometric group theory and 3-manifold topology. Many fundamental new ideas and methodologies are presented here for the first time, including a cubical small-cancellation theory generalizing ideas from the 1960s, a version of Dehn Filling that functions in the category of special cube complexes, and a variety of

results about right-angled Artin groups. The book culminates by establishing a remarkable theorem about the nature of hyperbolic groups that are constructible as amalgams. The applications described here include the virtual fibering of cusped hyperbolic 3-manifolds and the resolution of Baumslag's conjecture on the residual finiteness of one-relator groups with torsion. Most importantly, this work establishes a cubical program for resolving Thurston's conjectures on hyperbolic 3-manifolds, and validates this program in significant cases. Illustrated with more than 150 color figures, this book will interest graduate students and researchers working in geometry, algebra, and topology.

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