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Nota di contenuto	Preface -- I First Steps.-1 Introduction to the Polyhedron Kingdom. Marjorie Senechal- 2 Six Recipes for Making Polyhedra. Marion Walter; Jean Pedersen; MagnusWenninger; Doris Schattschneider; Arthur Loeb; and Eric Demaine, Martin Demaine and Vi Hart -- 3 Regular and Semiregular Polyhedra. H. S. M. Coxeter -- 4 Milestones in the History of Polyhedra. Joseph Malkevitch -- 5 Polyhedra: Surfaces or Solids? Arthur Loeb -- 6 Dürer's Problem. Joseph O'Rourke -- II Polyhedra in Nature and Art -- 7 Exploring the Polyhedron Kingdom. Marjorie Senechal -- 8 Spatial Perception and Creativity. Janos Baracs -- 9 Goldberg Polyhedra. George Hart -- 10 Polyhedra and Crystal Structures. Chung Chieh -- 11 Polyhedral Molecular Geometries. Magdolna Hargittai and Istvan Hargittai -- 12 Form, Function, and Functioning. George Fleck -- III Polyhedra in the Geometrical Imagination -- 13 The Polyhedron Kingdom Tomorrow. Marjorie Senechal -- 14 Paneled and Molecular Polyhedra: How Stable Are They? Ileana Streinu -- 15 Duality of Polyhedra. Banko Grünbaum and G. C. Shephard -- 16 Combinatorial Prototiles. Egon Schulte -- 17 Polyhedra Analogues of the Platonic Solids. Jörg M. Wills -- 18 Convex Polyhedra, Dirichlet Tessellations, and Spider Webs. Walter Whiteley with Peter Ash, Ethan Bolker, and Henry Crapo -- 19 Uniform Polyhedra from

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Molecules, galaxies, art galleries, sculptures, viruses, crystals, architecture, and more: *Shaping Space—Exploring Polyhedra in Nature, Art, and the Geometrical Imagination* is an exuberant survey of polyhedra and at the same time a hands-on, mind-boggling introduction to one of the oldest and most fascinating branches of mathematics. Some of the world's leading geometers present a treasury of ideas, history, and culture to make the beauty of polyhedra accessible to students, teachers, polyhedra hobbyists, and professionals such as architects and designers, painters and sculptors, biologists and chemists, crystallographers, physicists and earth scientists, engineers and model builders, mathematicians and computer scientists. The creative chapters by more than 25 authors explore almost every imaginable side of polyhedra. From the beauty of natural forms to the monumental constructions made by man, there is something to fascinate every reader. The book is dedicated to the memory of the legendary geometer H. S. M. Coxeter and the multifaceted design scientist Arthur L. Loeb. Contributing Authors: P. Ash, T. F. Banchoff, J. Baracs, E. Bolker, C. Chieh, R. Connelly, H.S.M. Coxeter, H. Crapo, E. Demaine, M. Demaine, G. Fleck, B. Grünbaum, I. Hargittai, M. Hargittai, G. Hart, V. Hart, A. Loeb, J. Malkevitch, B. Monson, J. O'Rourke, J. Pedersen, D. Schattschneider, M. Schmitt, E. Schulte, M. Senechal, G.C. Shephard, I. Streinu, M. Walter, M. Wenninger, W. Whiteley, J. M. Wills, and G. M. Ziegler.

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