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Titolo	Discrete Geometry and Symmetry : Dedicated to Károly Bezdek and Egon Schulte on the Occasion of Their 60th Birthdays / / edited by Marston D. E. Conder, Antoine Deza, Asia Ivi Weiss
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Soggetti	Convex geometry Discrete geometry Discrete mathematics Polytopes Mathematical optimization Convex and Discrete Geometry Discrete Mathematics Optimization
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Nota di contenuto	The geometry of homothetic covering and illumination -- Stability of the simplex bound for packings by equal spherical caps determined by simplicial regular polytopes -- Vertex-transitive Haar graphs that are not Cayley graphs -- On the Volume of Boolean Expressions of Large Congruent Balls -- Small Primitive Zonotopes -- Delone Sets: Local Identity and Global Symmetry -- The Twist Operator on Manifolds -- Hexagonal Extensions of Toroidal Maps and Hypermaps -- Noncongruent Equidissections of the Plane -- Pascal's triangle of configurations -- Volume of Convex Hull of Two Bodies and Related Problems -- Integers, Modular Groups, and Hyperbolic Space -- Monge points, Euler lines, and Feuerbach spheres in Minkowski spaces -- An Algorithm for Classification of Fundamental Polygons for a Plane Discontinuous Group -- Self-inscribed regular hyperbolic honeycombs -- Sphere-of-Influence graphs in Normed Spaces -- On Symmetries of

Sommario/riassunto

This book consists of contributions from experts, presenting a fruitful interplay between different approaches to discrete geometry. Most of the chapters were collected at the conference “Geometry and Symmetry” in Veszprém, Hungary from 29 June to 3 July 2015. The conference was dedicated to Károly Bezdek and Egon Schulte on the occasion of their 60th birthdays, acknowledging their highly regarded contributions in these fields. While the classical problems of discrete geometry have a strong connection to geometric analysis, coding theory, symmetry groups, and number theory, their connection to combinatorics and optimization has become of particular importance. The last decades have seen a revival of interest in discrete geometric structures and their symmetry. The rapid development of abstract polytope theory has resulted in a rich theory featuring an attractive interplay of methods and tools from discrete geometry, group theory and geometry, combinatorial group theory, and hyperbolic geometry and topology. This book contains papers on new developments in these areas, including convex and abstract polytopes and their recent generalizations, tiling and packing, zonotopes, isoperimetric inequalities, and on the geometric and combinatorial aspects of linear optimization. The book is a valuable resource for researchers, both junior and senior, in the field of discrete geometry, combinatorics, or discrete optimization. Graduate students find state-of-the-art surveys and an open problem collection. .