1. Record Nr. UNINA9910783121903321

Autore	McMullen Peter <1942->
Titolo	Abstract regular polytopes / / Peter McMullen, Egon Schulte [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2002
ISBN	1-316-08575-9 0-511-54668-8 1-280-41990-3 9786610419906 0-511-16958-2 1-139-14822-2 0-511-06500-0 0-511-05867-5 0-511-30843-4 0-511-07346-1
Descrizione fisica	1 online resource (xiii, 551 pages) : digital, PDF file(s)
Collana	Encyclopedia of mathematics and its applications ; ; volume 92
Disciplina	516.3/5
Soggetti	Polytopes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references (p. 519-538) and indexes.
Nota di contenuto	; 1. Classical Regular Polytopes -- ; 2. Regular Polytopes -- ; 3. Coxeter Groups -- ; 4. Amalgamation -- ; 5. Realizations -- ; 6. Regular Polytopes on Space-Forms -- ; 7. Mixing -- ; 8. Twisting -- ; 9. Unitary Groups and Hermitian Forms -- ; 10. Locally Toroidal 4-Polytopes: I -- ; 11. Locally Toroidal 4-Polytopes: II -- ; 12. Higher Toroidal Polytopes -- ; 13. Regular Polytopes Related to Linear Groups -- ; 14. Miscellaneous Classes of Regular Polytopes.
Sommario/riassunto	Abstract regular polytopes stand at the end of more than two millennia of geometrical research, which began with regular polygons and polyhedra. They are highly symmetric combinatorial structures with distinctive geometric, algebraic or topological properties; in many ways more fascinating than traditional regular polytopes and tessellations. The rapid development of the subject in the past 20 years has resulted

in a rich new theory, featuring an attractive interplay of mathematical areas, including geometry, combinatorics, group theory and topology. Abstract regular polytopes and their groups provide an appealing new approach to understanding geometric and combinatorial symmetry. This is the first comprehensive up-to-date account of the subject and its ramifications, and meets a critical need for such a text, because no book has been published in this area of classical and modern discrete geometry since Coxeter's Regular Polytopes (1948) and Regular Complex Polytopes (1974). The book should be of interest to researchers and graduate students in discrete geometry, combinatorics and group theory.