Classical Tessellations and Three-Manifolds

By Montesinos, Jose M.

Book Condition: New. Publisher/Verlag: Springer, Berlin | This unusual, richly illustrated book explores a relationship between classical tessellations and 3-manifolds. The space of positions of an euclidean, spherical or hyperbolic tessellation is a Seifert 3-manifold possessing one of three of Thurston's geometries. These manifolds are described in detail with an emphasis on their geometry. Classical tessellations for the spherical context are illustrated by colour photographs of minerals. A further set of colour plates depicts, for the first time, all 17 plane crystallographic groups in mosaics from the Alhambra of Granada (up till now it was thought only 13 could be found there). In his original and entertaining style and with numerous exercises and problems, the author introduces the reader to Seifert manifolds, classical tessellations, quaternions and rotations, orbifolds, 3-manifolds branched coverings etc. Graduate students will find in it a source of geometrical insight to low-dimensional topology. Reserchers will find much that they already know clothed in a new garb - the framework of orbifolds - and will be able to use the text as a source of geometrical ideas for a low-dimensional topology seminar, for individual study projects for their students, or as the basis for a reading course. The...

READ ONLINE
[9.18 MB]

Reviews

This publication might be well worth a study, and much better than other. It is among the most awesome book i have got study. You may like the way the article writer publish this publication.
-- Dr. Paige Bartell

Just no phrases to describe. It typically does not price an excessive amount of. It is extremely difficult to leave it before concluding, once you begin to read the book.
-- Felton Hessel