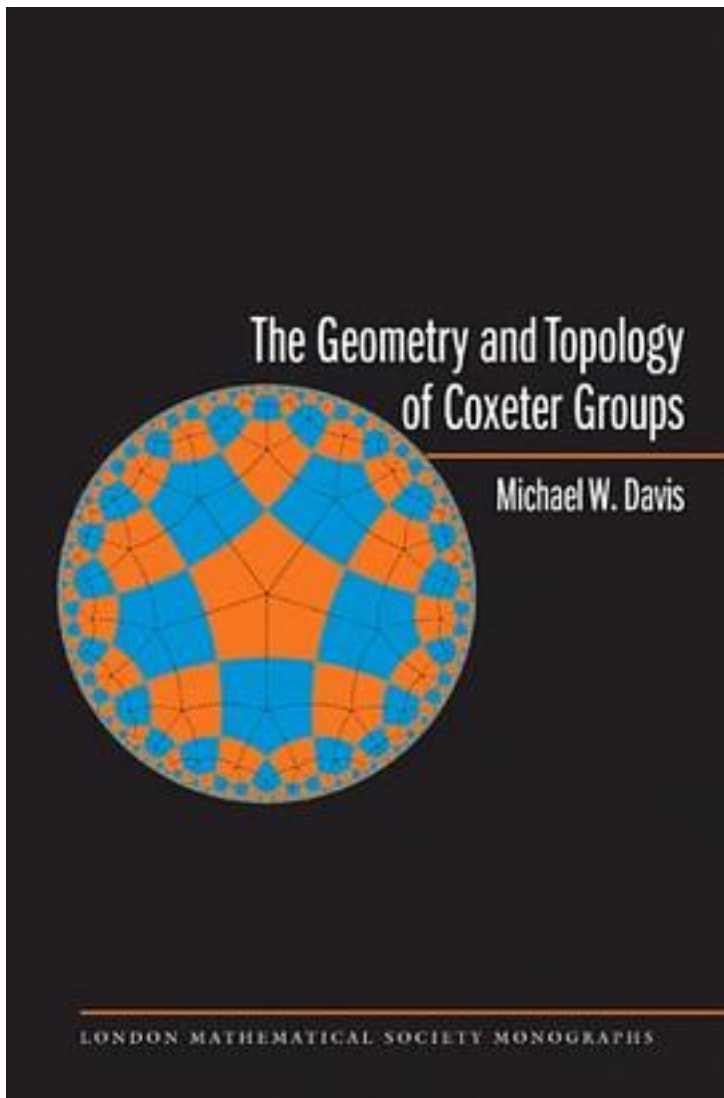# The Geometry and Topology of Coxeter Groups.

[The Geometry and Topology of Coxeter Groups._下载链接1_](#)

著者:Michael W. Davis

出版者:Princeton University Press

出版时间:2007-10-29

装帧:Hardcover

isbn:9780691131382

The Geometry and Topology of Coxeter Groups is a comprehensive and authoritative treatment of Coxeter groups from the viewpoint of geometric group theory. Groups generated by reflections are ubiquitous in mathematics, and there are classical examples of reflection groups in spherical, Euclidean, and hyperbolic geometry. Any Coxeter group can be realized as a group generated by reflection on a certain contractible cell complex, and this complex is the principal subject of this book. The book explains a theorem of Moussong that demonstrates that a polyhedral metric on this cell complex is nonpositively curved, meaning that Coxeter groups are "CAT(0) groups." The book describes the reflection group trick, one of the most potent sources of examples of aspherical manifolds. And the book discusses many important topics in geometric group theory and topology, including Hopf's theory of ends; contractible manifolds and homology spheres; the Poincar Conjecture; and Gromov's theory of CAT(0) spaces and groups. Finally, the book examines connections between Coxeter groups and some of topology's most famous open problems concerning aspherical manifolds, such as the Euler Characteristic Conjecture and the Borel and Singer conjectures.

作者介绍:

目录:

[The Geometry and Topology of Coxeter Groups._下载链接1_](#)

标签

数学

topology

of

geometry

and

Topology

The

Princeton

评论

[The Geometry and Topology of Coxeter Groups._下载链接1_](#)

书评

[The Geometry and Topology of Coxeter Groups._下载链接1_](#)