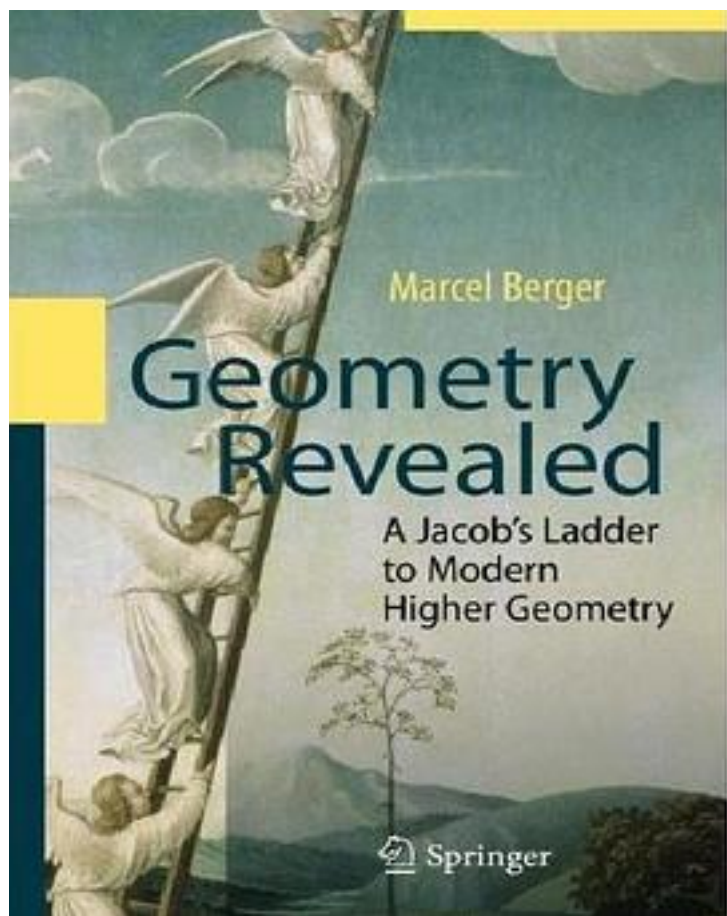


Geometry Revealed: A Jacob's Ladder to Modern Higher Geometry



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Both modern differential geometry, which lies at the heart of many recent advances in mathematics, from analysis to algebraic geometry and to mathematical physics, and

also classical geometry, have been active subjects of research throughout the 20th century. This fact is the underlying motivating concept for the new book of Marcel Berger. It offers readers the elements of a modern geometric culture by means of a whole series of visually appealing unsolved (or recently solved) problems that require the creation of concepts and tools of varying abstraction. Starting with natural, classical objects as lines, planes, circles, spheres, polygons, polyhedra, curves, surfaces, convex sets, etc., crucial ideas and above all abstract concepts needed for attaining the results are elucidated. These are conceptual notions, each built "above" the preceding and permitting an increase in abstraction, represented metaphorically by Jacob's ladder with its rungs: the 'ladder' in the Old Testament, that angels ascended and descended... In all this, the aim of the book is to demonstrate to readers the unceasingly renewed spirit of geometry and that even so-called "elementary" geometry is very much alive and at the very heart of the work of numerous contemporary mathematicians. It is also shown that there are innumerable paths yet to be explored and concepts to be created. The book is visually rich and inviting, so that readers may open it at random places and find much pleasure throughout according their own intuitions and and inclinations. Marcel Berger is the author of numerous successful books on geometry, this book once again is addressed to all students and teachers of mathematics with an affinity for geometry.

作者介绍:

Marcel Berger is Ancien Professeur of the University of Paris and emeritus director of research at the Centre National de la Recherche Scientifique (CNRS), from 1979 to 1981 he was president of the French Mathematical Society and from 1985 to 1994 director of the Institut des Hautes Études Scientifiques (IHÉS) in Bures-sur-Yvette.

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