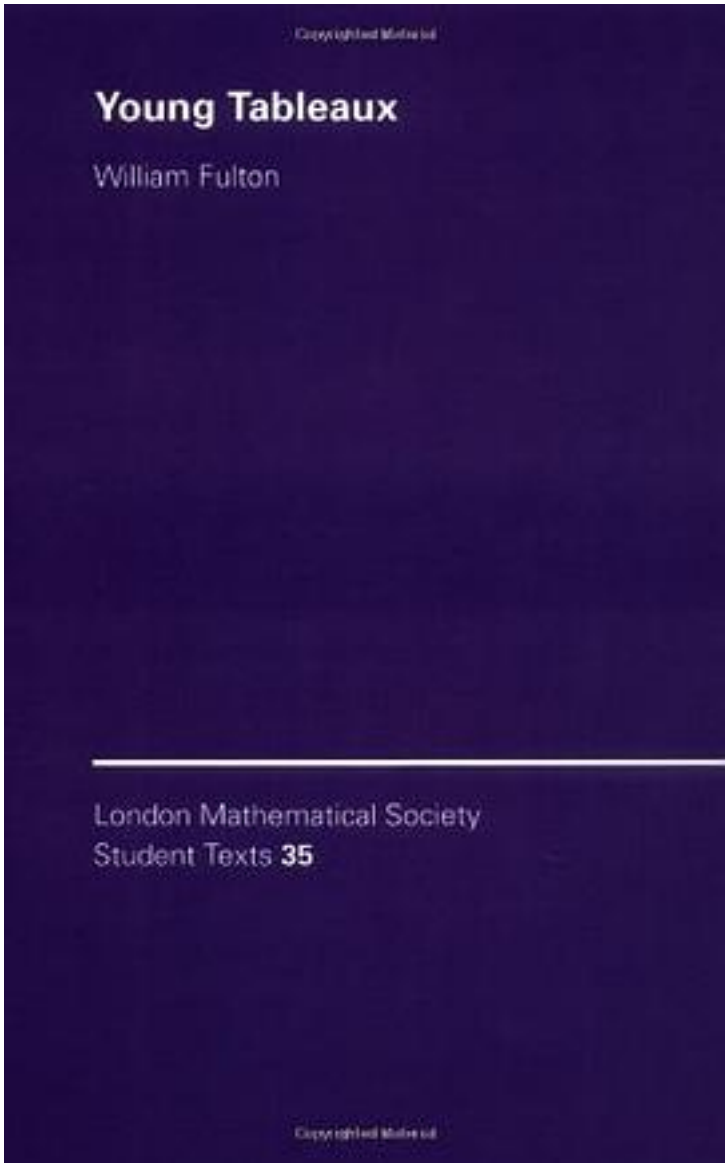
Young Tableaux



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出版者:Cambridge University Press

出版时间:1996-12-28

装帧:Paperback

isbn:9780521567244

The aim of this book is to develop the combinatorics of Young tableaux and to show them in action in the algebra of symmetric functions, representations of the symmetric and general linear groups, and the geometry of flag varieties. The first part of the book is a self-contained presentation of the basic combinatorics of Young tableaux, including the remarkable constructions of 'bumping' and 'sliding', and several interesting correspondences. In Part II these results are used to study representations with geometry on Grassmannians and flag manifolds, including their Schubert subvarieties, and the related Schubert polynomials. Much of this material has never appeared in book form.There are numerous exercises throughout, with hints or answers provided. Researchers in representation theory and algebraic geometry as well as in combinatorics will find Young Tableaux interesting and useful; students will find the intuitive presentation easy to follow.

作者介绍:

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标签

数学

组合数学

combinatorics

Mathematics

Math

教材

代数

math

评论

只仔细读了第一部分关于组合的，第二部分是表示论，第三部分是Schubert演算，难度越来越大，会逐渐假设你的基础知识。

后悔没有早点了解Young Tableaux。有趣的是高德纳（Knuth）对这理论作出了重要贡献。

复杂的流形的不变量公式竟然可以简单但是复杂计算中得到清晰的解释。同调代数和组合学的杨图之间，flag流形和格拉斯曼流形之间的变换来自Schur polynomial. 而A.A. Kirillov, I. Pak, Covariants of the symmetric group and its analogues in Weyl algebras 证明外尔的紧群公式来自图论和组合学。

1组合：杨表，Knuth等价和RSK对应；这部分比较直观，但许多证明并不简单，Littlewood-Richardson rule在1977年才有第一个证明。2表示论：S_n和GL(V)的表示；这部分基本上self-contained，展现杨表的威力。3几何：Flag varieties，Schubert calculus和intersection theory；看这部分需要先了解代数拓扑和代数几何。

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书评

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