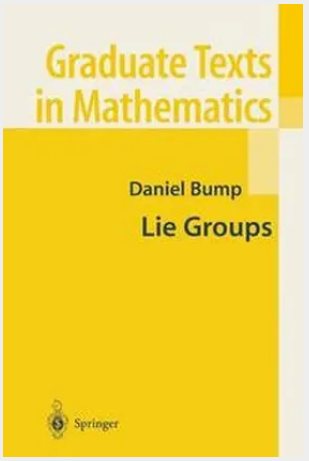
Bump

Lie Groups



This book proceeds beyond the representation theory of compact Lie groups (which is the basis of many texts) and offers a carefully chosen range of material designed to give readers the bigger picture. It explores compact Lie groups through a number of proofs and culminates in a "topics" section that takes the Frobenius-Schur duality between the representation theory of the symmetric group and the unitary groups as unifying them.

This book is intended for a one year graduate course on Lie groups and Lie algebras. The author proceeds beyond the representation theory of compact Lie groups (which is the basis of many texts) and provides a carefully chosen range of material to give the student the bigger picture. For compact Lie groups, the Peter-Weyl theorem, conjugacy of maximal tori (two proofs), Weyl character formula and more are covered. The book continues with the study of complex analytic groups, then general noncompact Lie groups, including the Coxeter presentation of the Weyl group, the Iwasawa and Bruhat decompositions, Cartan decomposition, symmetric spaces, Cayley transforms, relative root systems, Satake diagrams, extended Dynkin diagrams and a survey of the ways Lie groups may be embedded in one another. The book culminates in a "topics" section giving depth to the student's understanding of representation theory, taking the Frobenius-Schur duality between the representation theory of the symmetric group and the unitary groups as a unifying theme, with many applications in diverse areas such as random matrix theory, minors of Toeplitz matrices, symmetric algebra decompositions, Gelfand pairs, Hecke algebras, representations of finite general linear groups and the cohomology of Grassmannians and flag varieties. Daniel Bump is Professor of Mathematics at Stanford University. His research is in automorphic forms, representation theory and number theory. He is a co-author of GNU Go, a computer program that plays the game of Go. His previous books include Automorphic Forms and Representations (Cambridge University Press 1997) and Algebraic Geometry (World Scientific 1998).

59,87 €
55,95 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9780387211541
Medium: Buch
ISBN: 978-0-387-21154-1
Verlag: Springer Netherlands
Erscheinungstermin: 09.08.2004
Sprache(n): Englisch
Auflage: 1. Auflage 2004
Serie: Graduate Texts in Mathematics
Produktform: Gebunden
Gewicht: 911 g
Seiten: 454
Format (B x H): 155 x 235 mm

fachmedien.de
WISSEN. EINFACH. FINDEN.

23.11.2026 | 10:54 Uhr

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)