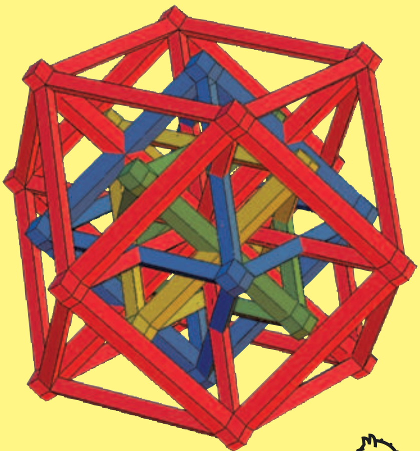
Universitext

Yvette Kosmann-Schwarzbach
Translated by Stephanie Frank Singer

Groups and Symmetries

From Finite Groups to Lie Groups

Second Edition



Springer

Universitext

Universitext is a series of textbooks that presents material from a wide variety of mathematical disciplines at master's level and beyond. The books, often well class-tested by their author, may have an informal, personal even experimental approach to their subject matter. Some of the most successful and established books in the series have evolved through several editions, always following the evolution of teaching curricula, into very polished texts.

Thus as research topics trickle down into graduate-level teaching, first textbooks written for new, cutting-edge courses may make their way into *Universitext*.

More information about this series at https://link.springer.com/bookseries/223

Yvette Kosmann-Schwarzbach

Groups and Symmetries

From Finite Groups to Lie Groups

Second Edition

Translated by Stephanie Frank Singer

Springer

Yvette Kosmann-Schwarzbach
Paris, France

Translated by
Stephanie Frank Singer
Hatfield School of Government
Portland State University
Portland, OR, USA

ISSN 0172-5939 ISSN 2191-6675 (electronic)
Universitext
ISBN 978-3-030-94359-2 ISBN 978-3-030-94360-8 (eBook)
https://doi.org/10.1007/978-3-030-94360-8

Mathematics Subject Classification: 01-01, 20-01, 20-G05, 20G45, 17B45, 33C55

Original French edition published by Éditions de l'École Polytechnique, 2005.

Cover illustration: The figure on the front cover represents weights for the fundamental representation of sl(4). Courtesy of Adrian Ocneanu.

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Sophus Lie (1842–1899), around 1865, at the end of his studies at the University of Christiana (Oslo), approximately seven years before his first work on continuous groups, later known as "Lie groups".

(Photo Frederik Klem/Joronn Vogt, with the kind permission of Joronn Vogt and Arild Stubhaug)

Contents