

Table of Contents

Chapter I. Abstract Groups

Chapter II. Topological Groups

1. Basic concepts and results
2. Subgroup, invariant subgroup and factor group of a topological group
3. Invariant integration on topological groups
4. The group algebra

Chapter III. Lie Groups and Lie Algebras

1. Lie groups local Lie groups and subgroups of a Lie group
2. Structure constants and the Lie algebra
3. On the structure of a semi-simple Lie algebras and Lie groups
4. Invariant integration on Lie groups
5. Some examples

Chapter IV. Group Representations

1. Basic definitions
2. Schur's lemma and its consequences
3. Realization of representations

Chapter V. Review of the Representation Theory of Bicomact Groups

Chapter VI. Induced Representations of Locally Bicomact Groups
Applications to Semi-Simple Lie Groups.

1. Introduction
2. Induced representations
3. The principal series of induced representations of a