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5. Electronic energy bands6. Survey of the crystallographic space groups; 7. Irreducible representations of symmorphic space groups; 8. Consequences of the fundamental theorems; Chapter 8. The Role of Lie Algebras; 1. ""Local"" and ""global"" aspects of Lie groups; 2. The matrix exponential function; 3. One-parameter subgroups; 4. Lie algebras; 5. The real Lie algebras that correspond to general linear Lie groups; Chapter 9. The Relationships between Lie Groups and Lie Algebras Explored; 1. Introduction; 2. Subalgebras of Lie algebras; 3. Homomorphic and isomorphic mappings of Lie algebras
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2. The Killing form and Cartan's criterion

Sommario/riassunto

This book, an abridgment of Volumes I and II of the highly respected Group Theory in Physics, presents a carefully constructed introduction to group theory and its applications in physics. The book provides anintroduction to and description of the most important basic ideas and the role that they play in physical problems. The clearly written text contains many pertinent examples that illustrate the topics, even for those with no background in group theory.This work presents important mathematical developments to theoretical physicists in a form that is easy to comprehend and apprec