



Group Theory in a Nutshell for Physicists

By A. Zee

Download now

Read Online 

Group Theory in a Nutshell for Physicists By A. Zee

Although group theory is a mathematical subject, it is indispensable to many areas of modern theoretical physics, from atomic physics to condensed matter physics, particle physics to string theory. In particular, it is essential for an understanding of the fundamental forces. Yet until now, what has been missing is a modern, accessible, and self-contained textbook on the subject written especially for physicists.

Group Theory in a Nutshell for Physicists fills this gap, providing a user-friendly and classroom-tested text that focuses on those aspects of group theory physicists most need to know. From the basic intuitive notion of a group, A. Zee takes readers all the way up to how theories based on gauge groups could unify three of the four fundamental forces. He also includes a concise review of the linear algebra needed for group theory, making the book ideal for self-study.

- Provides physicists with a modern and accessible introduction to group theory
- Covers applications to various areas of physics, including field theory, particle physics, relativity, and much more
- Topics include finite group and character tables; real, pseudoreal, and complex representations; Weyl, Dirac, and Majorana equations; the expanding universe and group theory; grand unification; and much more
- The essential textbook for students and an invaluable resource for researchers
- Features a brief, self-contained treatment of linear algebra
- An online illustration package is available to professors
- Solutions manual (available only to professors)

 [Download Group Theory in a Nutshell for Physicists ...pdf](#)

 [Read Online Group Theory in a Nutshell for Physicists ...pdf](#)

Group Theory in a Nutshell for Physicists

By A. Zee

Group Theory in a Nutshell for Physicists By A. Zee

Although group theory is a mathematical subject, it is indispensable to many areas of modern theoretical physics, from atomic physics to condensed matter physics, particle physics to string theory. In particular, it is essential for an understanding of the fundamental forces. Yet until now, what has been missing is a modern, accessible, and self-contained textbook on the subject written especially for physicists.

Group Theory in a Nutshell for Physicists fills this gap, providing a user-friendly and classroom-tested text that focuses on those aspects of group theory physicists most need to know. From the basic intuitive notion of a group, A. Zee takes readers all the way up to how theories based on gauge groups could unify three of the four fundamental forces. He also includes a concise review of the linear algebra needed for group theory, making the book ideal for self-study.

- Provides physicists with a modern and accessible introduction to group theory
- Covers applications to various areas of physics, including field theory, particle physics, relativity, and much more
- Topics include finite group and character tables; real, pseudoreal, and complex representations; Weyl, Dirac, and Majorana equations; the expanding universe and group theory; grand unification; and much more
- The essential textbook for students and an invaluable resource for researchers
- Features a brief, self-contained treatment of linear algebra
- An online illustration package is available to professors
- Solutions manual (available only to professors)

Group Theory in a Nutshell for Physicists By A. Zee Bibliography

- Sales Rank: #90515 in Books
- Brand: imusti
- Published on: 2016-03-29
- Original language: English
- Number of items: 1
- Dimensions: 1.70" h x 7.10" w x 10.10" l, .0 pounds
- Binding: Hardcover
- 632 pages

 [Download Group Theory in a Nutshell for Physicists ...pdf](#)

 [Read Online Group Theory in a Nutshell for Physicists ...pdf](#)

Editorial Review

Review

Honorable Mention for the 2017 PROSE Award in Textbook/Best in Physical Sciences and Mathematics, Association of American Publishers

"Another excellent entry in the 'Nutshell' series, Zee's latest has it all: broad scope, depth, thorough explanations, history, and an appealing sense of humor. The author's knowledge of mathematics and physics is encyclopedic, and he leavens the text generously with episodes and asides drawn from the life and work of the major figures in the development of group theory and its applications in physics."--**Choice**

"In *Group Theory in a Nutshell for Physicists*, Anthony Zee . . . combines clarity of presentation with mathematical detail at a level of rigor acceptable to physicists. The result is a tour de force that guides readers through the universe of group theory and leads them to recent particle physics, cosmology, and condensed matter. The book is unique in its laid-back presentation."--**Physics Today**

"This book lives up to my high expectations and can stand shoulder to shoulder with Zee's other two *Nutshell* books."--**Johannes Koelman, Science 2.0**

From the Back Cover

"Zee's lovely book on the theory of group representations is comprehensive and complete, both from the mathematical and physical points of view. While it doesn't discuss the representations of the symmetric groups, the book's got almost everything on the mathematical side, including roots and weights in the theory of compact Lie groups. The physics applications are mainly from high energy physics but also include some from chemical and condensed matter physics. Clearly written, this book makes an ideal text for a graduate course in physics on the subject."--**Barry Simon, California Institute of Technology**

"This excellent book stands out by its clarity of presentation."--**Eugene Demler, Harvard University**

"This is an ambitious book. Zee brings together a lot of material not easily found in one place."--**Savdeep S. Sethi, University of Chicago**

"*Group Theory in a Nutshell for Physicists* fills a gap in the market. Zee turns group theory into a less intimidating topic."--**Katrin Becker, Texas A&M University**

About the Author

A. Zee is professor of physics at the Kavli Institute for Theoretical Physics at the University of California, Santa Barbara. His books include *Quantum Field Theory in a Nutshell*, *Einstein Gravity in a Nutshell*, and *Fearful Symmetry: The Search for Beauty in Modern Physics* (all Princeton).

Users Review

From reader reviews:

Elinor Russell:

Do you among people who can't read pleasurable if the sentence chained in the straightway, hold on guys this aren't like that. This Group Theory in a Nutshell for Physicists book is readable simply by you who hate the perfect word style. You will find the information here are arrange for enjoyable examining experience without leaving actually decrease the knowledge that want to give to you. The writer involving Group Theory in a Nutshell for Physicists content conveys thinking easily to understand by many people. The printed and e-book are not different in the content material but it just different as it. So , do you continue to thinking Group Theory in a Nutshell for Physicists is not loveable to be your top listing reading book?

Tara Wilson:

The particular book Group Theory in a Nutshell for Physicists will bring that you the new experience of reading a new book. The author style to describe the idea is very unique. Should you try to find new book to study, this book very ideal to you. The book Group Theory in a Nutshell for Physicists is much recommended to you to learn. You can also get the e-book from the official web site, so you can quicker to read the book.

Alan Robert:

Typically the book Group Theory in a Nutshell for Physicists has a lot of knowledge on it. So when you check out this book you can get a lot of profit. The book was compiled by the very famous author. This articles author makes some research ahead of write this book. This kind of book very easy to read you may get the point easily after reading this article book.

Michelle Jarvis:

Can you one of the book lovers? If yes, do you ever feeling doubt while you are in the book store? Aim to pick one book that you never know the inside because don't determine book by its cover may doesn't work here is difficult job because you are frightened that the inside maybe not because fantastic as in the outside seem likes. Maybe you answer is usually Group Theory in a Nutshell for Physicists why because the great cover that make you consider about the content will not disappoint anyone. The inside or content is actually fantastic as the outside as well as cover. Your reading 6th sense will directly direct you to pick up this book.

Download and Read Online Group Theory in a Nutshell for Physicists By A. Zee #EFXPY04GR8I

Read Group Theory in a Nutshell for Physicists By A. Zee for online ebook

Group Theory in a Nutshell for Physicists By A. Zee Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Group Theory in a Nutshell for Physicists By A. Zee books to read online.

Online Group Theory in a Nutshell for Physicists By A. Zee ebook PDF download

Group Theory in a Nutshell for Physicists By A. Zee Doc

Group Theory in a Nutshell for Physicists By A. Zee Mobipocket

Group Theory in a Nutshell for Physicists By A. Zee EPub