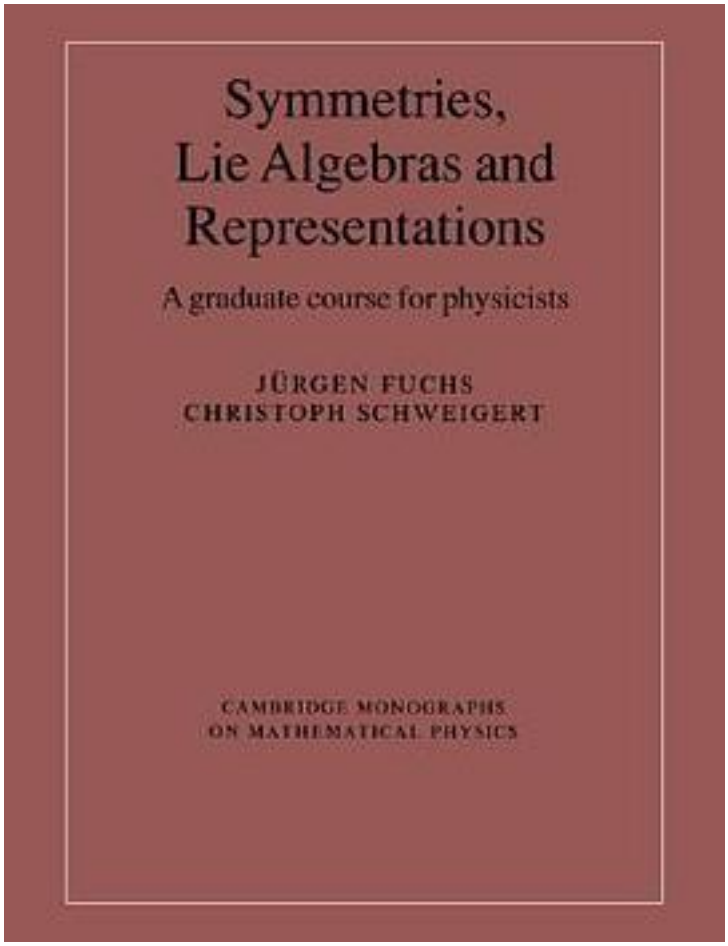
Symmetries, Lie Algebras and Representations



Symmetries, Lie Algebras and Representations_下载链接1_

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This is an introduction to Lie algebras and their applications in physics. The first three chapters show how Lie algebras arise naturally from symmetries of physical systems and illustrate through examples much of their general structure. Chapters 4 to 13 give a

detailed introduction to Lie algebras and their representations, covering the Cartan-Weyl basis, simple and affine Lie algebras, real forms and Lie groups, the Weyl group, automorphisms, loop algebras and highest weight representations. Chapters 14 to 22 cover specific further topics, such as Verma modules, Casimirs, tensor products and Clebsch-Gordan coefficients, invariant tensors, subalgebras and branching rules, Young tableaux, spinors, Clifford algebras and supersymmetry, representations on function spaces, and Hopf algebras and representation rings. A detailed reference list is provided, and many exercises and examples throughout the book illustrate the use of Lie algebras in real physical problems. The text is written at a level accessible to graduate students, but will also provide a comprehensive reference for researchers.

作者介绍:

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标签

李代数

数学

Cambridge

没头脑也很高兴

其余代数7

Representation

QuantumFieldTheory

Math

评论

闲来无事重读发现真的是入门好书，引入数学时motivation很足不会像某些数学物理书一样莫名其妙地长篇大论让你怀疑人生不懂为毛要学这些想我为什么不干脆跑去学数学。只是绝大多数人可能没耐心读作者完全物理的表述语言。话说穿插着的discussion初读的人肯定读不懂，能读懂的人又完全没读的必要，在没学会画邓金图前就能读懂“闭的非退化的2-形式”“拉格朗日子流形的余切丛”的人可能不是学物理的，不过也说不定..

这本书排版那叫一个差啊，内容还行，但是毕竟是做cft的人写的，仅仅讲了affine type，hyperbolic跟lorentzian type的没有涉猎，这是这本书的遗憾。

李代数仿射李代数的入门教材，可以参考着看。

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书评

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