

<<旋量与时空 (第2卷)>>

图书基本信息

书名：<<旋量与时空 (第2卷)>>

13位ISBN编号：9787506292603

10位ISBN编号：7506292602

出版时间：2009-1

出版时间：世界图书出版公司

作者：彭罗斯

页数：501

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

## 内容概要

This is a companion volume to our introductory work *Spinors and space-time, Volume 1: two-spinor calculus and relativistic fields*. There we attempted to demonstrate something of the power, utility and elegance of 2-spinor techniques in the study of space-time structure and physical fields, and to advocate the viewpoint that spinors may lie closer to the heart of (even macroscopic) physical laws than the vectors and tensors of the standard formalism. Here we carry these ideas further and discuss some important new areas of application. We introduce the theory of twistors and show how it sheds light on a number of important physical questions, one of the most noteworthy being the structure of energy-momentum/angular momentum of gravitating systems. The illumination that twistor theory brings to the discussion of such physical problems should lend further support to the viewpoint of an underlying spinorial structure in basic physical laws.

<<旋量与时空 (第2卷)>>

作者简介

作者：(英国)彭罗斯 (Penrose.R.)

<<旋量与时空 (第2卷)>>

书籍目录

Preface Summary of Volume 16 Twistors 6.1 The twistor equation and its solution space 6.2 Some geometrical aspects of twistor algebra 6.3 Twistors and angular momentum 6.4 Symmetric twistors and massless fields 6.5 Conformal Killing vectors, conserved quantities and exact sequences 6.6 Lie derivatives of spinors 6.7 Particle constants; conformally invariant operators 6.8 Curvature and conformal rescaling 6.9 Local twistors 6.10 Massless fields and twistor cohomology 7 Null congruences 7.1 Null congruences and spin-coefficients 7.2 Null congruences and space-time curvature 7.3 Shear-free ray congruences 7.4 SFRs, twistors and ray geometry 8 Classification of curvature tensors 8.1 The null structure of the Weyl spinor 8.2 Representation of the Weyl spinor on  $S$  8.3 Eigenspinors of the Weyl spinor 8.4 The eigenbivectors of the Weyl tensor and its Petrov classification 8.5 Geometry and symmetry of the Weyl curvature 8.6 Curvature covariants 8.7 A classification scheme for general spinors 8.8 Classification of the Ricci spinor 9 Conformal infinity 9.1 Infinity for Minkowski space 9.2 Compactified Minkowski space 9.3 Complexified compactified Minkowski space and twistor geometry 9.4 Twistor four-valuedness and the Grgin index 9.5 Cosmological models and their twistors 9.6 Asymptotically simple space-times 9.7 Peeling properties 9.8 The BMS group and the structure of 9.9 Energy-momentum and angular momentum 9.10 Bondi-Sachs mass loss and positivity Appendix: spinors in  $n$  dimensions References Subject and author index Index of symbols

<<旋量与时空 (第2卷)>>

章节摘录

插图：

<<旋量与时空 (第2卷)>>

编辑推荐

《旋量与时空(第2卷)》由世界图书出版公司出版。

<<旋量与时空 (第2卷)>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介, 请支持正版图书。

更多资源请访问:<http://www.tushu007.com>