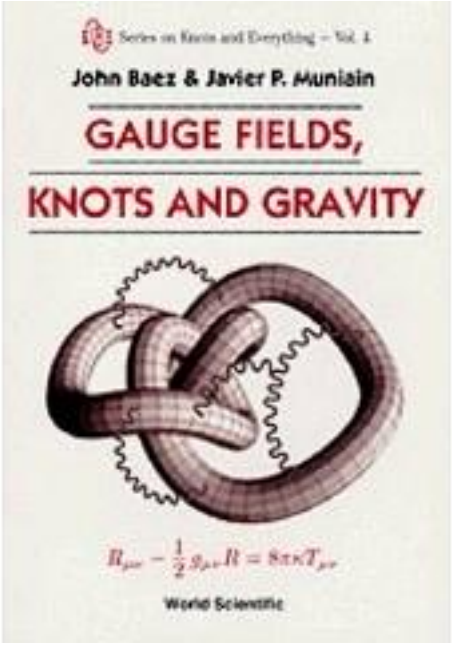
Gauge Fields, Knots and Gravity



Gauge Fields, Knots and Gravity_下载链接1_

著者:John Baez/Javier P Muniain

出版者:World Scientific Pub Co Inc

出版时间:1994-10-1

装帧:Hardcover

isbn:9789810217297

This is an introduction to the basic tools of mathematics needed to understand the relation between knot theory and quantum gravity. The book begins with a rapid course on manifolds and differential forms, emphasizing how these provide a proper language for formulating Maxwell's equations on arbitrary spacetimes. The authors then introduce vector bundles, connections and curvature in order to generalize Maxwell theory to the Yang-Mills equations. The relation of gauge theory to the newly discovered knot invariants such as the Jones polynomial is sketched. Riemannian geometry is then introduced in order to describe Einstein's equations of general relativity and show how an attempt to quantize gravity leads to interesting applications of knot theory.

作者介绍:

目录:

Gauge Fields, Knots and Gravity_下载链接1_

标签

物理

数学

统一之路

物理教材

物理学

教材

待阅

physics

评论

Gauge Fields, Knots and Gravity_下载链接1_

书评

这本好书一直没有书评，小弟我就抛砖引玉吧。
昨天从卓越入手的，今天读到第三章。书的字体和纸张有点像小说。行文娓娓道来，解释清晰明了。由于作者的用意在于引导，而不是完整严格地处理全部内容，所以详略非常合像我这种偏物理不好纯数学的读者的胃口，没有必要繁复证明地地...

Gauge Fields, Knots and Gravity_下载链接1_