

<<力学和对称性导论>>

图书基本信息

书名：<<力学和对称性导论>>

13位ISBN编号：9787506233064

10位ISBN编号：7506233061

出版时间：1997-9

出版时间：世界图书出版公司北京公司

作者：Jerrold E.Marsden,Tudor S.Ratiu

页数：500

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>

## <<力学和对称性导论>>

### 内容概要

本书是Springer《应用数学教材》丛书第17卷，是一部经典力学基本教程。书中对动力系统中的活跃分支——可积系统、混沌系统、在制系统、稳定性、分歧理论，以及特殊刚体、流体、等离子体和弹性系统等近代理论及其应用作了详细介绍，内容系统丰富。可供从事应用数学、力学专业的高年级大学生和研究生使用，也可作为相关领域专家、学者的参考书。

## &lt;&lt;力学和对称性导论&gt;&gt;

## 书籍目录

Preface 1 Introduction and Overview 1.1 Lagrangian and Hamiltonian Formalisms 1.2 The Rigid Body 1.3  
 Lie-Poisson Brackets, Poisson Manifolds, Momentum Maps 1.4 Incompressible Fluids 1.5 The Maxwell-Vlasov  
 System 1.6 The Maxwell and Poisson-Vlasov Brackets 1.7 The Poisson-Vlasov to Fluid Map 1.8 The  
 Maxwell-Vlasov Bracket 1.9 The Heavy Top 1.10 Nonlinear Stability 1.11 Bifurcation 1.12 The  
 Poincaré-Melnikov Method and Chaos 1.13 Resonances, Geometric Phases, and Control 2 Hamiltonian Systems on  
 Linear Symplectic Spaces 2.1 Introduction 2.2 Symplectic Forms on Vector Spaces 2.3 Examples 2.4 Canonical  
 Transformations or Symplectic Maps 2.5 The Abstract Hamilton Equations 2.6 The Classical Hamilton Equations  
 2.7 When Are Equations Hamiltonian? 2.8 Hamiltonian Flows 2.9 Poisson Brackets 2.10 A Particle in a Rotating  
 Hoop 2.11 The Poincaré-Melnikov Method and Chaos 3 An Introduction to Infinite-Dimensional Systems 3.1  
 Lagrange's and Hamilton's Equations for Field Theory 3.2 Examples : Hamilton's Equations 3.3 Examples : Poisson  
 Brackets and Conserved Quantities 4 Interlude : Manifolds , Vector Fields , Differential Forms 4.1 Manifolds 4.2  
 Differential Forms 4.3 The Lie Derivative 4.4 Stokes' Theorem 5 Hamiltonian Systems on Symplectic Manifolds 6  
 Cotangent Bundles 7 Lagrangian Mechanics 8 Variational Principles , Constraints , Rotating Systems 9 An  
 Introduction to Lie Groups 10 Poisson Manifolds 11 Momentum Maps 12 Computation and Properties of  
 Momentum Maps 13 Euler-Poincaré and Lie-Poisson Reduction 14 Coadjoint Orbits 15 The Free Rigid  
 Body References Index

<<力学和对称性导论>>

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>