## <<双曲几何讲义>>

### 图书基本信息

书名:<<双曲几何讲义>>

13位ISBN编号:9787510046322

10位ISBN编号:7510046327

出版时间:2012-8

出版时间:世界图书出版公司

作者: Riccardo Benedetti, Carlo Petronio

页数:330

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

### <<双曲几何讲义>>

#### 内容概要

One of the main themes of this book is the conflict between the "flexibility' and the "rigidity properties of the hyperbolic manifolds: the first radical difference arises between the case of dimension 2 and the case of higher dimensions (as proved in chapters B and C), an elementary feature of thus phenomenon being the difference between the Riemann mapping theorem and Liouville's theorem, as pointed out in chapter A. Thus chapter is rather clementary and most of its material may' be the object of an undergraduate course.

Together with the rigidity theorem , a basic tool for the study of hyperbolic manifolds is Margulis' lemma , a detailed proof of which we give in chapter D; as a consequence of this result in the same chapter we also give a rather accurate description , in all dimensions , of the thin-thick decomposition of a hyperbolic manifold (especially in case of finite volume) .

## <<双曲几何讲义>>

#### 书籍目录

|   |       | •   |    |
|---|-------|-----|----|
| r | ۱rc   | T2  | ce |
|   | , i c | ,ıu | -  |

chapter a.hyperbolic space

- a.1 models for hyperbolic space
- a.2 isometries of hyperbolic space: hyperboloid model
- a.3 conformal geometry
- a.4 isometries of hyperbolic space: disc and half-space

#### models

- a.5 geodesics, hyperbolic subspaces and misceuaneo,s facts
- a.6 curvature of hyperbolic space

chapter b.hyperbolic manifolds and the compact two-dimensional case

- b.1 hyperbolic, elliptic and flat manifolds
- b.2 topology of compact oriented surfaces
- b.3 hyperbolic, elliptic and flat surfaces
- b.4 teichmiiller space

chapter c.the rigidity theorem (compact case)

- c.1 first step of the proof: extension of pseudo-isometrics
- c.2 second step of the proof: volume of ideal simplices
- c.3 gromov norm of a compact manifold
- c.4 third step of the proof:the gromov norm and the volume are proportional
- c.5 conclusion of the proof, corollaries and generalizations chapter d.margulis' lemma and its applications
  - d.1 margnlis' lemma
  - d.2 local geometry of a hyperbolic manifold
  - d.3 ends of a hyperbolic manifold

chapter e.the space of hyperbolic manifolds and the volume function

- e.1 the chahauty and the geometric topology
- e.2 convergence in the geometric topology: opening cusps.the case of dimension at least three
- $\mbox{e.3}$  the case of dimension different from three.conclusions and examples
- e.4 the three-dimensional case: jorgensen's part of the so-calledjorgensen-tlmrston theory
- e.5 the three-dimensional case. thurston's hyperbolic surgery theorem: statement and preliminaries
- e.5-i definition and first properties of ts (non-compact three-manifolds with "triangulation" without vertices)
- e.5-ii hyperbolic structures on an element of ts and realization of the complete structure
  - e.5-iii elements of ts and standard spines
  - e.5-iv some links whose complements are realized a.s elements of

ts

e.6 proof of thurston's hyperbolic surgery theorem

## <<双曲几何讲义>>

- e.6-i algebraic equations of h(m)(hyperbolic structures supported by m t3)
  - e.6-ii dimension of h(m): general ca.se
- e.6-iii the case m is complete hyperbolic:the space of deformations
- e.6-iv completion of the deformed hyperbolic structures and conclusion of the proof
- e.7 applications to the study of the volume f, mction and complements about three-dimensional hyperbolic geometry chapter f.bounded cohomology, a rough outline
  - f.1 singular cohomology
  - f.2 bounded singular cohomology
  - f.3 flat fiber bundles
  - f.4 euler class of a flat vector bundle
- f.5 flat vector bundles on surfaces and the milner-sullivan theorem
  - f.6 suuivan's conjecture and amenable groups subject index notation index references

# <<双曲几何讲义>>

### 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