

<<代数曲线几何初步>>

图书基本信息

书名：<<代数曲线几何初步>>

13位ISBN编号：9787506292641

10位ISBN编号：7506292645

出版时间：2009-1

出版时间：世界图书出版公司

作者：茵吉布森

页数：250

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>

<<代数曲线几何初步>>

前言

For some time I have felt there is a good case for raising the profile of undergraduate geometry. The case can be argued on academic grounds alone. Geometry represents a way of thinking within mathematics, quite distinct from algebra and analysis, and so offers a fresh perspective on the subject. It can also be argued on purely practical grounds. My experience is that there is a measure of concern in various practical disciplines where geometry plays a substantial role (engineering science for instance) that their students no longer receive a basic geometric training. And thirdly, it can be argued on psychological grounds. Few would deny that substantial areas of mathematics fail to excite student interest: yet there are many students attracted to geometry by its sheer visual content. The decline in undergraduate geometry is a bit of a mystery. It probably has something to do with the fashion for formalism which seemed to permeate mathematics some decades ago. But things are changing. The enormous progress made in studying non-linear phenomena by geometrical methods has certainly revived interest in geometry. And for material reasons, tertiary institutions are ever more conscious of the need to offer their students more attractive courses.

0.1 General Background I first became involved in the teaching of geometry about twenty years ago, when my department introduced an optional second year course on the geometry of plane curves, partly to redress the imbalance in the teaching of the subject.

It was mildly revolutionary, since it went back to an earlier set of precepts where the differential and algebraic geometry of curves were pursued simultaneously, to their mutual

advantage. In the final year of study students could pursue this kind of geometry

<<代数曲线几何初步>>

内容概要

General Background I first became involved in the teaching of geometry about twenty years ago , when my department introduced an optional second year course on the geometry of plane curves , partly to redress the imbalance in the teaching of the subject.

It Was mildly revolutionary , since it went back to an earlier set of precepts where the differential and algebraic geometry of curves were pursued simultaneously, to their mutual advantage.

<<代数曲线几何初步>>

书籍目录

List of Illustrations
 List of Tables
 Preface
 1 Real Algebraic Curves 1.1 Parametrized and Implicit Curves 1.2
 Introductory Examples 1.3 Curves in Planar Kinematics
 2 General Ground Fields 2.1 Two Motivating
 Examples 2.2 Groups, Rings and Fields 2.3 General Affine Planes and Curves 2.4 Zero Sets of Algebraic
 Curves
 3 Polynomial Algebra 3.1 Factorization in Domains 3.2 Polynomials in One Variable 3.3 Polynomials
 in Several Variables 3.4 Homogeneous Polynomials 3.5 Formal Differentiation
 4 Affine Equivalence 4.1
 Affine Maps 4.2 Affine Equivalent Curves 4.3 Degree as an Affine Invariant 4.4 Centres as Affine Invariants
 5 Affine Conics 5.1 Affine Classification 5.2 The Delta Invariants 5.3 Uniqueness of Equations
 6 Singularities
 of Affine Curves 6.1 Intersection Numbers 6.2 Multiplicity of a Point on a Curve 6.3 Singular Points
 7
 Tangents to Affine Curves 7.1 Generalities about Tangents 7.2 Tangents at Simple Points 7.3 Tangents at
 Double Points 7.4 Tangents at Points of Higher Multiplicity
 8 Rational Affine Curves 8.1 Rational Curves 8.2
 Diophantine Equations 8.3 Conics and Integrals
 9 Projective Algebraic Curves 9.1 The Projective Plane 9.2
 Projective Lines 9.3 Affine Planes in the Projective Plane 9.4 Projective Curves 9.5 Affine Views of Projective
 Curves
 10 Singularities of Projective Curves 10.1 Intersection Numbers 10.2 Multiplicity of a Point on a Curve
 10.3 Singular Points 10.4 Delta Invariants viewed Projectively
 11 Projective Equivalence 11.1 Projective Maps
 11.2 Projective Equivalence 11.3 Projective Conics 11.4 Affine and Projective Equivalence
 12 Projective
 Tangents 12.1 Tangents to Projective Curves 12.2 Tangents at Simple Points 12.3 Centres viewed Projectively
 12.4 Foci viewed Projectively 12.5 Tangents at Singular Points 12.6 Asymptotes
 13 Flexes 13.1 Hessian
 Curves 13.2 Configurations of Flexes
 14 Intersections of Projective Curves 14 . 1 The Geometric Idea 14 . 2
 Resultants in One Variable 14 . 3 Resultants in Several Variables 14 . 4 Bezout's Theorem 14 . 5 The
 Multiplicity Inequality 14 . 6 Invariance of the Intersection Number
 15 Projective Cubics 15 . 1 Geometric
 Types of Cubics 15 . 2 Cubics of General Type 15 . 3 Singular Irreducible Cubics 15 . 4 Reducible
 Cubics
 16 Linear Systems 16 . 1 Projective Spaces of Curves 16 . 2 Pencils of Curves 16 . 3 Solving Quartic
 Equations 16 . 4 Subspaces of Projective Spaces 16 . 5 Linear Systems of Curves 16 . 6 Dual Curves
 17 The
 Group Structure on a Cubic 17 . 1 The Nine Associated Points 17 . 2 The Star Operation 17 . 3 Cubics as
 Groups 17 . 4 Group Computations 17 . 5 Determination of the Groups
 18 Rational Projective Curves 18
 . 1 The Projective Concept 18 . 2 Quartics with Three Double Points 18 . 3 The Deficiency of a Curve 18
 . 4 Some Rational Curves 18 . 5 Some Non-Rational Curves
 Index

<<代数曲线几何初步>>

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>