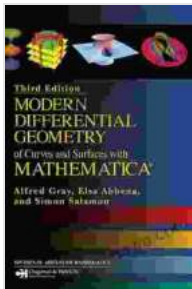


# Modern Differential Geometry of Curves and Surfaces with Mathematica Textbooks

This book provides a comprehensive to modern differential geometry, with a focus on curves and surfaces. It is written in a clear and concise style, and includes numerous examples and exercises to help students understand the material. The book also includes a CD-ROM with Mathematica notebooks that can be used to illustrate the concepts discussed in the text.



## Modern Differential Geometry of Curves and Surfaces with Mathematica (Textbooks in Mathematics) by Alfred Gray

★★★★☆ 4.6 out of 5

Language : English

File size : 35923 KB

Screen Reader : Supported

Print length : 1016 pages

X-Ray for textbooks : Enabled



## Table of Contents

- Chapter 1:
- Chapter 2: Curves
- Chapter 3: Surfaces
- Chapter 4: Differential forms
- Chapter 5: Integration on manifolds

- Chapter 6: Applications

## **Chapter 1:**

This chapter provides an overview of differential geometry and its applications. It begins with a discussion of the basic concepts of differential geometry, including manifolds, tangent spaces, and differential forms. The chapter then discusses the applications of differential geometry to physics, engineering, and other fields.

## **Chapter 2: Curves**

This chapter focuses on the geometry of curves. It begins with a discussion of the basic concepts of curve theory, including arc length, curvature, and torsion. The chapter then discusses the applications of curve theory to kinematics, mechanics, and other fields.

## **Chapter 3: Surfaces**

This chapter focuses on the geometry of surfaces. It begins with a discussion of the basic concepts of surface theory, including surface area, Gauss curvature, and mean curvature. The chapter then discusses the applications of surface theory to architecture, engineering, and other fields.

## **Chapter 4: Differential forms**

This chapter introduces the concept of differential forms. Differential forms are a powerful tool for studying the geometry of manifolds. The chapter discusses the basic properties of differential forms and their applications to differential geometry.

## **Chapter 5: Integration on manifolds**

This chapter discusses the integration of differential forms on manifolds. Integration on manifolds is a powerful tool for studying the geometry of manifolds. The chapter discusses the basic properties of integration on manifolds and their applications to differential geometry.

## Chapter 6: Applications

This chapter discusses the applications of differential geometry to other fields, such as physics, engineering, and computer science. The chapter provides examples of how differential geometry is used to solve problems in these fields.

This book provides a comprehensive to modern differential geometry, with a focus on curves and surfaces. It is written in a clear and concise style, and includes numerous examples and exercises to help students understand the material. The book also includes a CD-ROM with Mathematica notebooks that can be used to illustrate the concepts discussed in the text.

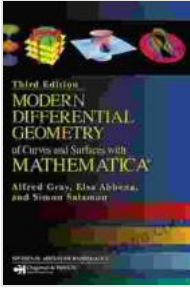
## References

1. Do Carmo, M. P. (1994). *Differential geometry of curves and surfaces*. Prentice Hall.
2. Kreyszig, E. (1991). *Differential geometry*. Dover Publications.
3. Spivak, M. (1999). *A comprehensive to differential geometry*. Publish or Perish, Inc.

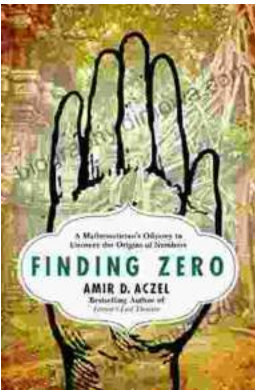
**Modern Differential Geometry of Curves and Surfaces  
with Mathematica (Textbooks in Mathematics)** by Alfred Gray

★★★★★ 4.6 out of 5

Language : English



File size : 35923 KB  
Screen Reader : Supported  
Print length : 1016 pages  
X-Ray for textbooks : Enabled



## Mathematician's Odyssey to Uncover the Origins of Numbers

In his captivating new book, *Mathematician's Odyssey*, acclaimed author and mathematician Dr. Alex Bellos embarks on an extraordinary journey to unravel...



## Unlock the Power of Profiting Without Property: Your Guide to Building Passive Income and Financial Freedom

Are you ready to embark on a journey towards financial independence and unlock the potential for passive income streams? This comprehensive guide will equip...