

<<计算机图形学习题与解答>>

图书基本信息

书名：<<计算机图形学习题与解答>>

13位ISBN编号：9787111104179

10位ISBN编号：711110417X

出版时间：2002-8

出版时间：机械工业

作者：[美]ZhigangXiang, [美]RoyPlast

页数：347

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>

<<计算机图形学习题与解答>>

书籍目录

CHAPTER 1 INTRODUCTION

1.1 A Mini-survey

1.2 What's Ahead

CHAPTER 2 IMAGE REPRESENTATION

2.1 The RGB Color Model

2.2 Direct Coding

2.3 Lookup Table

2.4 Display Monitor

2.5 Printer

2.6 Image Files

2.7 Setting the Color Attribute of Pixels

2.8 Example: Visualizing the Mandelbrot Set

CHAPTER 3 SCAN CONVERSION

3.1 Scan-Converting a Point

3.2 Scan-Converting a Line

3.3 Scan-Converting a Circle

3.4 Scan-Converting an Ellipse

3.5 Scan-Converting Arcs and Sectors

3.6 Scan-Converting a Rectangle

3.7 Region Filling

3.8 Scan-Converting a Character

3.9 Anti-Aliasing

3.10 Example: Recursively Defined Drawings

CHAPTER 4 TWO-DIMENSIONAL TRANSFORMATIONS

4.1 Geometric Transformations

4.2 Coordinate Transformations

4.3 Composite Transformations

4.4 Instance Transformations

CHAPTER 5 TWO-DIMENSIONAL VIEWING AND CLIPPING

5.1 Window-to-Viewport Mapping

5.2 Point Clipping

5.3 Line Clipping

5.4 Polygon Clipping

5.5 Example: A 2D Graphics Pipeline

CHAPTER 6 THREE-DIMENSIONAL TRANSFORMATIONS

6.1 Geometric Transformations

6.2 Coordinate Transformations

6.3 Composite Transformations

6.4 Instance Transformations

CHAPTER 7 MATHEMATICS OF PROJECTION

7.1 Taxonomy of Projection

7.2 Perspective Projection

7.3 Parallel Projection

CHAPTER 8 THREE-DIMENSIONAL VIEWING AND CLIPPING

8.1 Three-Dimensional Viewing

<<计算机图形学习题与解答>>

8.2 Clipping

8.3 Viewing Transformation

8.4 Example:A 3D Graphics Pipeline

CHAPTER 9 GEOMETRIC REPRESENTATIONS

9.1 Simple Geometric Forms

9.2 Wireframe Models

9.3 Curved Surfaces

9.4 Curve Design

9.5 Polynomial Basis Functions

9.6 The Problem of Interpolation

9.7 The Problem of Approximation

9.8 Curved-Surface Design

9.9 Transforming Curves and Surfaces

9.10 Quadric Surfaces

9.11 Example:Terrain Generation

CHAPTER 10 HIDDEN SURFACES

10.1 Depth Comparisons

10.2 Z-Buffer Algorithm

10.3 Back-Face Removal

10.4 The Painter's Algorithm

10.5 Scan-Line Algorithm

10.6 Subdivision Algorithm

10.7 Hidden-Line Elimination

10.8 The Rendering of Mathematical Surfaces

CHAPTER 11 COLOR AND SHADING MODELS

11.1 Light and Color

11.2 The Phong Model

11.3 Interpolative Shading Methods

11.4 Texture

CHAPTER 12 RAY TRACING

12.1 The Pinhole Camera

12.2 A Recursive Ray-Tracer

12.3 Parametric Vector Representation of a Ray

12.4 Ray-Surface Intersection

12.5 Execution Efficiency

12.6 Anti-Aliasing

12.7 Additional Visual Effects

Appendix 1 MATHEMATICS FOR TWO-DIMENSIONAL COMPUTER GRAPHICS

A1.1 The Two-Dimensional Cartesian Coordinate System

A1.2 The Polar Coordinate System

A1.3 Vectors

A1.4 Matrices

A1.5 Functions and Transformations

Appendix 2 MATHEMATICS FOR THREE-DIMENSIONAL COMPUTER GRAPHICS

A2.1 Three-Dimensional Cartesian Coordinates

A2.2 Curves and Surfaces in Three Dimensions

A2.3 Vectors in Three Dimensions

<<计算机图形学习题与解答>>

A2.4 Homogeneous Coordinates

ANSWERS TO SUPPLEMENTARY PROBLEMS

INDEX

<<计算机图形学习题与解答>>

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>