<<交互式计算机图形学>>

图书基本信息

书名：<<交互式计算机图形学>>

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内容概要

本书向读者讲授如何用OpenGL从初级阶段快速制作优质的交互式计算机图形实例，OpenGL是业界广泛采用的三维图形API，本书藉此向读者提供了在计算机图形学领域更广阔空间内发展的坚实基础。书中内容覆盖了计算机图形学基础课程所需的所有论题，如光景交互作用、图形明暗处理、图形建模、曲线与曲面、偏差预防、纹理映射和图形组合，还探讨了计算机硬件方面的问题。

本版为配合计算机图形学领域最新进展，增加了更具广度和深度的内容，包括图像处理、多重透视、并行透视等，并运用选择模式、仿真模拟、面向对象图形学与实景图像、射线跟踪等方法讲解了图形交互的内容。

随书所附光盘包括OpenGL指令集参考、OpenGL手册、书中源码代码和附加的实用案例。

本书适用于高等院校本科高年级和研究生的计算机图形学、交互式计算机系统等课程。

作者简介

Edward Angel is currently a professor of Commputer Sicience,Electrical and Computer Engineering and Media Arts at the university of new mexico.He was recently named the Director of the Art tech Center at UNM in the College of Fine Arts.Professor Angel

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书籍目录

章节摘录

插图：Classical graphics techniques arose as a medium to convey information among people.Although spoken and written languages serve a similar purpose， the human viSUal system is unrivaled bo出as a processor of data and as a pattern recognizer.More than 4000 years ago ’ the Babylonians displayed floor plans of buildings on stones.More出an 2000 years ago.the Greeks were able to convey their architectural ideas graphically,even though the related mathematics was not developed until the Renaissance.Today,the same type of information iS generated by architects， mechanical designers ’ and draftspeople using computer- based drafting systems.For centuries ， cartographers have developed maps to display celestial and geographical information.Such maps were crucial to navigators as these people explored出e ends ofthe earth：maps are no less important today in fields such as geographic information systems.Now,maps can be developed and manipulated in real time over Che Internet.Over the past 1 00 years， workers in the field of statistics have explored tech. niques for generating plots that aidthe viewer in determining the information in a set ofdata.Now,we have computer plotting packages that provide a variety of plotting techniques and color tools.and that can handle multiple large data sets.Nevertheless.it is still the human ’ S ability to recognize visual patterns that ultimatelv allows us to interoret the information contalned in the data.Medicine poses interesting and important data。
analysis problems.New imag. ing technologics——such as computed tomography（C7）， magnetic resonance imaging（Mea）， ultrasound ’ and positron.emission tomography（PET）一generate three-dimensional data that must be subjected to algorithmic ma. nipulafion to provide useful information.Color Plate 20 shows an image of a person'S head in which the skin iS displayed as transparent and the muscles are displayed as opaque.Although the data were collected by a medical imaging system， computer graphics produced the image that shows the structures.

媒体关注与评论

书评本套教学用书的特点： 权威性——教育部高等教育司推荐、教育部高等学校信息科学与技术引进教材专家组遴选。
系统性——覆盖计算机专业主干课程和非计算机专业计算机基础课程； 先进性——著名计算机专家近两年的最新著作，内容体系先进； 经济性——价格与国内自编教材相当，是国内引进教材价格最低的。
This is third edition of this widely adopted textbook.It gets beginners creating exciting interactive graphics applications quickly using OpenGL,the most widely used 3D graphics API in the industry,and provides a solid background for future work in computer graphics,The book covers all topics required for a fundamental course in computer graphics,such as light-material interactions,shading,modeling,curves and surfaces,antialiasing,texture mapping,and compositing,as well as hardware issues. This edition includes an expanded breadth and depth of material to account for new developments in the field,including new material on image processing,texture mapping,multirendering,image-based rendering,and parallel rendering,as well as more material on interaction using selection mode,smooth animations,object-oriented graphics and scene graphics,and ray tracing and radiosity. Included is a CD-ROM with OpenGL resources and book supplements.

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编辑推荐

《交互式计算机图形学:自顶向下方法与OpenGL应用(第3版 影印版)》由高等教育出版社出版。
本套教学用书的特点：权威性——教育部高等教育司推荐、教育部高等学校信息科学与技术引进教材专家组遴选。
系统性——覆盖计算机专业主干课程和非计算机专业计算机基础课程；先进性——著名计算机专家近两年的最新著作，内容体系先进；经济性——价格与国内自编教材相当，是国内引进教材价格最低的。
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