Título: Computer Graphics Using Opengl

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Sinopsis   **ISBN:** 9780131496705

For undergraduate Computer Graphics courses.

Updated throughout for the latest developments and technologies, this text combines the principles and major techniques in computer graphics with state-of-the-art examples that relate to things students see everyday on the Internet and in computer-generated movies. Practical, accessible, and integrated in approach, it carefully presents each concept, explains the underlying mathematics, shows how to translate the math into program code, and displays the result.

Features
Text-specific Web site:
Easy for student to use and obtain source code from book. - Offers convenient access to many images, references and sample programs to support the discussion in the book.
Vastly expanded to include all color images, source programs for all complete programs given in the text, and resources closely related to the book's material.
C++ as the underlying programming language -Introduces useful classes for graphics, but does not force a rigid object-oriented posture.
Early, in-depth treatment of 3D graphics and the underlying mathematics - Enables students to produce realistic 3D graphics much earlier in a course. Students can write programs to "fly" a camera through a 3D scene.
Extensive case studies at the end of each chapter.
Clear flow of ideas from first principles to the techniques of graphics:
Develops the underlying mathematics from first principles.
Shows students where the math comes from, why it is used, and how it is applied, allowing them to grasp it much more quickly and apply it to their graphics work.
Clear presentation of the links between a concept, underlying mathematics, program coding, and the result - e.g., the use of vectors in graphics, the underlying theory of transformations, the mathematics of perspective projections, etc.
An abundance of state-of-the-art worked examples.

Numerous practice exercises (approx. 30 per chapter).

New to this Edition
Updated treatment of graphics hardware and algorithms.
 More emphasis on interactive graphics - Includes menu design and interaction, and the use of OpenGL to simplify real-time interactions such as flying a camera through a scene.
Discussion of the development of video games through history.
Discussions on the graphics pipeline - Includes coverage of the latest versions OpenGL & the Shading Language and the benefits they provide.
Reduced emphasis on PostScript, Hidden Surface Removal, Relative Drawing, and Fractals. These topics are still covered but have been moved to appendices.
Full working source code provided for all significant examples, either in the book or on the book's companion website.
Significant improvements to organization, based on second edition user feedback and reviewer comments.
Larger number of problems than the previous edition.
Case studies revised throughout - Increased in number and refined throughout; they correspond more closely to the topics in each chapter.