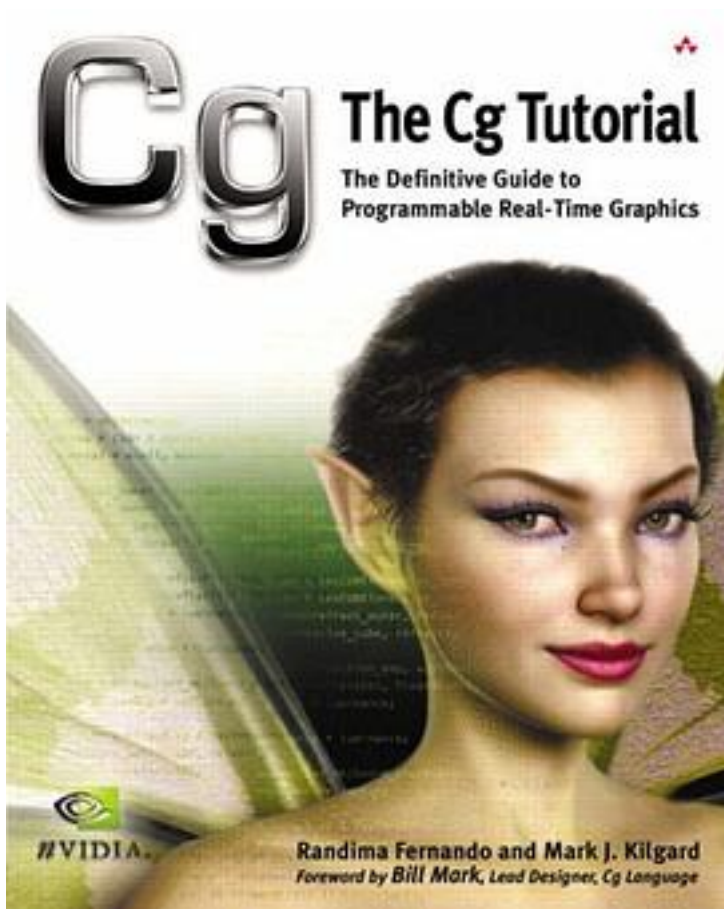# The Cg Tutorial

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"Cg is the key to unlocking the power of a new generation of programmable graphics hardware. This book is the definitive introduction to Cg, and will be essential for anyone programming high-quality real-time graphics. The Cg Tutorial will teach you to use Cg to create effects never before available for real-time applications." --Larry Gritz,

Author of Advanced RenderMan (Morgan Kaufmann, 2000) "An important and timely book: Pixel-level procedural textures--animated clouds, fire, water, the whole bag of procedural tricks--finally go from the movie screen to the desktop. Access to computation of this power through a C-like language will usher in an exciting new era for the graphics community." --Ken Perlin, Professor, New York University Cg (C for graphics) is a complete programming environment for the fast creation of special effects and real-time cinematic quality experiences on multiple platforms. By providing a new level of abstraction, Cg lets developers more directly target OpenGL(R), DirectX(R), Windows(R), Linux, Mac OS X(R), and console platforms, such as the Xbox(t), without having to program directly to the graphics hardware assembly language. Cg was developed by NVIDIA(R) Corporation in close collaboration with Microsoft(R) Corporation, and is compatible with both the OpenGL API and Microsoft's HLSL for DirectX 9.0. The Cg Tutorial explains how to implement both basic and advanced techniques for today's programmable GPU architectures. Major topics covered include: *3D transformations * Per-vertex and per-pixel lighting * Skinning and key-frame interpolation * Environment mapping * Bump mapping * Fog * Performance optimization * Projective texturing * Cartoon shading * Compositing The accompanying CD-ROM includes the tools needed to run the sample programs in the book.

作者介绍:

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标签

cg

GPU

计算机图形学

Shader

Graphics

游戏开发

图形学

openGL

GPU entry

2011.08

这本书比《Shaders for Game Programmers and Artists》成书要早，有些内容没有后者丰富，但是每章最后的further reading提供了参考资料，可以供有兴趣的读者进一步学习。第九章关于shadow map的叙述，采用projective texture作为铺垫，比《Shaders for Game Programmers and Artists》更好的描述了对shadow map采样的原理

CG编程入门必备

太基础了点

高二读的时候如获珍宝 现在，唉，多少年没关注 Program on Graphic concerning GPU hardware more stable and efficent maginificent visual effect

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用了一周时间看完了这本书，补充了一些图像渲染方面的基础概念

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official Cg primer。一边看一边自己完整的翻译了一遍。

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书评

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