



# Computer Graphics 2024

## 0. Overview

---

张宏鑫 (Hongxin Zhang)

[zhx@cad.zju.edu.cn](mailto:zhx@cad.zju.edu.cn)

浙江大学**CAD&CG**全国重点实验室，计算机学院  
State Key Lab of CAD&CG, Zhejiang University

2024-09-13





# Welcome to the World of Computer Graphics

(The video is downloaded from <https://www.unrealengine.com/>)



## 数字豪华版

- 完整游戏
- 兵器: 铜云棒
- 披挂:  
百戏傀面, 百戏村钱衣, 百戏护手, 百戏吊腿
- 珍玩: 风铎
- 游戏音乐精选集



Welcome to  
the World of Computer Graphics  
(Downloaded from Steam)

# Course Objectives

---

- Fundamental course
- You will know:
  - **Fundamental problems** addressed by CG
  - **Basic principles and methods**
  - **Basic programming skills** for developing CG systems.
  - **To cultivate the habit and ability** to solve problem on one's own legs



# 勿在浮沙筑高台



# Course Objectives

---

- While the course is NOT a graphics programming tutorial
- The assignments and active participation in projects will ensure that you acquire very good graphics programming skills using OpenGL.

What is not about?

Photoshop, AutoCAD, Maya, Renderman

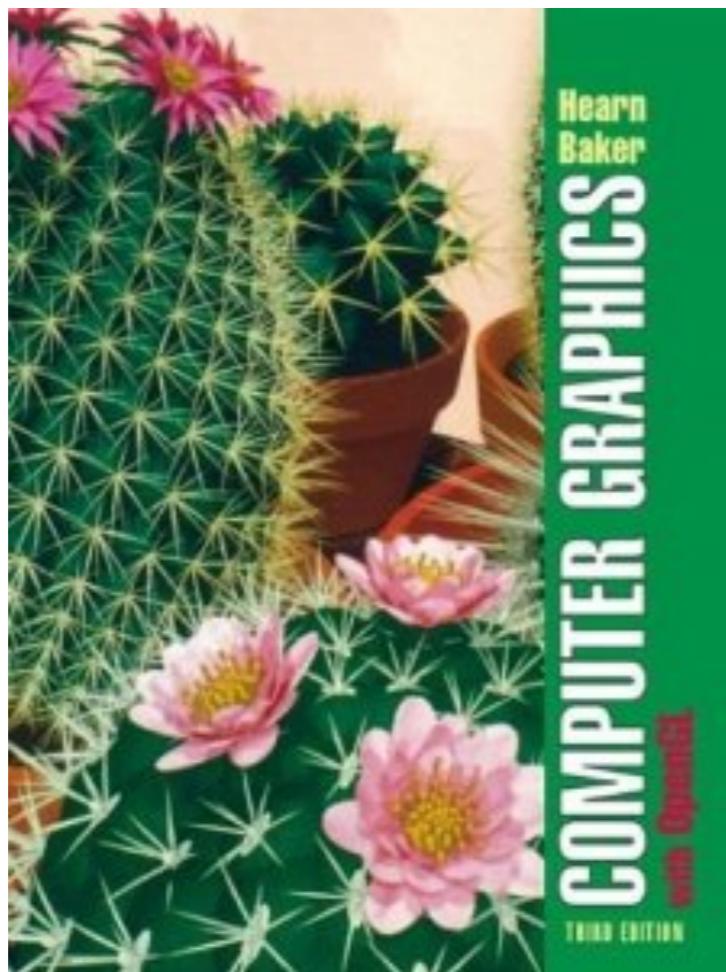


# Course Text

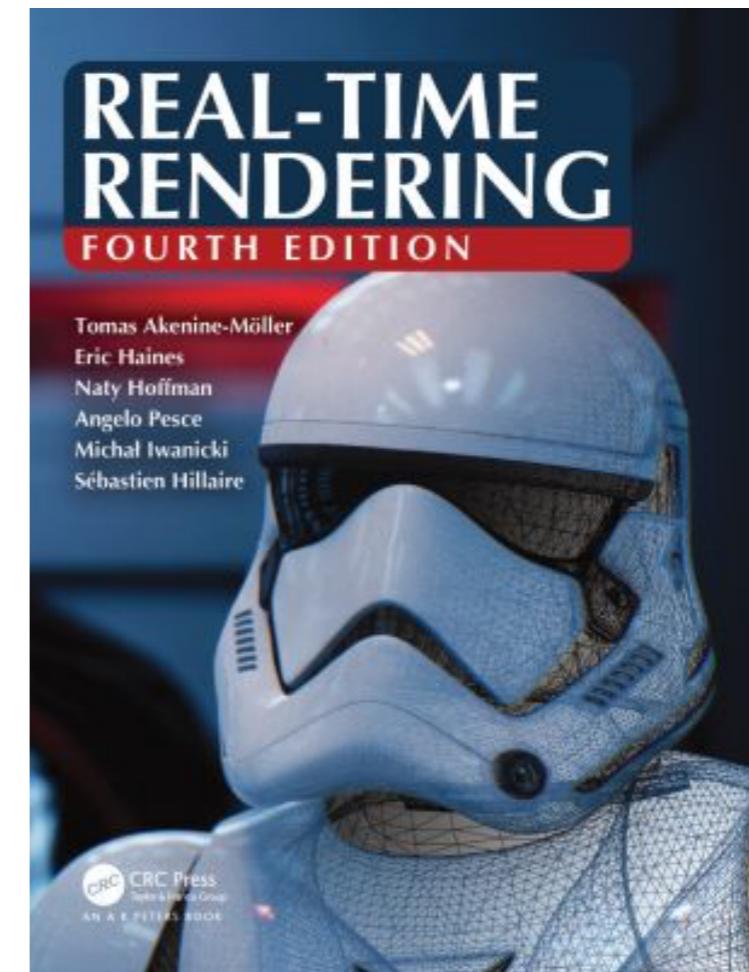
- Computer Graphics with OpenGL, Third Edition D. Hearn, M. P. Baker  
(电子工业出版社, 中文版)
- Fundamentals of Computer Graphics, Peter Shirley, Steve Marschner, A K Peters
- 计算机图形学——原理、方法及应用, 潘云鹤, 董金祥, 陈德人, 2003
- OpenGL Programming Guide, Fourth Edition, Addison-Wesley, 2003,  
(OpenGL编程指南, 人民邮电出版社)
- OpenGL Distilled, Paul Martz , Addison-Wesley, Addison-Wesley Professional; IST edition (OpenGL 2.0精髓, 人民邮电出版社)
- <http://nehe.gamedev.net> - The NeHe tutorials



# Textbooks



Computer Graphics with  
OpenGL (4th Edition)



Real-Time Rendering  
(4th Edition)



# 看完Real-time Rendering是一种什么体验？



那一堆才是绝世武功的秘籍



# 看完Real-time Rendering是一种什么体验？



<https://www.zhihu.com/question/35567285>



# Course Faculty Details

- Instructors:
  - 张宏鑫 [zhx@cad.zju.edu.cn](mailto:zhx@cad.zju.edu.cn)
  - 童若锋 [trf@zju.edu.cn](mailto:trf@zju.edu.cn)
  - 吴鸿智 [hwu@acm.org](mailto:hwu@acm.org)
- TA:
  - 吴泓嘉 (21博) 与王隽曦 (24硕)
- Office: 紫金港蒙民伟楼517室
- Tel: 13958011790



# Evaluation

- 30% : Lab assignments
- 40% : Course Project
- 30% : In-class performance
  - 5 homework
  - in-class quiz and attendance
  - question and answer



# Course Website

- WEB
  - <http://give.zju.edu.cn/cgcourse>
  - <https://github.com/hongxin/CGCourse-2024>



# More ...

- <https://graphics.stanford.edu/wikis/cs148-10-fall>



**Pat Hanrahan**



# The main idea

本源

ultimate source

[https://lg.cubic.org/docs/  
farbrauschDemos/](https://lg.cubic.org/docs/farbrauschDemos/)



# Homework today

- Say hello to me and TA in course.zju.edu.cn
  - include your name, ID, e-mail address
  - one of your frontal face photo
  - your major interests
  - wechat number (optional)
    - not necessary, but recommended, to build a WeChat group
  - even a brief greeting to TA
- It's A0

