

Course Information



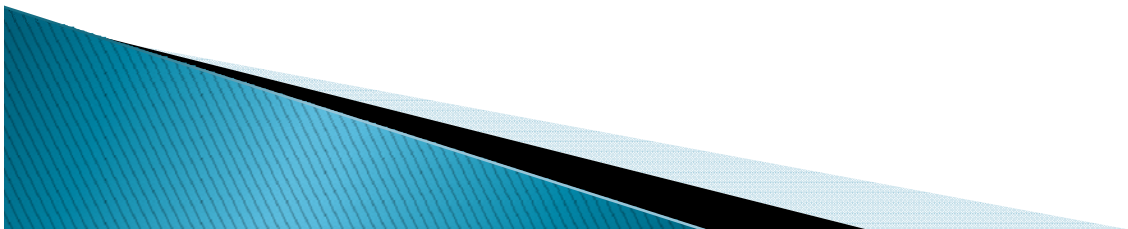
Your Lecturer

- ▶ CHENG, Ho Lun, Alan, 鄭浩麟
 - Hong Kong
 - UIUC, Duke (USA)
- ▶ Hobbies:
 - Teaching
 - 3G: Graphics, Geometry, Games
 - Animation, anime, comics, movies, etc.
- ▶ Email:
 - `hcheng@comp.nus.edu`
 - `(alan@comp.nus.edu)`
 - DO NOT send to `dcschl`
 - **DO NOT send codes to me**
 - Office: AS6 #05-03
- ▶ Ext. 68732



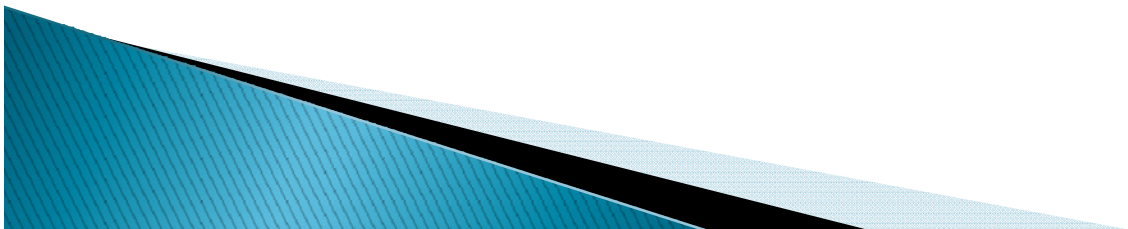
Outline of the Course

- ▶ 2D Graphics
 - Transformation (ME)
- ▶ Object modeling (ME)
- ▶ 3D Graphics
 - Transformation and viewing (ME)
- ▶ Hidden surface removal (TE)
- ▶ Scan convert algorithm (E)
- ▶ Lighting model (TE)
- ▶ Texture mapping (E)
- ▶ Ray tracing (E)
- ▶ Object modeling – curves surfaces (C)
- ▶ Some fun topics (E)



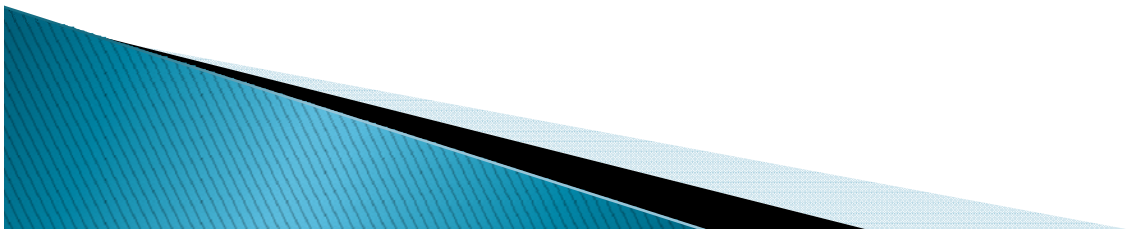
About what I want in this course

- ▶ Fun
- ▶ Interactive
- ▶ Minimal revision
- ▶ Encourage to learn more
 - From books, magazine, journal like IEEE Visualization, SIGGRAPH, etc
- ▶ **University is for you to learn, not to be taught**
- ▶ And finally
 - Fair



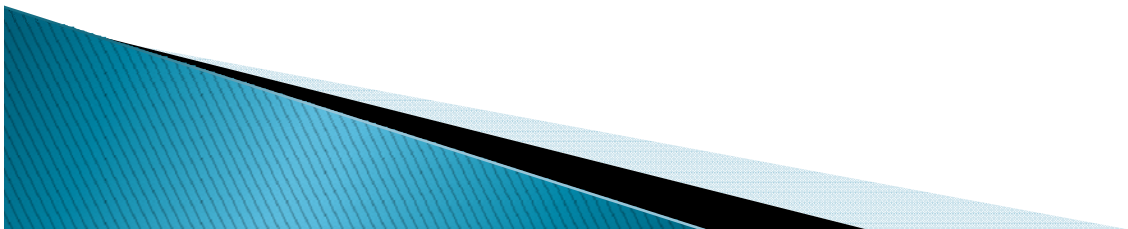
CA

- ▶ 20% Assignments (x5)
 - ▶ 10% Tutorial attendance and participation
 - ▶ 20% Midterm
 - ▶ 50% Final
-
- Assignments and tutorials are preparation for the midterm and final exam.
 - Midterm and final exam are open book



Tutorial Participation

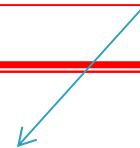
- ▶ 10%
 - 7% for attendance
 - 3% for participation
 - Presentation of answers in tutorial
 - Will be assigned by email
 - ~1% per presentation
 - Contributing in discussion



Marking Scheme of Lab Assignments

- ▶ 20% for 5 lab assignments, 4% for each
- ▶ Marking scheme for EACH assignment
 - 20% for compilation and programming style
 - Just neat, (NOT a high requirement), + a bit comments
 - Basically just mean that it can be compiled using the lab machines
 - 40% for requirement stated in the assignment
 - 20% for extra features NOT taught in lab/class
 - Number of features x 10%
 - 20% for artistic appreciation
 - 0% It doesn't make any sense
 - 5% Ok
 - 10% Good looking (Most (70%) of students will be in this)
 - 15% Very good, exceptional
 - 20% The best 5 students

Please allow us to be “subjective” on this



Rationales of Lab Assignments



A bonus of extra
10% of in-class
FB voting

- ▶ 20% for 5 lab assignments, 4% for each
- ▶ Each assignment should NOT take you more than 4 hours
- ▶ To experience, understand and prepare for midterm and final exam

- ▶ 20% for artistic appreciation
 - 0% It doesn't make any sense
 - 5% Ok
 - 10% Good looking (>60% of students)
 - 15% Very good, exceptional
 - 20% The best 5 students

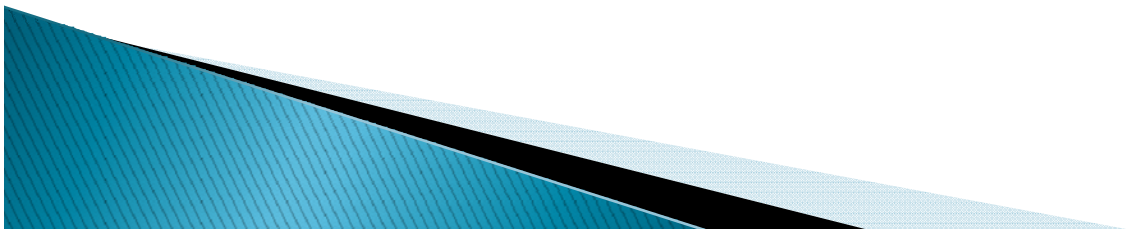
A gap of 10% x
4% = 0.4% for
every assignment



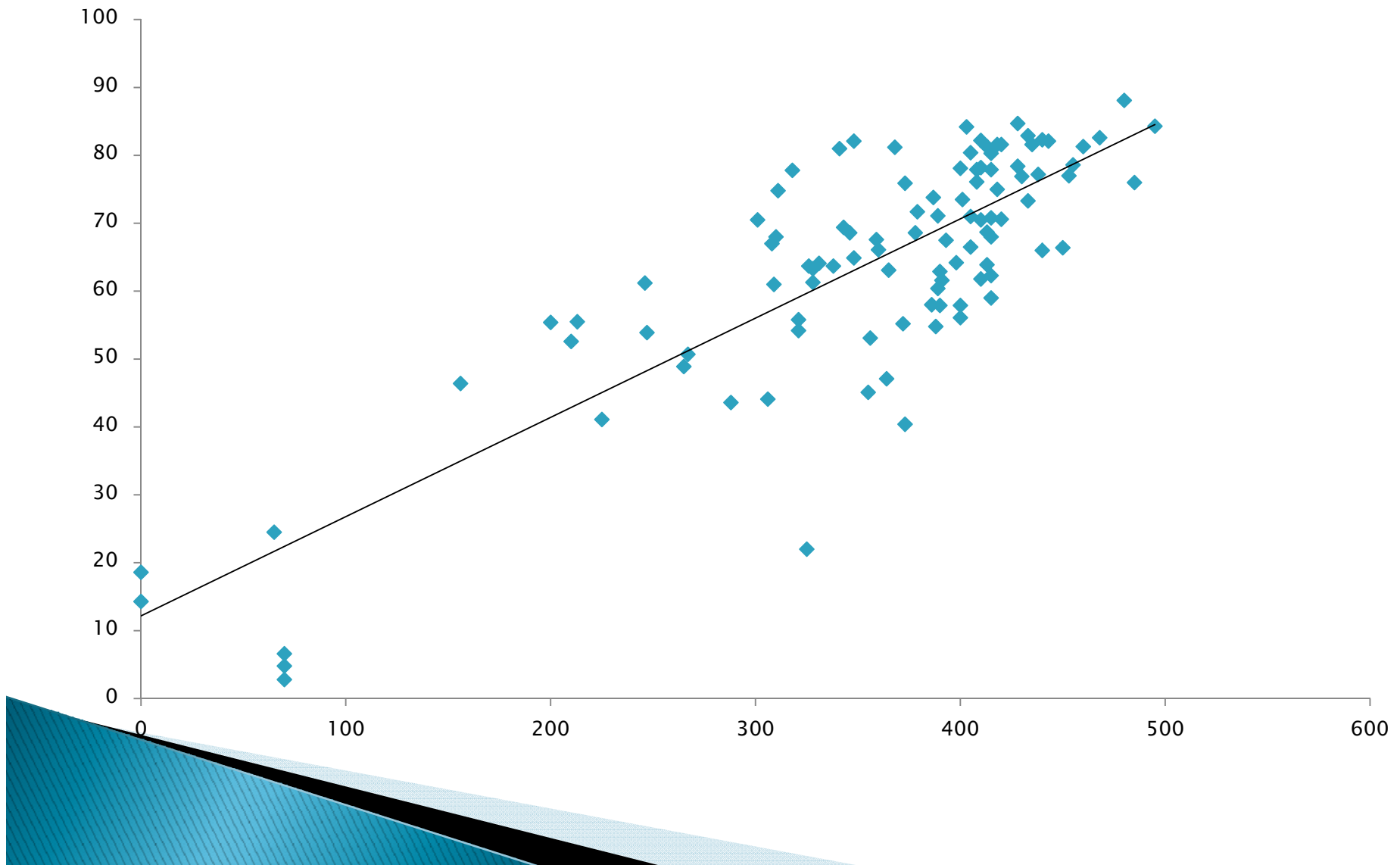
▶ (in which, a True/False question = ~1%)

Late Submission Policy

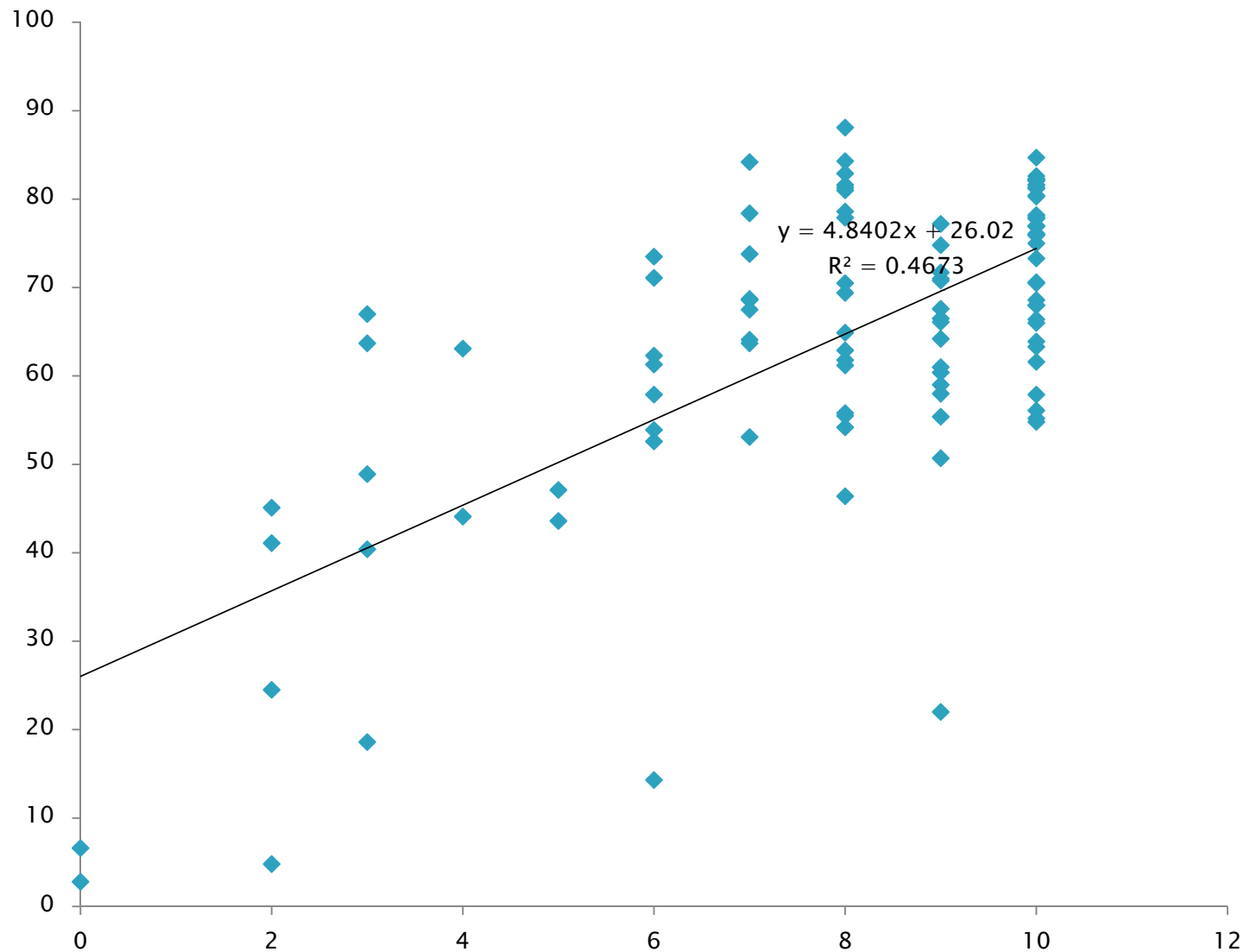
- ▶ One day late: – 33%
- ▶ Two day late: – 66%
- ▶ Excuse
 - MC: with documents
- ▶ Inappropriate excuses
 - Submitting to the wrong courses, forgot about the deadline, hard disk crash, etc..
- ▶ Please approach me if there is really some serious problem happened



Lab(x) vs Final marks(y)



Tutorial vs Final marks



Textbook

- ▶ No official textbook



CS3241
Poll: COMPUTER GRAPHICS

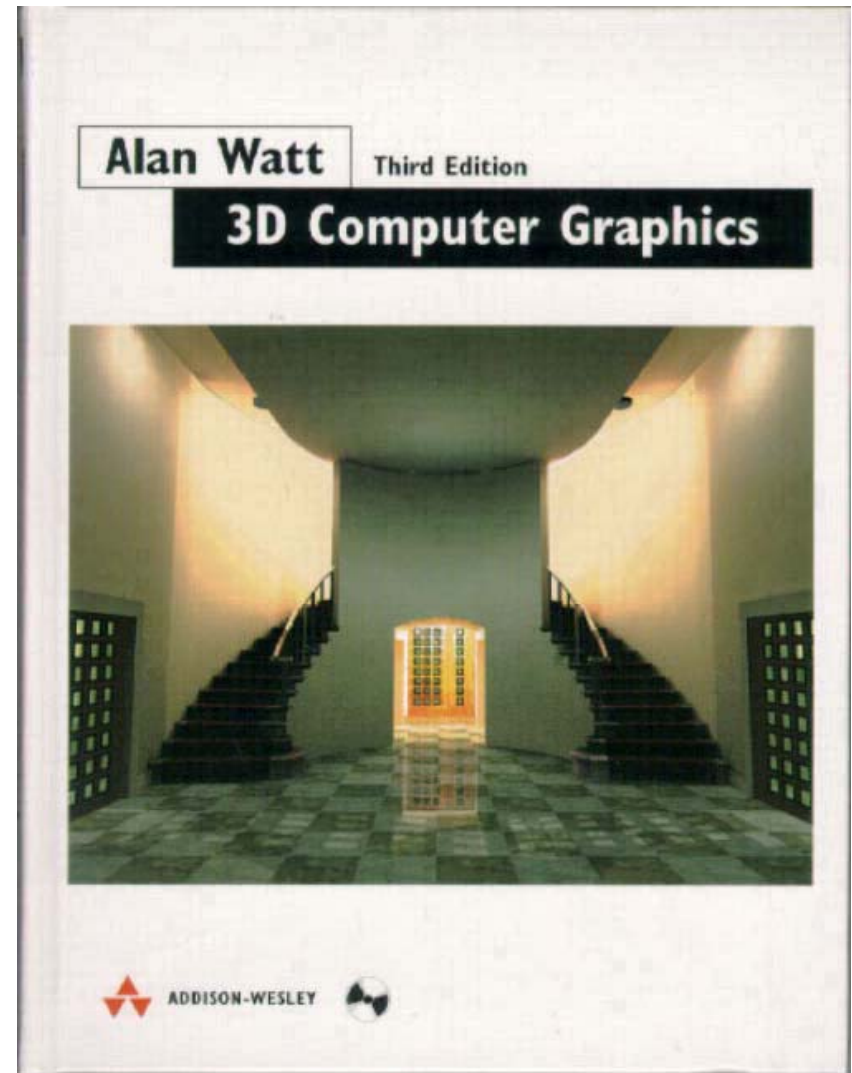
Multiple Choice Question

Which textbook did you buy and find it useful?

Options	Result	Percentage
Computer Graphics: Principles and Practice in C (2nd Edition) Author: James D. Foley, Andries van Dam, Steven K. Feiner		0%
Interactive computer graphics : a top-down approach using OpenGL Author: Edward Angel		0%
Computer Graphics with OpenGL Author: Donald Hearn and M. Pauline Baker		7.1%
3D Computer Graphics (3rd Edition) Author: Alan H. Watt		0%
I didn't buy any textbook and I think it's ok		85.7%
I didn't buy any textbook but i think it is NOT ok		0%
Others		7.1%

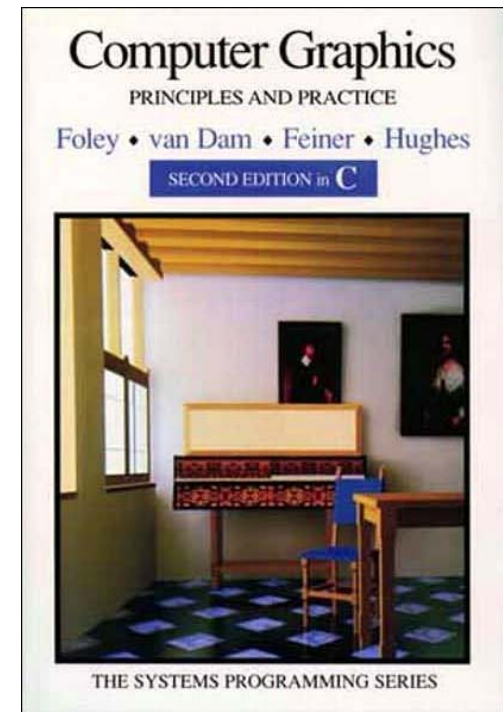
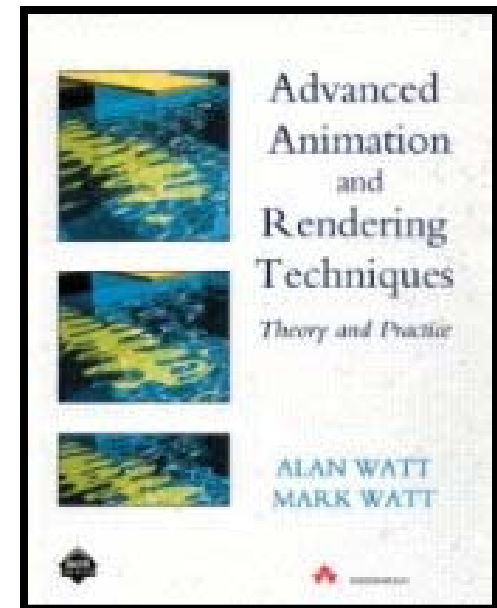
Textbook

- ▶ 3D Computer Graphics (3rd Edition)
 - Alan Watt
 - Addison Wesley



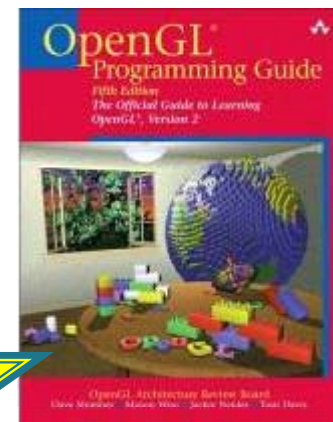
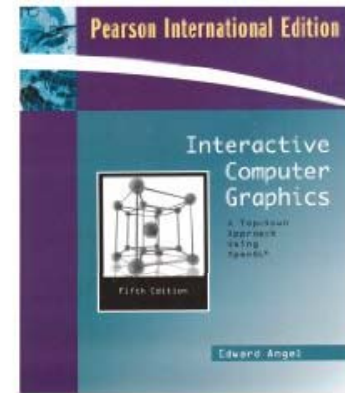
References

- ▶ **Advanced Animation and Rendering Techniques : Theory and Practice**
 - Alan H. Watt, Mark Watt
Publisher: Addison-Wesley Pub Co
ISBN: 0201544121
- ▶ **Computer Graphics : Principles and Practice, Second Edition in C**
 - James D. Foley, Andries van Dam, Steven K. Feiner,
Publisher: Addison-Wesley Pub Co
1175 Pages – Pub Date: 04-Aug-1995
ISBN: 0201848406

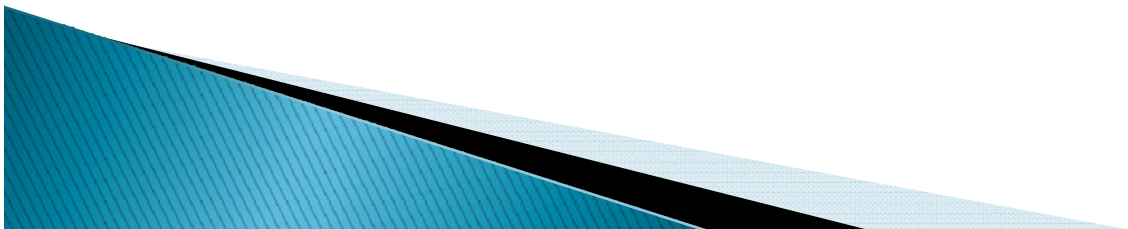


References

- ▶ Interactive Computer Graphics: A top-down approach using OpenGL, *3rd Edition*, by Edward Angel
- ▶ The OpenGL Programming Guide (The Redbook), Addison-Wesley
 - 2nd Edition is freely available online at http://www.opengl.org/documentation/red_book/



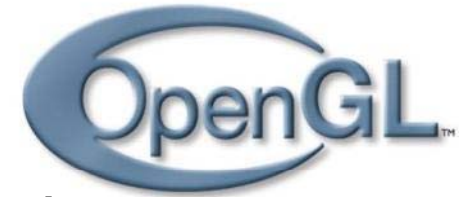
Very useful book!



Software for Assignments

- ▶ C++ and OpenGL

- MS Visual Studio 2008 (in lab)
- Feel free to use 2010, but make sure that your HW can be compiled in 2008



- ▶ Why OpenGL and not “DirectX”?

- Industry standard for high-performance computer graphics
- More platforms (Apple, Unix, Windows, etc. .)
- Easier to learn
- Transferable to DirectX

- ▶ Why not OpenGL Shader Language?

- Too difficult for beginners

