Course: Computer Graphics 2009/2010

lecture 1: Introduction, course overview

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agenda

- course information
- who am I?
- what is computer graphics (CG) (in 2 slides)
- course topics
- case study
course information

- web page
http://www.dcc.fc.up.pt/~veronica.orvalho/teaching/

- Textbook:
  - Shirley, 2\textsuperscript{nd} edition
  - OpenGL (on the web, or red book)
  - Real Time Rendering, 3\textsuperscript{rd} edition
course information

• be prepared for hard work and many assignments

assignments:

- 5 Labs
- 1 special project
course information

Grading:

- Independent assignments: 40%
- Special project: 40%
- Final Exam: 20%
who am I?

PhD in CG
(Universitat Politecnica de Catalunya)

Topic: Facial Rigging and Animation

Joined FCUP|DCC in 2008

CTO at Face In Motion
http://www.faceinmotion.com
Fast and Reusable Facial Rigging and Animation: Create Once, Use Many

Video and additional information
http://www.faceinmotion.com/events/PhD/
Fast and Reusable Facial Rigging and Animation: Create Once, Use Many

Currently being used by major Film and Videogame companies

Holy Night!

Fable 2

The Simpsons Ride
current research

Research interest

• Computer animation
• Geometric Modeling and Deformation
• Human-Computer Interaction
current research

Research projects (some)

• Facial Muscle System for CG Films and games
• Pattern recognition of 2D facial expressions
• Real-time collision detection for skin deformation
• Markerless facial motion capture
what is CG?

>> Faking reality

Make synthetic images LOOK REAL
Nvidia- human head
http://www.youtube.com/watch?v=lvI1l0nAd1c&feature=related

Deformable
http://www.youtube.com/watch?v=f9UyPPWDn0I

Lighthouse
http://www.youtube.com/watch?v=g2Isuk4rybY&NR=1

Boat
http://www.youtube.com/watch?v=fqKVjKo96Es

Water
http://www.youtube.com/watch?v=_FIKonHQF8Y&NR=1
what is CG?

>> Creating a new reality

Modeling, animation and rendering NEW object
Avatar
http://www.youtube.com/watch?v=FY_RTaKbSiE
course topics

>> modeling

>> animation

>> rendering
course topics

>> modeling
    how to represent objects and how to create them

>> animation

>> rendering
course topics

>> modeling
  how to represent objects and how to create them

>> animation
  controlling the way the objects move

>> rendering
course topics

>> modeling
how to represent objects and how to create them

>> animation
controlling the way the objects move

>> rendering
how to create images
see you next week for serious work!
case study

>> Sin City

making:
http://www.youtube.com/watch?v=3csUQ18tGJU

trailer:
http://www.youtube.com/watch?v=5peop3olrVs