Welcome to Virtual Reality, CS 498 SL

Prof: Anna Yershova
Office: 2212 Siebel Center, 1-2 pm MW

TAs: Chris Widdowson, Banu Muthukumar, Qiuhua Ding,
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Web page: https://courses.engr.illinois.edu/cs498sl3/


Piazza

VR Lab: Siebel Center 4107

What this class is about: VR, perception meets engineering
and computer science.
A Bit About Oculus

- early 2012, Palmer Luckey made a prototype headset (duct taped!)

- Aug 2012, John Carmack improved it and showed at E3.

- Aug 2012, game industry leaders showed strong support, Oculus is founded (Brendan Iribe, Michael Antonov, Nate Mitchell, and Jack McCauley)

- Sep 2012, Kickstarter very successful.

- 2012-2014, over 60,000 headsets sold.

- March 2014, Facebook acquires Oculus for $2 billion.
A Bit About Oculus

https://www.youtube.com/watch?v=pAC5SeNH8jw
What's This Course About?

GOALS:
- Learn how to build a *good* VR experience (comfortable + adequate for task)
- Understand how VR works (engineering + psychology)
- Learn how to criticize VR
- Learn fundamentals to shape future of VR

TASK-DEPENDENT VR:
- Game
- Write code
- Maintain relationship
- Relax
- Watch film
- Travel to exciting virtual places

Lecture, 4/5 MPs, 2 exams, project
Inducing targeted behavior in an organism by using artificial sensory stimulation, while the organism has little or no awareness of the interference.
Examples of VR

Omni: Real Battlefield Place [ Future of Gaming in the world ]

https://www.youtube.com/watch?v=j3vHv4lNvg4
Examples of VR

Mouse in VR Maze

https://www.youtube.com/watch?v=1DJOTEDBA2c
Examples of VR

https://www.youtube.com/watch?v=1ezL8nGo--l

Who is the laboratory rat, and who is the scientist?
Definition of VR

Inducing targeted behavior in an organism by using artificial sensory stimulation, while the organism has little or no awareness of the interference.

Who is the laboratory rat and who is the scientist?
VR or not VR?

- playing second life (first person video game)
- watching a movie
- video conferencing
- listening to the music
- playing a third person video game
- AR
- talking on the phone
- reading a book
- looking at a painting
- being under the influence of a hallucinogenic drug
- wearing thermal clothes
Definitely VR

Socializing in Virtual Spaces

Open Sim, Second Life, ...
Do you wish your home were bigger?
Definitely VR
Definitely VR

Panoramas

Pick your favorite street views and have a look around.
Definitely VR

Connect omnidirectional cameras to mobile robots, humanoids, quadrotors

https://www.facebook.com/makeyourfutures/videos/709112912563319/
Definitely VR

First-Person Shooter Games

Team Fortress 2, Valve Inc.
What could you do with an elephant trunk?
Definitely VR

Thrill Seekers

Virtual amusement park rides!
Definitely VR

Ever wonder how Louis XVI must have felt?
Definitely VR
Definitely VR

Flying Like in Your Dreams

Zurich University of the Arts