

CS888 - Advanced Topics in Computer Graphics - Stereo 3D

Description

The goal of this course is to obtain an understanding of stereoscopic 3D and its role in film and computer graphics. We will look at stereopsis, technology for viewing S3D content, conversion, disparity maps, content manipulation, and perception.

Objectives/Marking Scheme

- [50%] Final Project
- [20%] Paper Presentations (2 @ 10% each)
- [20%] Paper Reviews (8 @ 2.5% each)
- [10%] Online Participation

Assignments: There is an optional assignment, worth 10%, that can be completed to reduce the weight of the project by 10% (making the project worth 40%). Details regarding the option assignment will be posted to piazza.

Bonus: If your project is worthy of submission to a conference or journal with reasonable expectations of acceptance, then you will receive **100** in this course. I **strongly** encourage you to chase this bonus, and will be happy to assist you in finding appropriate projects.

Logistics

Due to COVID-19, this course is being offered online **only**. As a result, we have had to make some logistical changes to how typical seminar courses are executed. Lectures, paper presentations and project presentations will all be offered as live-streams and recorded video. Participation will occur over piazza.

You will need the ability to record your paper and project presentations. I recommend using OBS, a free tool, to assist with the recordings. A brief tutorial can be provided, if necessary.

There are four major topic areas we will cover:

- Stereopsis and Stereo Viewing Technology (*May 11-30*)
- Conversion and Disparity Maps (*June 1-20*)
- Manipulation (*June 20-July 10*)
- Perception and Applications (*July 11-July 31*)

Please choose two papers to read and present from different areas. Record a 10 minute presentation of your selected paper(s) and upload the video to Youtube, or another video sharing website. Then, post the link to your video on our piazza forum so that others may watch. Presentations are due by the end of the topic area slot. You are expected to answer questions about the paper and your presentation through piazza. There is a signup sheet, posted on piazza, to ensure that paper presentations are not duplicated.

Please also choose eight papers to review, two from each area. Reviews should be short, no more than 500 words. Reviews will be submitted by email to: lanortha [at] uwaterloo.ca.

Please watch your fellow students presentations (both paper and project) and ask them questions through piazza. Additionally, choose **24** presentations, six from each area, and provide feedback. Feedback forms are available through piazza and can be submitted to me my email. Asking and answering questions as well as providing feedback will comprise your participation mark.

The complete list of papers can be downloaded [here](#). Access to the signup sheet, review and presentation form is posted on piazza.

The final project will be due in August. There will be several deliverables: a proposal, a final presentation video, and a paper along with any code/results that you may have produced.

Schedule

- Opening Lecture, Week of May 11th
- Project Final Presentations, Due by August 15th

Notes

All communication regarding course content, projects, etc., will happen through piazza.

CONTACT

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