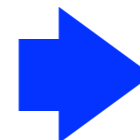
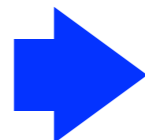


Due date:
September 15th, 2014 11:59 PM

Prokudin-Gorskii's Color Photography (1907)

Given R,G,B channel images with unknown offset generate the color image



Project 1

https://piazza.com/cmu/fall2014/15463/home

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Carnegie Mellon University - Fall 2014

15463: Computational Photography

✍ Number of posts: **17** | 👤 Number of students enrolled: **48**

Course Information

Staff

Resources

Description

COURSE OVERVIEW:

Computational Photography is an emerging new field created by the convergence of computer graphics, computer vision and photography. Its role is to overcome the limitations of the traditional camera by using computational techniques to produce a richer, more vivid, perhaps more perceptually meaningful representation of our visual world.

The aim of this advanced undergraduate course is to study ways in which samples from the real world (images and video) can be used to generate compelling computer graphics imagery. We will learn how to acquire, represent, and render scenes from digitized photographs. Several popular image-based algorithms will be presented, with an emphasis on using these techniques to build practical systems. This hands-on emphasis will be reflected in the programming assignments, in which students will have the opportunity to acquire their own images of indoor and outdoor scenes and develop the image analysis and synthesis tools needed to render and view the scenes on the computer.

TOPICS TO BE COVERED:

Cameras, Image Formation
Visual Perception
Image and Video Processing (filtering, anti-aliasing, pyramids)
Image Manipulation (warping, morphing, mosaicing, matting, compositing)
Modeling and Synthesis with Visual Big Data
High Dynamic Range Imaging and Tone Mapping
Image-Based Lighting
Image-Based Rendering
Non-photorealistic Rendering

Announcements

Lecture Notes have been posted

8/27/14 7:09 PM

PDFs from the first class have been uploaded under the resource tab.

[View on Piazza](#)