

DMET 1055: Selected Topics in Visual Computing Project Guidelines

Posted: Thursday, February 28th, 2019

Due: **Thursday, March 28th at 11:59 PM**

3D Reconstruction and Virtual Cameras:

- Posted are a pair of wide baseline stereo images with their camera parameters.
- It is required that you estimate the 3D position for each corner of the box using corresponding points (hand-picked).
- Use a virtual camera to look at the box from different viewpoints creating virtual images.
- Use affine matrices to map the surfaces of the box to the virtual image.
- In addition to using affine matrices, as an alternative, use homography matrices to map the surfaces of the box to the virtual image.
- Change virtual camera parameters to create a virtual sequence of images.
- The sequence of images should be saved as an AVI file.

Instructions:

- This is a group project. Each group should consist of 2 or 3 students.
- Names and ID's are to be e-mailed to rimon.elias@guc.edu.eg by **March 16th, 2019**
- Each group will decide about their implementation environment, programming language, etc.
- By the deadline, submit to rimon.elias@guc.edu.eg
 - Source files
 - Executables
 - The AVI file
 - A report listing the 3D positions estimated, the virtual camera parameters for each generated image and some of the generated images
- The deadline is **Thursday, March 28th at 11:59 PM**