Pre Lab 1

Camera Calibration

Objective

In this experiment, students will use stereo cameras, an image acquisition program and camera calibration algorithms to achieve the following goals:

1. Develop a procedure for camera calibration.

2. Measure the error in calibration using three approaches: a) a simple Least Square method; b) well designed calibration toolbox.

Reference

1. Lecture notes, i.e. camera calibration using least square approach.


3. Caltech Camera Calibration Toolbox.

Assignments

Please read the following materials:


b) Zhang’s paper: “A Flexible New Technique for Camera Calibration”

c) “Getting Started” section for “Camera Calibration Toolbox for Matlab”:
http://www.vision.caltech.edu/bouguetj/calib_doc/#start

Note: There may be a small quiz at the first of the first lab session related to these materials.