

Oberseminar Bildverarbeitung, Computersehen und Computergrafik

Albert-Ludwigs-Universität Freiburg
Institut für Informatik

Prof. Dr. Thomas Brox
Prof. Dr. Matthias Teschner
apl. Prof. Dr. Olaf Ronneberger

Am Dienstag, 28.03.2017, 10:30 hct, berichtet Herr Markus Frey über die Ergebnisse seines Masterprojektes:

Camera calibration in triangulation setups affected by plane parallel plate refractions

Abstract: Using a calibrated set of two or more cameras for point triangulations and object tracking in three dimensional space has many practical uses in industry and research. Especially in the biomedical field an often found scenario is the tracking of rats or other animals in order to gather behavioral information and compare movement data while the animals are under different medication or other medical treatments. While there are a number of different approaches when it comes to what cage to use during the experiments in order to interfere as little as possible with the camera images, the simplest and probably cheapest choice is a plexiglass box. While easy to construct, maintain and clean this introduces light refractions that interfere with the calibration process and the resulting triangulations. This master's project gives detailed information on all needed steps to successfully calibrate a triangulation setup and proposes an additional refraction calibration step that is experimentally shown to improve triangulations in absolute world coordinates.

Zeit: Dienstag, 28.03.2017, 10:30 hct
Ort: Geb. 052, SR 02-017

Interessenten sind herzlich eingeladen. Weitere Informationen bei:
Prof. Dr.-Ing. Thomas Brox, Tel: 0761/203-8261
Email: brox@cs.uni-freiburg.de

<http://lmb.informatik.uni-freiburg.de/lectures/oberseminar>