Assignment 2: Depth estimation and image refocusing

Task 1. Depth estimation

Depth estimation is the task of measuring the distance of each pixel relative to the camera. Depth is extracted from either monocular (single) or stereo (multiple views of a scene) images. Traditional methods use multi-view geometry to find the relationship between the images.

Based on \LightFieldRefocus\Depth_Estimation\depthmapMain.m investigate the particularities of depth estimation method

Task 2. Image refocusing

Digital refocusing, a technique that generates photographs focused to different depths (distances from a camera) after a single camera shot, is attracting the attention of the computer graphics community and others in view of its interesting and useful effects.

Investigate properties of different image refocusinf techniques:
1. \LightFieldRefocus\SelectiveRefocus\demoShiftSumRefocus.m
2. \LightFieldRefocus\SelectiveRefocus\demoSelectiveRefocus.m

All results complete into report and send it with subject “Chosen chapters: computational imaging” to Taras.Holotyak@unige.ch