

## Announcements (last update: 25.11.16)

- There is a typo in section 4.2 (Step 3): triangulating new landmarks), in the paragraph about the updated state, in the third bullet point: you should read: “For each candidate keypoint  $c_m^i$ , the camera pose  $T^{i-L_m}_{WC}$  at the first observation of the keypoint [...]”
- Since we will go through your code, we will also penalize particularly unreadable code. Make sure to use concise variable names, and regularly remove code that doesn't do anything.

## Questions

### May we use the `F = estimateFundamentalMatrix` flavour of the `estimateFundamentalMatrix` function?

As some of you have noted, Matlab's `estimateFundamentalMatrix` function can also automatically use RANSAC (or other outlier rejection) schemes on top of estimating the fundamental matrix. Since we haven't done eight-point in conjunction with RANSAC in the exercises, **you are not allowed to use this function**, but you need instead to write your own implementation of RANSAC + 8-point algorithm, as described in the project statement.

### What do you mean “scale drift”?

As you know, monocular visual odometry has scale ambiguity: Purely from the landmark observations, you can't really tell how big the scene is. The way we work with this is that we arbitrarily assign a scale at the beginning of the VO. However, this scale estimate might drift as you progress, i.e. far apart scenes that should have the same size, will have different size estimates.

### What to do with the stereo frames for the KITTI and Malaga datasets?

Your final VO pipeline should not require stereo frames, but we supply them so you can use them for initializing your VO pipeline easily in an intermediate step (see problem statement, in the “Initialization” section, without needing to implement the full monocular initialization pipeline.

To run your monocular VO pipeline on the KITTI and Malaga datasets, **just use only the left camera images** (and ignore the right camera images).