

1. Which factor contributes most to the odometric error when a robot moves:

The position error or the heading error?

TRUE FALSE

2. In order to use the laser localization method in Chapter 6, one must first carefully define a set of landmarks that the robot can use in order to find its pose.

3. In the matching error equation, only those rays are included for which both the actual LRF and the virtual LRF give a reading.

1. The heading error is the main source of odometric drift. In fact, with a heading error of zero, the position error would not grow very much. However, even a slight heading error quickly leads to a large position error.
2. This is false: The method uses all the lines (defining the map) within range of the (2D) LRF. There is no need to define specific landmarks.
3. This is true. In cases where only one ray (or none) is available, one can of course not form the relative difference term.