



İTÜ



Istanbul Technical University Robot Olympics 2019 Maze Category Rules

Mission Description

- An autonomous robot, which is launched from a settlement where the labyrinth is located, reaches the target area as soon as possible.

Success Criteria

- The criterion of success in this category is that the robot can reach the end zone at least once from the starting area.

Track Properties:

1. The walls of the labyrinth are white and have a height of 10 cm. The floor is made of black wood
2. The maze consists of 12x12 unit squares and the size of each unit square (the area inside the walls) is 20cm x 20cm. The margin of error for the specified dimensions is 5%.
3. The target area is 2x2 square meters and the entrance of this zone shall be indicated by a white band with a width of 19 ± 1 mm on the black ground.
4. Paint, tape etc. on the runway floor. 1 mm thick roughness caused by factors such as.
5. The labyrinth may contain dead ends.
6. The target area will not be in a location where the robot can only reach the right wall or just the left wall.

Robot Features:

1. Robots must be autonomous.

2. The width and length of the robots is 17 cm. The margin of error is 5%.
3. There is no limit on height and weight.

Competition:

1. Each robot will compete in order.
2. Robots will be collected before the labyrinth track comes to the competition area.
3. Each competitor will have a total duration of 10 minutes and will not be stopped for the duration of the competition. In this time, the best time the robot reaches its target area from the starting area will determine the degree of the robot.
4. During this period the robot can make more than one experiment to get the best time. Starting from the starting area, each time the destination reaches the target area will be recorded and the best time will be selected as the time of the competition.
5. Robots can start to compete in the white zone.
6. In order for the robot to start a new trial, it does not have to be returned to the starting area once it reaches the target area and should not enter the starting area completely.
7. There are 3 right to intervene. When the robot is interfered in any part of the runway that test is considered invalid and the robot is taken off the track with the referee's approval.
8. After coming to the competition area, the labyrinth track cannot be intercepted with the switch, button and so on. There should be no switch and switch on the robot except power on / off switch and reset button.
9. The duration of the right to intervene will not be stopped regardless of the cause of the right to be used. The duration of the contestant in each case will be over 10 minutes.

10. It is forbidden for the robots to drop, drop or damage the track during the competition.
11. To reach the target, the robots must cross the white line and be completely within the 2 x 2 unit square target area.

Scoring:

1. When all the experiments performed by the robots are taken into account, the duration of the experiment (as soon as the region reaches the end zone) as soon as possible will determine the time of the robot.
2. The robot with less score will be on top of the rankings