

12. Latvia Robotics Championship

Folkrace rules 2018

Description

Folkrace competition is autonomous car imitation in looped track with obstacles. Robot has to drive as many laps in the track in the correct direction as possible in the determined time. Track has multiple turns and multiple obstacle types, which the robot must be able to avoid. In addition to the obstacles, there are opponent robots, which the participant robot must avoid. The winner is the fastest, most maneuverable robot.

Competition rules

1. Competition has 3 rounds, each round lasts 3 minutes.
2. Robots are placed on the track parallel to the track curbs and each other, no less than 5 cm away from the track walls or opponent robots.
3. Competition starts and ends after the signal from the referee.
4. Robot can move 5 seconds after the signal from the referee.
5. If the robot has done a false start, he is penalized by 1 point and is given a warning. Repeated offense results into disqualification.
6. Points are count for driving one lap in the correct direction. Lap beginning and end point is the start line.
7. 1 point is added for driving one lap in the correct direction.
8. 1 point is subtracted for driving one lap in the opposite direction.
9. If a robot hinders other robot driving abilities for more than 15 seconds, the referee can take the robot away from the track and place it after 10 seconds in the same place.
10. If a robot gets stuck but doesn't hinder other robots, the participant can:
 - Let the robot stay in the position
 - Place the robot back on the start line, losing all the achieved points.
11. If there are robots with the same amount of points, there will be extra round, in which the winner will be the robot which finishes one lap in the least amount of time.
12. All robot control devices after the robot start must be given to the referee, who will give the devices back after the end of the round.
13. Any external control of the robot will be regarded as infringement of the rules, which will result in the disqualification of the robot.

Track

1. Track is physically defined by curbs, it is not marked with optical, magnetic, visual or other resources.
2. Track surface is black.
3. The curbs are white and 10 +/- 1 cm in height.
4. The width of the track is 100 +/- 10 cm.
5. Track is a closed trajectory 5 – 15 m in length.
6. Track can contain obstacles:
 - Hills with steepness up to 40-degrees
 - Recesses and elevations up to 2 cm.
 - Roughness

Barriers or other objects, creating additional turns and/or narrow sections.
In addition to these obstacles, there can be other obstacles

Robot

1. Robot must drive autonomously
2. The size of the robot can not exceed 15x20 cm (width, length), height is not limited, weight can be up to 1 kg. Robot cannot:
 - Change its configuration/looks whilst driving;
 - Damage the track or endanger the viewers;
 - Emit any kind of gases, powder or liquid substances;
 - Actively block or damage other robots;
 - Use other robots to move;
3. Robot must be started and stopped using a built-in button or a wireless remote.
4. The robot number sticker must be placed in a clearly visible place, so it can be seen during the competition.