Cumhuriyetin 100. Yılı

İTÜROBOT 2023

15. INTERNATIONAL ITU ROBOT OLYMPICS

Mini Sumo Category Rules

İTÜ İSTANBUL TEKNİK ÜNİVERSİTESİ 1773

250 YIL 1773–2023

OTOKON

İstanbul Technical University Robot Olympics 2023

Mini Sumo Category Rules

Task Definition:

- In this category, the robots try to push the opponent robot off the track in their matches.

Success Criterion:

- In this category, the robot which have fell will consider as an unsuccessful.

Dohyo Features:

1) It will be 5 cm high and 77 cm in diameter.
2) Starting lines consist of 2 brown lines and each lines are 1 cm thickness and 10 cm length. Each line will be 5 cm away from dohyo's center.
3) There will be a 2.5 cm dividing line on the edge of the dohyo.

The Features of Robot:

1) The width, length and height of the robots must not exceed 10 cm.
2) The dimensions of the robots must not change throughout the competition.
3) The robots' weight must not exceed 500 gram.
4) In robots, it will completely cut off the contact of the opponent robot with the ground or intentionally harm the opponent robot systems cannot be used.

5) The robot must not immobilize itself.

Robot Control

1) Robots will be autonomous. No remote control except for start and stop will not be used.
2) The paper test will be applied to the robots under the control of the referee at the beginning, and the ones with sharp blades will be robots will not be accepted into the competition.

Competition:

1) Any robot that damages the opponent or the track (except in the event of a collision) will be disqualified.
2) If pieces fall from the robots (more than 10 grams) they lose the round.
3) The competition takes place in the form of double matches (match) of the robots. One match, 90 seconds each consists of three rounds.
4) If both robots get stuck on each other and subsequent movements are not possible, after 10 seconds the round is repeated with the decision of the referee.
5) In the event of a tie occurring three times in the same round, the weight of the robots is first taken into consideration. The lighter robot is declared the winner. If the weights of the robots are equal, the winner will be determined by a coin toss conducted by the referee.
6) Robots that are not with dohyo within a minute when it's time for the matches to start, they will lose their match 3-0 by forfeit.
7) The robots start the matches by being symmetric to the center of the dohyo, with a distance of 10 cm between them, facing in opposite directions in the first round, facing in the same direction in the second round, and facing in opposite directions again in the third round, all in parallel to each other.

8) Between the rounds, players can make a technical intervention for most 1 minute if referee give permission. Technical intervention makes in field and under the supervision of the referee. During the technical intervention the module cannot be change.
9) From the moment the competition starts, any action on the robot, including technical breaks, parts of robot cannot be changed. In case of violation of this clause, the violating team will be disqualified from the competition.
10) The robots have to start 5 seconds after referee's start command. The robots which are not obey this rule will forfeit the match 3-0
11) The robot that pushes the opponent robot out of the dohyo wins the round.
12) If contestants starts their robot incorrectly, referee can restart the round during the match or after watching camera recordings.
13) In the first stage, there will be group matches consisting of 4 teams. The top 2 teams in each group will advance to the next round. The matches in the next round will be played in elimination style. The final group will consist of 4 teams.
14) If there is score equality between groups, double or triple average will be considered.
15) Each contestant and their robot will be given a QR code. In order for the contestant to compete, their QR code must match the QR code on their robot. Otherwise, the contestant will forfeit their right to compete and their opponent will be declared the winner by default with a score of 3-0.
16) The robots have to carry module or equivalent which is provide to the robots start or stop by referee with remote control during the competition in the link below.

Link: Starting Modulus