

TECH ROCKS HERE!



2020



DNIPRO



ROBO MAZE

SPECIFICATION

1 Race description

- Team members are to prepare an autonomous robot capable of navigating through the maze in the shortest possible time. The robot starts from certain corners of the maze.

2 Team makeup

- Each team consists of 1–3 participants and a trainer. The age of the team members is not limited. Each team is represented by one robot.

3 Determining the winner

- The winner is the team or participant whose robot effectively navigates the maze in the fastest possible time.

4 Prizes for winners

- All competitors will receive participation certificates. Winners will receive valuable prizes from BestRoboFest organizers and sponsors.

Technical requirements

5.1. Robot requirements

- Robots must be self-contained (no remote controls).
- Robots must not jump, step, or overcome the walls of the maze in any way.
- Any base structure is allowed.
- Robots must attend technical inspection prior to competition.
- Each robot receives a unique registration number. The robot must display this number at all times in order to be identified by the jury and audience.

5.2. Robot designs are not permitted to allow the following

- Parts that may break, scratch or damage the walls and ground surface of the maze.
- Any flammable devices.

5.3. Maze requirements

- Flooring material shall be matte banner fabric.
- Wall material shall be hard plastic.
- Field color shall be white.

- The start and exit zones are clearly indicated by color: green at the start, red at the exits.
- Passages of the maze shall have a minimum width of 30 cm. NB: make sure your robot will clear this width by at least 5 cm. .
- Wall height shall be 10 cm.
- Wall width shall be no wider than 2 cm.
- The starting point of the maze is determined by the judges committee on the day of the competition.

Competition procedure

- The number of attempts for each team is determined by the total number of teams.
If a robot fails to complete the maze, the team may retry, within the predetermined total number of attempts in in the previous paragraph.
- A team's Results shall be the time the team's robot took to complete the maze, or in the case of no robots successfully navigating the maze, then the time it took to reach as close as possible to the exit. All attempts are recorded, with the best time being counted towards a team's standing: the shorter the time is, the higher the place is in the standings. If several teams have recorded the same times, then the team that used fewer attempts will take a higher place.
- Participants' robots are only placed in the maze at the direction of the judges.
- When the robot is placed at the starting position, the judge will ask if the operator is ready. If the operator affirms they are ready, then the "Start" command is announced. The participant then starts the robot. During the competition, team members are not allowed to be in the ring area and/or touch the robots.

- The race time is counted from the moment the robot starts to move until the robot crosses the exit line from the maze. The intersection is counted whether the front part of the robot touches the line or it completely intersects it.
- Participants may make design changes to the robot between attempts (repair, adjustment, battery replacement, program selection, etc.), provided the changes do not contradict the robot design requirements and do not violate the rules of the competition.
- If, during the attempt, any electrical part of the robot is not fixed rigidly (torn off or hanging on the wires), then this robot is considered to forfeit the attempt.
- If a result is in question, the judge may order a retry.

Disqualification conditions for participants

- A robot is immediately disqualified if it pollutes or damages the competition field in any way.

Safety precautions

- Participants are responsible for the safety of their robots and any accidents they may cause. Competition organizers are not liable for any violation of safety rules and/or damage that may be caused by such violation.

The organizers may make changes to the rules no later than 2 weeks prior to the competition. In this case, the organizing committee is obligated to inform all participants of any changes no later than 10 days before the start of the competition.