

School of Electronics & communication Engineering

RoboSoccer

EventID:ECET1607

Introduction

This event is a platform for participants to showcase their robotics talents and also to bring alive the football spirit. They are required to build two manually controlled bots capable of playing soccer on an arena specially designed for the robotic soccer match.

Objective

- To build two manually controlled bots capable of playing soccer on an arena specially designed for robotic soccer match. The event is aimed at testing flipping and hitting of ball and bot control.
- The bots should be controlled using laptops or pc's only. Use of DPDT switches and controllers is not allowed.
- For communication with computer both wired or wireless communication may be used.

Note: Teams have to bring their own laptops for the competition.

Bot Specifications

- Each team is allowed to have a maximum of two bots .
- The bot must fit into a cube of (20x20x20)cm at all times. It may not expand at any time during the match beyond this size even for hitting the ball. Violating this clause will lead to immediate disqualification.
- The bots should be controlled manually using laptop or pc only.
- Teams can use both on board and off board circuits for communication with computer
- The bots can have on board as well as off board power supply. Teams will be provided 220 volts 50 Hz AC supply.
- The maximum potential difference between any two points on the bot should not exceed 24 volts.
- Grabbing the ball is not allowed. So bots should not have any kind of grabbing mechanisms.

Game-Play

- Teams will have to play a football match against other team. Teams will be divided into pools details of which will be provided at the starting of event.
- 5 minutes of setup time will be provided to each team for pre-game setup and testing.
- Each match will consist of two halves of 6 minutes each.
- Ball will be placed at the centre of the arena at the starting of the match.
- In case of tie 3 min extra time will be given. The team to score first goal during the extra time will win the match. If no goal is scored during extra time, winner will be decided by penalty shoot outs during which 2 penalty shoots will be given to each team in turn. The better of two penalties will be considered to decide the winner.
- During Penalty shoots, only one bot (i.e. the striker) will be placed in arena and ball will be placed at the centre of the arena. The team to score a goal in lesser time will be considered winner.
- After the first half, goals will be swapped.

Scoring

A goal will be considered to be scored only if the ball has crossed the goal line completely.

General Rules

1. A team may consist of maximum of 5 members. Students from different institutes may form a team.
2. Ready-made LEGO kits are not allowed. However, ready-made gear assemblies and development boards may be used.
3. Teams will have to report at least 15 minutes before the time slot allotted to them at the beginning of the event, failing to do so may result in disqualification.
4. No last minute repairs will be allowed in the arena. However, each team can take a time-out of 2 minutes once during a match.
5. Bots would be checked for their safety before the match and may be discarded if found unsafe for other team or spectators.
6. Organizers reserve the rights to change the rules at any point of time as they deem fit. The changes will however be highlighted on the website. So keep checking the 'TITIKSHA' website for latest updates.

Rules for Fouls

- Any kind of intentional damage caused to opponent team's bot will be considered as foul. Intentional grabbing of the ball so as to make it impossible for other team to get the control of the ball will also be considered as foul.
- A free kick will be given to other team in case of fouls during which bots of the team committing the foul will be freezed for 30 seconds and ball will be given to the other team.

- In case of repeated fouls yellow card and red cards will be given. If yellow card is given the bot will not be allowed to play rest of the match whereas the in case of red card it will not be allowed to play current as well as the next match.
- If a foul is committed inside the D-area, penalty will be given.
- Decision of the referee will be final and binding.

Disqualification

Following cases will attract immediate disqualification:

- If a team fails to adhere to size specifications.
- If a team damages the arena in any way.
- If a team commits repeated fouls.
- If a team fails to report in time.
- If a team tries to intervene the gameplay without permission of the referee.