SUMO WARS

ABOUT THE COMPETITION –

In this autonomous robotic event, the competing team has to make a bot capable of searching and pushing opponent bot out of the arena, all the while keeping itself inside the arena.

OBJECTIVE-

To develop a fully autonomous bot, thus in the process help the participant in understanding the application of various sensors.

MOTIVATION –

The matches in Sumo Wars allow students from a variety of disciplines - physics, mechanics, and computer science - to hone their programming and design skills in the lead up to a bigger task.

Also, to inculcate in the students an understanding of electronic circuits, a basic understanding of arduino and its IDE and the use of automation in real life situations.

This particular event is at the heart of robotics, it will introduce the participants to the real life problems, challenges & scenarios faced during a robotics competition.

RULES-

- Team may consist of max 5 people .
- Robot will be automated and running on battery.(11.1v LiPo battery will be provided during the event itself)
- Battery dimensions are 10.5 x 3.5 x 3 cm.
- Arena will be a circular black disk of radius 1.5m and 10-15 cm white strip on the boundary(+-5% error).
- Bot size - max length=20cm, max width=20 cm.
- Weight limit of bots is 1.5 kg(without the Li Po battery).
- Ground clearance should be of at least 3 cm.
- Rpm of motor should be of maximum 300.
- Each battle will consist of a best of three rounds scenario with each round having a time limit of 120 seconds.
- Technical time out will be given once of 10mins per team, per match.
- The chassis cannot be readymade.
- Any mechanism which can be used to dismantle the opponent bot is not allowed.

JUDGING CRITERIA-

- In order to win a round, the opposition bot has to be completely pushed out of the

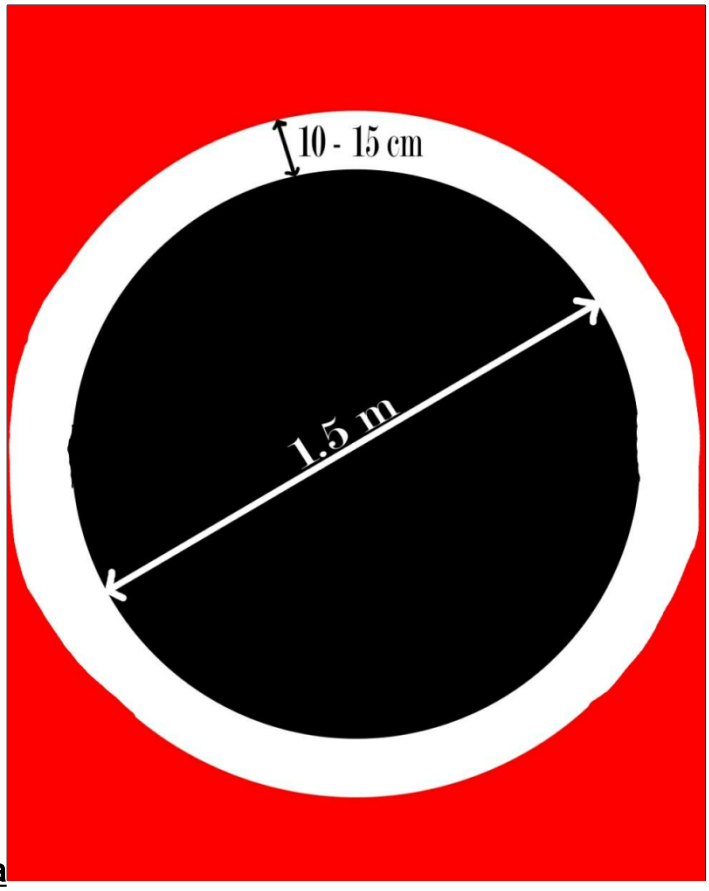
arena

- If the time limit has been reached, and both bots are inside the arena, then a tie breaker round will be held between both teams
- Tie breaker will be of 1 minute and both bots will be placed at centre and after one minute winner will be decide which is least distance from centre .
- Complexity of bot won't be considered for judgment.
- The decision of the judges will be final & abiding in entirety through out considered.

P.S - From basic programming of C language to Development in Arduino all will be taught to you in workshops, 1 October 2018 onwards, conducted by organisers.

Estimated bot cost: Rs 2,200

Schematic diagram of Arena



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