



TECHNOVANZA

Taking technology to society

ROBOSUMO

INTRODUCTION:

The spirit of Sumo is “互いを打つ” which means Striking one another. So Technovanza is introducing Robo-Sumo.

Picture a robot in your mind.

Is it a mechanical assistant, ready to augment humans in the most menial tasks?

Is it a fancy robot equipped with artificial intelligence from a science fiction film?

What about a robotic sumo wrestler?

Bet you didn't think of that.

There is actually a whole industry of people using robots in spectator sports. Many are familiar with Battlebots, but that's not the only way robots can duke it out in the battlefield. Presenting Robo-Sumo. Much like the original sport of Sumo, the goal is not to destroy the opponent robot or turn it into a heaping pile of junk, but to push it out of a ring or pit. That may not sound like much, but the execution is “oh! so entertaining.”

TEAM SPECIFICATIONS:

Any team can participate in Robosumo. A team may consist of a maximum of 6 participants. These participants can be from same or different institutes.

Team Name: Every team must have a name which must be unique. Technovanza reserves the right to reject entries from any Team whose name it deems inappropriate, offensive or conflicting. Organizers must be notified during if a Team's name has been changed

CERTIFICATE POLICY:

1. Certificate of Appreciation/Participation will be awarded to the all teams.
2. Certificate of Excellence will be given to top three teams.
3. Disqualified teams will not be considered for any certificates.

GAMEPLAY:

1. Each battle will consist of three rounds.
2. Each round will be of 2 minutes.
3. Each round will consist of a point based system.
4. If a bot falls in the pits will give the opposite team 3 points while if it either falls off the arena will give opposing team 8 points.
5. The bot or any part of the bot should touch the base of pit for getting 3 points.
6. If a bot is **immobile** or cannot perform linear movement within 20 seconds, the opposing team will gain 5 points.
7. At the end of each round the points gained will determine the victor for that round.
8. In case of a tie, where at the end both teams have equal victories or draws, the collective points gained in all three will be considered to determine the victor.
9. In point 8, if the collective points are also same then, then an additional round of increased time (4min) is conducted where the first team to gain point wins the round as well as the complete show-off.
10. Technical break can be used by both teams which will last for 40 seconds, once for a complete battle (including tie-breaker round).
11. Time given between each round is 1.5 minutes.
12. Hand Touch during the battle to avoid the bot from falling in the pit/outside arena will lead to the bot being considered as **fallen** and necessary points will be given to enemy team respectively.



RULES:

DIMENSIONS

1. The dimensions of the robot used for Robosumo is 40x40 (length x breadth) (10% tolerance allowed). All dimensions are in cm.
2. The maximum permissible weight for the robot is **15 kg**. (tolerance of 5kgs allowed)
3. The robot should not be split intentionally into components or parts during the match.
4. **Negative clearance will not be allowed.**
5. Special note should be taken such that the wire never remains "taut" during the complete battle. Failure to do so will lead to disqualification.
6. A length of more than 20 feet is recommended to avoid getting disqualified as per above rule.

MOBILITY

1. The robot should exhibit linear motion along the arena floor during the match.
2. Jumping, flying and hopping are not allowed. The robot displaying such a motion will be disqualified.

ROBOT CONTROL REQUIREMENTS

1. The robot should be wired or wireless. In case of wireless robot, the battery should be on-board.
2. All required measures should be taken in case of wireless robots.



BATTERY & POWER

1. The maximum voltage between any two points on the robot during the match is 24V. A variance of 2V can be considered due to batteries not being exactly equal to said voltages.
2. Batteries such as LiPo, NiCd, sealed Lead Acid, Li-ion can be used. Change of battery won't be allowed during the match.
3. All efforts must be made to protect battery terminals from a direct short and causing a battery fire, failure to do so will cause direct disqualification.
4. Use of damaged, non-leak proof batteries may lead to disqualification.
5. Special care should be taken to protect the on-board batteries. If judges found that the battery is not properly protected, then team will be disqualified immediately.
6. No AC supply allowed.

WEAPONS SYSTEM

1. The robots should not have any attacking weapons on the robot; the robot should only PUSH the opponent robot outside the arena.
2. Use of wedge is allowed to push away the opponent robot.
3. No lifting or flipper mechanism can be used.
4. No moving weapon is allowed.



JUDGING CRITERIA:

A robot will be declared **immobile** if it cannot display linear motion of at least one inch in a timed period of 30 seconds. A robot with one side of its drive train disabled will not be counted out if it can demonstrate some degree of controlled movement.

1. A robot that is deemed unsafe by the judges after the match has begun will be disqualified and therefore declared the loser. The match will be immediately halted and the opponent will be awarded a win.
2. If the robots become entangled with each other, the robots should be taken back to initial positions and then the match will continue.

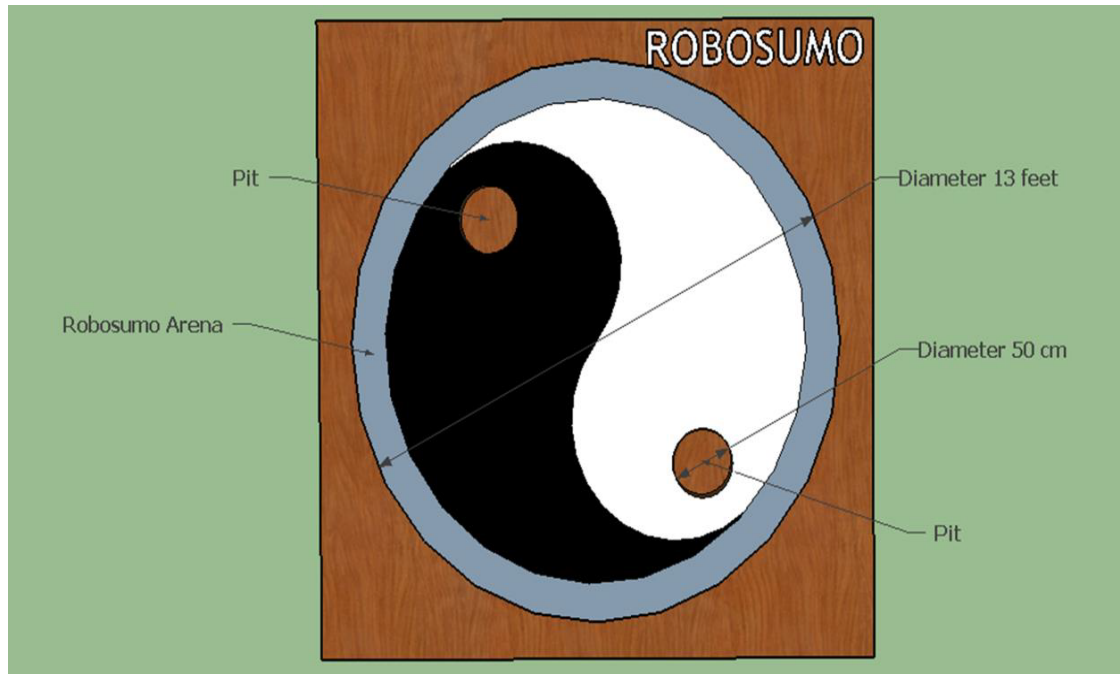
DISQUALIFICATION:

1. Participants not following the above rules will be disqualified on the spot.
2. Improper behavior or grave misconduct will lead to disqualification.
3. Opposing the decision of the judge can also lead to a disqualification.

NOTE: Qualification of a robot to next level is subjective and totally on the decision of the judges. A robot winning in a round against an opponent doesn't guarantee its entrance into the next round. If the judges find the winner robot incompetent to enter into the next round, it may get disqualified. Judges can disqualify both the robots of a match from advancing to next round. All the decisions taken by the judge will be final and binding to all. Any queries afterwards will not be entertained.



ARENA:



CONTACT US:

Mihir Pathak: +91 7045498973

Aditya Balkavde: +91 900421709