

VALADHIMATRA



Sreenidhi's Annual Technical Fest ★ ISO 20121:2012 CERTIFIED

ROBOVEDA '22

explore the unwritten lore...

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JALADHMATRA

1. GAMES AND RULES:

Design a Wired or Wireless manually controlled Robot capable of navigating by floating on water and complete specific tasks within provided time. A robot should be designed such that it is capable of traversing through water with utmost ease and technique. The robot should be able to cross the hurdles that it comes across the arena and make it to the finish line. The arena and all the rounds are prepared in order to evaluate all the attributes of the robot and to make the best robot win.

2. ARENA:

- Arena is rectangular in cross-section of size and consists of water up to a height.
- The arena consists of certain obstacles and checkpoints. The robot should be able to traverse through the obstacles with utmost stability.

3. THE COMPETITIONS AND MATCHES:

There will be two rounds.

i) Qualifying Round

ii) Final Round

3.1. QUALIFYING ROUND:

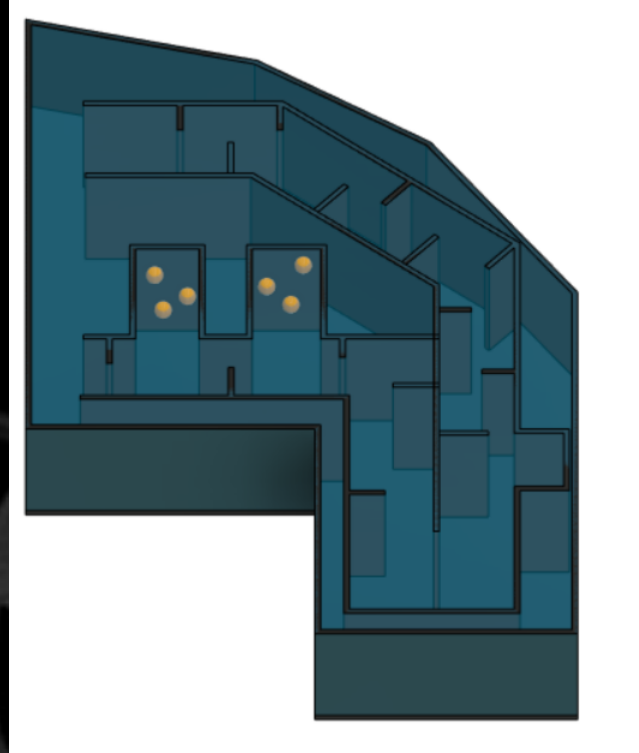
- Each bot has to traverse the path by floating on the water in minimal time.
- The bots which traverses the path in least time are shortlisted and forwarded to the final round.
- The arena just resembles the figure below. The figure is not up to scale.



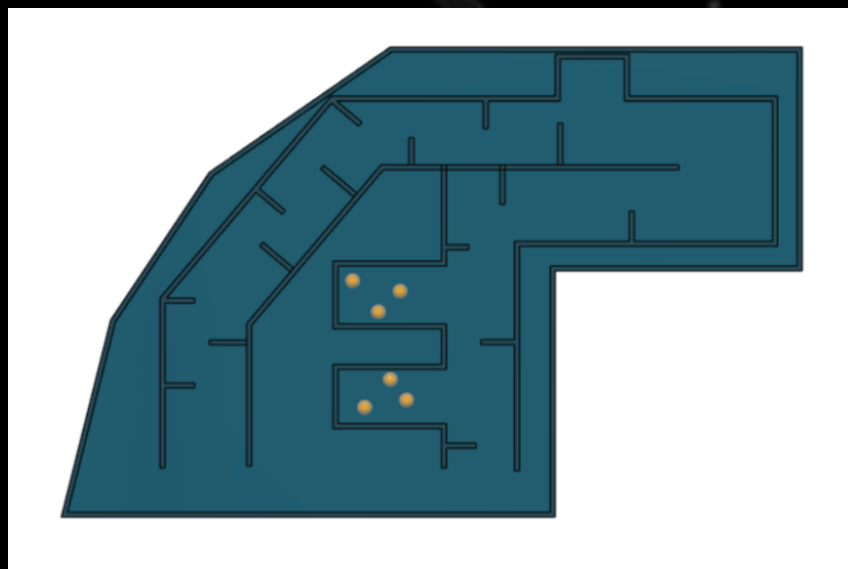
THE ROBOTICS CLUB
Narasimha College of Arts & Science



ARENA MODEL



ARENA MODEL (TOP VIEW)



- Obstacles and its positions may vary in the arena .
- The robot will be placed before the start line .
- The robot has to traverse through the first semi circle area and it may or may not contains obstacles.
- Next, the robot has to pass the triangle area which contains some obstacles.
- Then it should pass through two “U” turns.
- At last the robot has to make a loop over the circular area and should reach end line.

3.2.FINAL ROUND:

- Details about the final round will be revealed on that same day itself as and when the round is conducted.
- Specifications of the bot for the final round are the same as that of the qualifying round.

3.3. POINTS & PENALTIES:

- Based on the violations and penalties the overall time is calculated.
- The maximum time for each participant is 15 minutes for track completion.
- The penalty is imposed , if the robot touches the boundary.
- If the robot flip or stuck in the arena , the coordinator will arrange the bot proper manner at the nearest check point and the penalty will be imposed.
- The technical timeout will be given for the participant on the request of the participants for one minute, if there is no further movement in the robot.
- A penalty will be imposed if the robot touches the obstacles.
- If the robot moves out of the arena then the bot will be placed at nearest checkpoint and penalty will be imposed.

3.4. DISQUALIFICATION:

- If a participant does not comply with the rules of the event, the robot will be disqualified from the event.
- The robot should not damage the arena. The constantly damaging the arena may lead to disqualification.
- Misbehavior of any kind will not be tolerated and the team will be subjected to disqualification from RoboVeda'22.
- Readymade chassis, any form of printed circuit boards or controller boards (other than Arduino and motor drivers) are not allowed. Failing to oblige which, shall lead to disqualification.
- Human interference (e.g. touching the robot) during the game will not be allowed.
- If the Robot is unable to complete the track traversal within time (15 minutes) is considered as disqualified.
- If the robot moves out of the arena for twice then the bot will be out of the event or play.

4. ROBOT SPECIFICATIONS:

- The maximum dimensions of the bot should be 30cm x 30cm x 40cm(l*b*h).
- The robot may be wired or wireless.
- The robot should be self-powered with supply not exceeding 12V.
- Power supply can be on board or off board. Participants cannot draw power from outside.
- There is no weight limit for the robot.
- A tolerance of 5% is allowed in the dimensions and power supply.
- LEGO kits are not allowed.



- In case of wired robots, it is advisable to get wires of larger length as per your requirement and strictly it should not be less than 3m.
- Potentiometers are not allowed to be used.
- The robot should not expand or compress during the run.

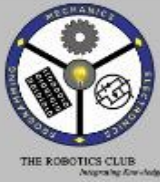
5. JUDGING CRITERIA:

- Any team will be eligible for the next round only if the robot completes the qualification round within a given stipulated time(robot with least completion time).
- However, teams are selected only if they succeed in making it to the shortlist.
- A penalty will be imposed if the robot touches the obstacles.
- Team completing in less time will have first preference.
- Top 50% of the participants who completed the qualifying round in least time are shortlisted for final round.
- Selected number of teams will be forwarded to the final round.

6. RULES AND REGULATIONS:

- There is no team limit.
- Members from different institutions can form a team.
- Only 2 members of a team are allowed to stay around the arena (for controlling and assisting) and a team is allowed to play with one robot only.
- Arena may contain various hurdles (it can be of any kind).
- Any kind of damage to the arena will not be entertained, and if done, the robot will be immediately disqualified.
- All the required accessories have to be brought by the participants.
- No technical assistance will be provided by the coordinators during the time of the event.





- No practice runs will be provided.
- Use of an IC engine in any form is NOT allowed.
- Human interference (e.g. touching the robot) during the game is not allowed.
- If a participant does not comply with the rules of the event he/she will be disqualified from the event. If the robot engages in a place without any further movement, then it would be continue from the nearest checkpoint traversed with penalty.
- The robot should not harm the opponent or the field. Constantly harming the arena may lead to disqualification.
- Decisions of the Event Coordinators shall be treated as final.
- No external AC/DC power supply will be provided at the sight of play.
- A robot with the base of a toy car and its gearbox as a machine part will be disqualified. Also, Lego kits are strictly prohibited and will lead to disqualification.
- Participants with wired robots are strictly advised to get wires of length 3m or more.
- In case of wired robots the wired should be slacked throughout the game.
- Other rounds will be disclosed later during the event.
- Only undergraduates are allowed to participate.

7. OTHERS:

- Maintain a physical distance of 1-2m from other persons, even if they don't appear to be sick.
- Wear a properly fitted mask and frequently sanitize yourself with an alcohol-based hand rub (sanitizer) or soaps.
- Make sure your mask covers your nose, mouth, and chin.
- If you feel any kind of Covid-19 symptoms, make sure you inform coordinators immediately.
- It's important for every participant to strictly follow the Covid-19 Protocols.





- All participants will be given a Certificate of Participation.
- Winners and runners will be given a Certificate of Merit.
- The same member cannot be a member of two different teams for the same event.
- In case of any discrepancies, the decision of the coordinator and the event head shall be the final, and no further arguments shall be entertained.
- We request the participants not to assume anything without contacting us.
- Team Roboveda is not responsible for any kind of damage to your robot.
- All participants must bring their registration receipts to the event compulsorily.
- A robot is allowed to participate only once in that particular event.
- All the participants are requested to bring their college ID cards.
- Events Pushpak, Yantraa and Ranaveera are open categories. All the remaining events are open for students pursuing up-to B.Tech level only.
- The registration fee per individual in a team is ₹299 with which the entrant can participate in Yoddha, Samanvayi, Jaladhmatra, only. One should pay the scheduled amount before participating in the event.
- The registration fee per individual in a team is ₹449 with which the entrant can participate in all the events, except Yantraa, Pushpak, Ranaveera. One should pay the scheduled amount before participating in the event.
- The registration fee is ₹849 for which the entrant can participate in all the events including Pushpak, Yantraa, and in both the categories of Ranaveera.
- The registration fee per individual in a team is ₹.749 with which the entrant can participate in all the events and any one of the 2 categories in Ranaveera. One should pay the scheduled amount before participating in the event.





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Note: In case of any discrepancies, the decision of the coordinator and the event head shall be the final and no further arguments shall be entertained.

*** THANK YOU ***

EVENT COORDINATORS:

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www.roboveda.org