

# RANAVEEVA



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

**ROBOVEDA '22**

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## RANAVEERA

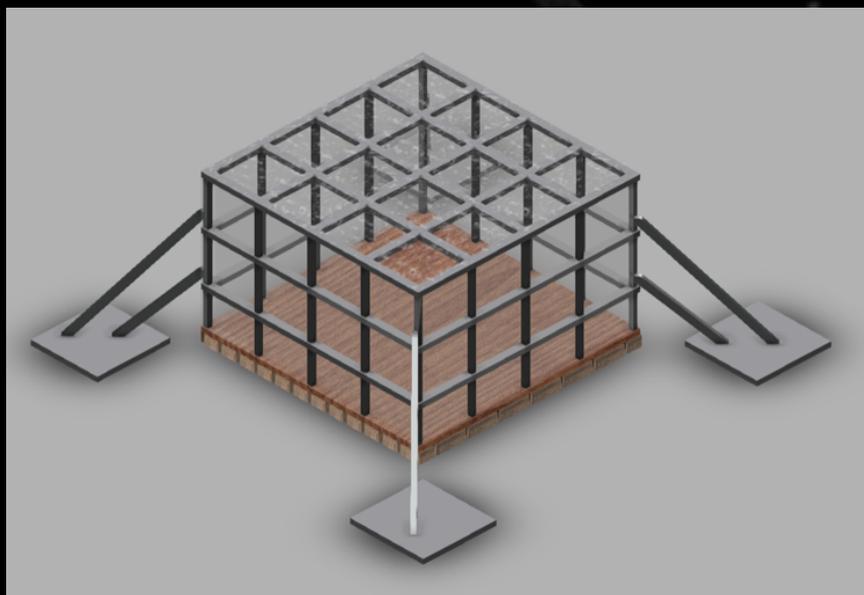
(Open for all)

### 1. GAME AND RULES:

- 1.1. Design a wireless manually controlled robot that has the ability to defeat the opponent's bot by getting it into a halt position within the given time limit.
- 1.2. The team having the best attacking, defending and control strategy will be the winner.

### 2. GAME FIELD AND OBJECTS:

- 2.1. The arena will be a square with dimensions 4.5 \* 4.5 meters (l \* b).
- 2.2. The arena will be bounded by polycarbonate sheets on all 4 sides and on the top
- 2.3. Walls may have nails embedded on them.
- 2.4. The exact arena will be disclosed at the time of the event.





### **3. TEAMS:**

- 3.1. There is no team limit.
- 3.2. Members of different institutions can form a team.
- 3.3. At Most 2 members of a team are allowed to stay around the arena (one for controlling and the other for assisting). A team is allowed to play with one robot only.
- 3.4. It states that there can't be a change of robot between the match/round.

### **4. ROBOTS:**

#### **4.1. Robot Specifications:**

**Note:-Event will be held in two categories. 30kg(Category1), 15kg(Category2)**

- 4.1.1. The maximum dimensions of the robot should not exceed 750mm x 750mm x700mm (l\*b\*h) (5% tolerance) including its expanding arms etc. for both the categories.
- 4.1.2. The robot should be completely wireless. And no wired bots are allowed.
- 4.1.3. For wireless robots, use four frequency remote control circuits or two dual control.
- 4.1.4. The dimensions of the field, facilities, and equipment described in this document have an error of plus or minus 5% unless otherwise stated.
- 4.1.5. Use of Pneumatics and Hydraulics is strictly prohibited.
- 4.1.6. All precautions must be taken to avoid a direct short of battery terminals, and thus leading to a fire accident, Failure in taking precautions will lead to disqualification.



## 4.2. Power supply for robots:

4.2.1. The electric supply voltage to the bot should not exceed 48V (5% tolerance) at any point of time during the game.

4.2.2. No external AC power supply will be provided during the game.

4.2.3. Use of non-leak-proof batteries might lead to disqualification.

## 4.3. Weight:

4.3.1. The maximum weight of the robot = 30kgs.(in category 1) and 15kgs.(in category 2).

## 5. SAFETY:

5.1. All precautions must be taken to avoid a direct short of battery terminals and thus leading to a fire accident. Failure in taking the precaution will lead to disqualification.

5.2. Team members must wear running shoes, helmets, and goggles during a match.

5.3. Use of explosives, fire, water, magnetic weapons, hammers, cutters, nets, glue, radio signal jammers, and dangerous chemicals are prohibited.

## 6. THE COMPETITION RULES AND MATCHES:

### 6.1. Matches:

6.1.1. The players of each match will be chosen at random or will be disclosed during the event.

6.1.2. The total number of matches which a team has to play will be dependent on the number of participants.



## 6.2. Regulations:

**6.2.1.** Any kind of damage to the arena will not be entertained, and if done, the robot will be immediately disqualified.

**6.2.2.** All the required accessories have to be brought by the participants.

**6.2.3.** No technical assistance will be provided by the coordinators during the time of the event.

**6.2.4.** No practice runs will be provided.

**6.2.5.** Use of an IC engine in any form is not allowed.

**6.2.6.** Human interference (e.g., touching the robot) during the game is not allowed.

**6.2.7.** Unfair play may lead to disqualification of the team which will be decided by the coordinator of the event.

**6.2.8.** Misbehavior of any kind will not be tolerated, and the team will be subjected to disqualification from Roboveda.

**6.2.9.** The robot should not harm the opponent or the field. Constantly harming the arena may lead to disqualification.

**6.2.10.** No external power supply will be provided at the time of the event.

**6.2.11.** 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.

**6.2.12.** Readymade RF modules, PCBs, Development Boards are allowed.





**6.2.13.** Using the same robot for different events will not be entertained irrespective of a change in components or team members.

**6.2.14.** The weaponry should be power operated and should switch off when power is unplugged.

**6.2.15.** The bot should comply with all the bot specifications mentioned in document, failing which leads to disqualification.

**6.2.16.** Any kind of major arguments with the referee/judge will not be tolerated and event organizers shall have all the rights to disqualify the team in such situations.

**6.2.17.** The coordinator's and Head's decision will be final and abiding.

**6.2.18.** In between the match breaks are not allowed.

**6.2.19.** Constantly harming the arena may lead to disqualification.

**6.2.20.** Using the same robot for more than one time in the same event will not be Entertained.

**6.2.21.** Members participating in an event in a team cannot participate in the same event with a different team.

**6.2.22.** Some other rules may be added prior to the match and will be rightly known to participants.

### **6.3. Competition rules:**

**6.3.1.** All robots must undergo a pre-check process before competing in the event.

**6.3.2.** After the pre-check process the robot design shouldn't alter.

**6.3.3.** The qualifying round is a one-on-one battle between 2 robots picked at random.





**6.3.4.** For every match there are three (3) rounds and each round is of 60 seconds or vary duration.

**6.3.5.** A team that should win a minimum of two (2) rounds will be declared as the winner.

**6.3.6.** A time gap of 30 seconds will be given in-between the rounds of a particular match.

**6.3.7.** No technical timeouts are given.

**6.3.8.** Teams must start their robot from the starting line when the signal is given by the referee.

**6.3.9.** Clashes can be an infinite number of times but dragging or pushing the opponent's Robots are allowed only for a maximum of 10 seconds. After 10 seconds, the bots should move away from each other and go back to their half of the arena prior to the next clash.

**6.3.10.** Between 2 consecutive dragging or pushing there should be a time difference of 10 seconds.

## **6.4. Scoring:**

**6.4.1.** The event will be a knockout fight, where the bots will compete with each other to be the arena winner.

**6.4.2.** The bot that manages to make the opponent's bot immobile will succeed. (Immobile means if it cannot display the linear motion of at least 2 inches in a duration of 15 seconds).

**6.4.3.** If a team fails to set up their bot in the arena within 60 seconds, the opponent will be given a walk-over.





6.4.4. Points will be awarded on the basis of Attack, Defence, and Strategy.

6.4.5. Scoring Schema will be disclosed at the time of the event.

## **7. VIOLATION AND DEDUCTION OF POINTS:**

1. Getting into an argument with the referee/judge leads to the deduction of points.
2. Any team member touching any part of the bot apart from the controller and the cable is a violation.

### **7.1. Disqualification:**

A team will be liable for disqualification if it,

- 7.1.1. Damages the arena.
- 7.1.2. Argues with the opponents.
- 7.1.3. Fails to obey the instructions or warnings of the referee.
- 7.1.4. Fails to abide to the specifications of the bot.
- 7.1.5. Makes a false start more than 3 times i.e., before the signal from the referee.

### **7.2. Judging Criteria:**

7.2.1. Bringing an opponent to in a halt position within the time limit will get you to the next round.

•**Halt:** If the robot does not move for 15 sec without the opponent touching it, then the robot is said to be at a halt position.

7.2.2. If both the robots are able to move after the time limit then, the judge will decide the winner of the round.



7.2.3. The decision of the judges will be based on the following parameters,

- The points are purely based on aggression and defense criteria.
- Extent of damage done to the opponent robot.
- Extent of damage perceived.
- Robot operating skills.
- Arena damage (Negative Points).

## 8. OTHERS:

8.1. Maintain a physical distance of 1-2m from other persons, even if they don't appear to be sick.

8.2. Wear a properly fitted mask and frequently sanitize yourself with alcohol-based hand rub(sanitizer) or soaps.

8.3. Make sure your mask covers your nose, mouth, and chin.

8.4. If you feel any kind of Covid-19 symptoms, make sure you inform coordinators immediately.

8.5. It's important for every participant to strictly follow the Covid-19 Protocols.

8.6. The teams which are participating in Ranaveera 2022 must report at the arena on or before 1pm on the first day of event.

8.7. It's our sincere request to all the participants to go through this rule book thoroughly and not a single point mentioned in the rule book will be compromised under any circumstances. We also request you to have a copy of this rule book handy during the event.



- 8.8.** Any kind of misbehavior will not be tolerated and will lead to disqualification of the team.
- 8.9.** The dimensions, weights, etc. of the field, facilities, and equipment described in this document has a margin of error of plus or minus 5% unless otherwise stated.
- 8.10.** All participants will be given a Certificate Of Participation.
- 8.11.** Winners and Runners will be given a Certificate Of Merit.
- 8.12.** All Participants must bring their respective college ID cards.
- 8.13.** Team Roboveda is not responsible for any damage to your robot on or off the event.
- 8.14.** In unforeseen circumstances, Team Roboveda abides to the decision of the institution regarding the conductance of the event. Only registered participants will be informed about the change in event dates or cancellation. In that case, the registration fee will be refunded.
- 8.15.** No spot registrations will be accepted for this event.
- 8.16.** Events Pushpak, Yantraa and Ranaveera are open categories. All the remaining events are open to the students pursuing upto B-Tech level only.
- 8.17.** The registration fee per individual in a team is ₹299 with which the entrant can participate in Yoddha, Samanvayi, Jaladhmatra only.
- 8.18.** The registration fee per individual in a team is ₹449 with which the entrant can participate in all the events except Pushpak, Ranaveera, and Yantraa.
- 8.19.** 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.
- 8.20.** 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.





8.21. One should pay the scheduled amount before participating in the event.

8.22. Events ranaveera, Pushpak and Yantraa are open categories. All the remaining events are open for students pursuing up- to B.tech level only.

**Important Note:**

1) Under any circumstance or any arguments, The decision of Coordinator's or Head's or event organizer is final.

2) There is every right for event organisers to change the gameplay time duration or number of rounds that is to be played by the participants under fair means. Any arguments are not tolerated and lead to team disqualification.

3) The actual playing rounds and time details will be announced to participants prior to the match.

**\*\*\*THANK YOU\*\*\***

**EVENT COORDINATORS:**

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