THE INSTITUTION OF ENGINEERS (INDIA)

TUMAKURU LOCAL CENTRE

In Association With

ISTE Karnataka Section

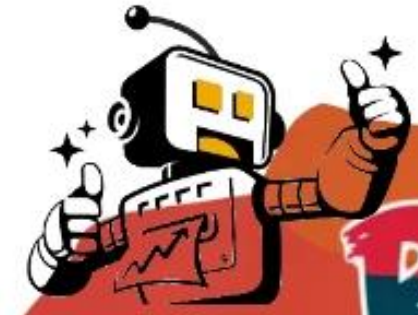
MHRD Institution's Innovation Council

Channabasaveshwara Institute of Technology, Gubbi

Department of Electronics and Communication Engineering

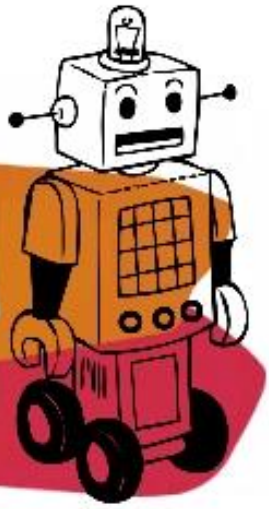
IDEAS CLUB

Organizes



ROBOCON

- A STATE LEVEL ROBOTIC COMPETITION





EVENTS

Path Following Robot
Robo War
Robo Maze
Robo Race

Date:	Venue:	Time:
08/05/2023	CIT, Gubbi	9:00 AM Onwards

NOTE

"Attractive Cash Prizes"

"All the Particpants will get Certificates"

Registration fee of Rs 250/- per event

Last Date for Registration
06/05/2023

Registration Link
https://forms.gle/NVu4eFbRks6wK17r8

For Queries Contact

Faculty Coordinator	Student Coordinator	
Mr. Rajendra CJ	Mr. Akash R	Mr. Suhas A R
9972549850	9036267685	9513097690

For more information on rules please visit: www.cittumkur.org

General Instructions

- The ROBOCON event will be held on 8th May 2023.
- Online registrations will open from 27th April 2023. Last date for participating teams to register is 6th May 2023.
- Participants must carry their college ID card and Aadhaar Card.
- Registration fees for participation per event is Rs. 250/-.
- Payment Details are given in the registration Link.
- The size of the team should comprise of minimum of two members and maximum of 4 members. The students from different Collages can also form a team.
- Team members must be ready at the game field 10 minutes before their every scheduled game. Failure to do so will result in disqualification.
- Usage of any form of Tobacco, Alcohol or Narcotic substances during the event is entirely prohibited.
- All participants are expected to maintain discipline and decorum inside and outside the college premises. Failure to do so or engagement in any misadventure will result in penal action.
- Decision of the evaluator is final. Violation of the rules leads to disqualification

PATH FOLLOWING ROBOT

1. Robot Specifications

- Robot must move autonomously and start with a push button. Any wireless/wired remote control is not allowed.
- The size of the robot shall not exceed 20cm (length) x 20cm (width) x 20cm (height).
- The total weight of the robot including its power source and other parts must not exceed 3kg.
- The robot shall not leave any part of its body behind while negotiating the path.
- On the completion of Robot specification test, approved sticker/Tags will be pasted on the Robot.
- All robots must be designed and manufactured to cause no harm to any person and no damage to the field.
- Robot will be inspected by the technical team before the commencement of every game. If the robot is not complying the rules, then, the team will not be allowed to participate.

2. Game Rules

- The robot must start behind the starting line and must move along the designated track until it touches the finishing line.

- The team which takes least duration of time to complete the given task will be considered as the winner.
- Team members will be given 1 minute of setting up time before the start of their game.
- Only two members from the team are allowed to enter the game field.
- The robot will be inspected and quarantined 5 minutes before the event starts. Reprogramming or modifying of the robot is not allowed after the setting up time.
- Each team will be given one extra trial only when there is a legit technical issue with the penalty of +15 seconds.

ROBO MAZE

1. OBJECTIVE

In this challenge, the mission of the autonomous robot is to drive through a maze from specified corner to its center in the shortest possible time.

2. ELIGIBILITY OF PARTICIPATION

- The competition accepts participation of teams and not individuals.
- The team consists of minimum of 2 and maximum of 4 members.

3. THE ROBOT

- The robot must be self-contained.
- The robot shall not leave any part of its body behind while negotiating the maze. The robot shall not jump over, fly over, climb, scratch, cut, burn, mark, damage, or destroy the walls of the maze.
- The dimensions of a robot shall not be greater than 15 cm × 15 cm× 15 cm (l × b × h).
- Any violation of the above rules will constitute immediate disqualification of the robot.

4. THE MAZE

- The start of the maze is located at one of the four corners. The start square is bounded on three sides by walls. The finish line is at the entrance to the destination square.
- Multiple paths to the destination square are allowed and are to be

expected. The destination square has only one entrance and it will be positioned

5. THE COMPETITION

- Each contesting robot is allocated a specified time for access to the final maze. Any time used to adjust a robot between runs is included in this time. Each run in which a robot successfully reaches the destination square is given a run time. The minimum run time shall be the robot's official time.
- First prize goes to the robot with the shortest official time. Second prize to the next shortest.
- Each run shall be made from the starting square. The operator may abort a run at any time. If an operator touches the robot during a run, it is deemed aborted, and the robot must be removed from the maze. If a robot has already crossed the finish line, it may be removed at any time without affecting the run time of that run.
- After the maze is disclosed, the operator shall not feed information on the maze into the robot.
- The contestant is allowed to: adjust sensors; make repairs in case the robot breaks down.
- The run timer will start when front edge of the robot crosses the start line and stops when the front edge of the robot crosses the finish line.

ROBO RACE

1. General Instructions

- The team would consist of minimum 2 and maximum of 4 members.
- The size of the robot should not be changed during the competition.
- If the robot by any chances falls from the bridge and any part of its body falls behind, the robot will be resumed from the previous checkpoint crossed with a penalty.
- During the game play, if any part of a robot is destructed/ dismantled/ damaged, the participant will be given a timeout to repair at an expense of a penalty, while the next participant will be called for the play.
- Only 1 timeout will be given for any participant and the participant will repair it with the help of the mentor/teammates.
- No readjustment/reprogramming is allowed during the run.
- Any part of the Robo face crossing the endline is considered as the end time of the race.

2. Robot Specification

- Readymade Robot are not allowed.
- The l X b X h should not exceed (250 X 250 X 250) mm
- The net weight should not exceed 3kg. (Including power source / battery)

- However, a tolerance of 10% is acceptable.
- Only wireless robot is allowed.

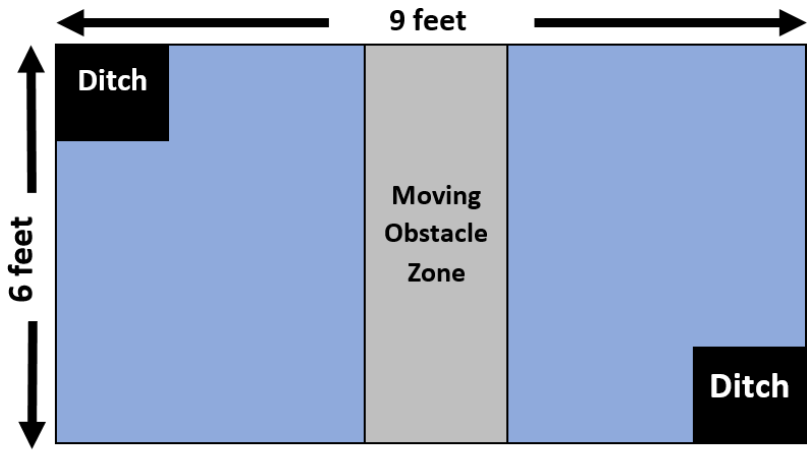
3. Rules & Regulations

- The robot should follow the robot specifications provided. Any deviation from the mentioned specifications will lead to disqualification.
- This is racing event, so fastest and most balanced Robot will be considered as the winner.
- Once the race begins, three hand touches are allowed, to resume the race you have to start from the last checkpoint.
- No test practice will be allowed on the main arena.
- The decision of the judges will be final and abiding. Argument with judges in any form will lead to the disqualification of the team.
- The robot should not damage the arena, if it damages it leads to disqualification.
- Time scale will be calculated on the basis of minutes and seconds.
- In case of tie, milliseconds will be considered.

ROBO WAR

1. General Rules

- Robots will be inspected for safety and reliability before being allowed to compete.
- Disrupting opponent's power is not allowed.
- Arena is a 9 ft. X 6 ft. platform consisting of two ditches (a schematic diagram is illustrated herewith).
- Organizers reserve the right to ban/disqualify any robot at any point of time, due to safety or any other reason.
- ROBOCON organizing team reserves the right to disqualify any participant who fails to adhere to the below mentioned game rules.



Arena of ROBOWAR

2. Robot Specification

- Permissible weight and height: Maximum 3 kg and Maximum 45cm (including off-bot power equipment e.g. batteries, adapters etc.)
- Robots can have weapons such as cutters, flippers, saws, lifting devices, spinning hammers etc. Use of liquid projectiles, any kind of

inflammable liquid, flame-based weapons, radio jamming devices, high power magnets or electromagnets, are not permitted.

- Use of IC Engines is not allowed.
- The Robot must be wireless

3. Game Rules

- The competition will be played on a knockout basis consisting of 2 players at a time.
- The maximum duration of each war/fight will be 5 minutes.
- The organizers have reserves the rights to change any or all of the above rules they deem fit.
- Violation of any of the above rules leads to disqualification.
- Judge's decision shall be treated as final and binding on all.

4.ROBO WAR COMPETITION SCORING

During the competition in each round, Robots will be engaged in a time battle. The winners will be decided by knockout. If the time runs out with no clear winner, Judges Decision would be the final. Points will be scored on the basis following norms.

5. GAME POINTS

- **First Contact (5 POINTS):** Whichever the robot makes first contact with the opposing robot, will be awarded 5 points, if both the robots makes contact at the same time, then both the teams will be awarded 5 points each.

- **Ditch (5 POINTS):** While battling with each other, if any part of the robot makes contact with the ditch either by fighting with the opponent robot or by itself, the opposition team will be awarded 5 points.

- **Arena weapon (3 POINTS):** 3 points will be awarded to the team if they manage to push the opponent robot outside the specified playing arena.

- **Flip the robot (5 & 10 POINTS):** 5 points will be awarded to the team if they manage to flip the opponent robot on either of the sides and 10 points will be awarded if they manage to completely flip the robot upside down(360 degrees).

- **Hit point (2 POINTS):** 2 points will be awarded for each hit if the robot manages to hit the opponent by any means and 2 points per second will automatically added to the team who manages to dominate the opposition by holding them as hostile indefinitely.

- **Disassembling (5 POINTS):** 5 points will be awarded for disassembling each part of the opponent robot in the war.

- **Free style (3 POINTS):** 3 points will be awarded for each specified type of damage they showcase on the given hostile robot (provided by the organizers) further instructions on this style will be provided on spot.