

Event 2 - Robo Tug of War

Location	Arena
Robo Tug of War	
Per Match	2–3 minutes
Team Size	2 min – 4 max
Prize	Winner based (Knockout / League)
Jury	Internal

1. Event Overview

Robo Tug of War is a robotics competition where two robots compete against each other by pulling a rope in opposite directions. The objective is to test the robot's traction, torque, stability, and mechanical design. The robot that successfully pulls the opponent across the center line or disables it wins the match.

2. Arena

Size : 2m × 2m

Surface: Flat (Wood / Rubber Mat)

A clear center line will be marked

Start lines will be marked at equal distance from the center.

3. General Rules

- 1.) Each team can have only one robot.
- 2.) A team can consist of minimum 2 and maximum 4 members.
- 3.) Teams must bring their own robots, tools, and spare parts.
- 4.) Only team members are allowed near the arena.
- 5.) The referee's decision will be final and binding.
- 6.) Any argument with judges may lead to disqualification.
- 7.) Organizers are not responsible for any damage to robots.
- 8.) Robots must not damage the arena in any way.
- 9.) Organizers have the right to inspect robots at any time.
- 10.) Matches will be conducted in knockout or league format.

4. Game Play

- 1.) The match starts with both robots connected by a rope.
- 2.) Robots must be placed behind their respective start lines.
- 3.) Match begins on referee signal: "3...2...1...GO".
- 4.) Robots must pull the opponent using the rope.
- 5.) The match continues until a winner is decided or time ends.
- 6.) Each match will be played as Best of 3 rounds.
- 7.) No time will be given for repairs during the match.
- 8.) If both robots stop functioning, the round may be restarted.

5. Winning Criteria

A team wins if:

- 1.) Opponent robot is pulled across the center line

- 2.) Opponent robot stops functioning
- 3.) Opponent robot goes out of bounds

6. Fouls

- 1.) Cutting or damaging the rope
- 2.) Intentionally detaching from the rope
- 3.) Using glue, sticky materials, or liquids
- 4.) Throwing objects or external interference
- 5.) Damaging opponent robot intentionally

⚠ Penalty System:

First foul → Warning

Second foul → Point deduction

Third foul → Disqualification

7. Robot Specifications

- 1.) Maximum size: $30 \times 30 \times 30$ cm
- 2.) Maximum weight: 5 kg (including battery & controller)
- 3.) Power supply must be onboard battery only
- 4.) No external power supply allowed
- 5.) Wired or wireless control allowed
- 6.) Robot must have a hook or mechanism to attach rope
- 7.) Maximum voltage must not exceed 24V
- 8.) No hazardous or flammable components allowed
- 9.) Sharp edges are strictly prohibited
- 10.) Readymade robots are not allowed



8. Weight Verification

- 1.) Robots will be weighed before each match
- 2.) Allowed tolerance: ± 100 grams
- 3.) Overweight robots get 5 minutes to adjust
- 4.) Failure to comply \rightarrow Disqualification

General Information :

- ❖ The event will be conducted during Technova Technical Fest at Shetty Institute of Technology
- ❖ Rules may be updated by organizers
- ❖ All dimensions are subject to minor tolerances
- ❖ Organizers hold full authority over rule changes