

SANKALP 2K19



Integration of Innovation and Intelligence

NIST ROBOTICS CLUB

Pralay (Robo War)



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PROBLEM STATEMENT:

The participating team needs to design and construct a manually (Wired / Wireless) controlled robot capable of driving the opponent's robot into the dead pit zone either by pushing, dragging, lifting and throwing, or making robot immobile or by any other means within the specified time.

BOT SPECIFICATION:

Weight limit:

10kg (on-bot/off-bot power supply)

Maximum allowable dimension:

35cmx45cmx35cm

Voltage supply:

25v

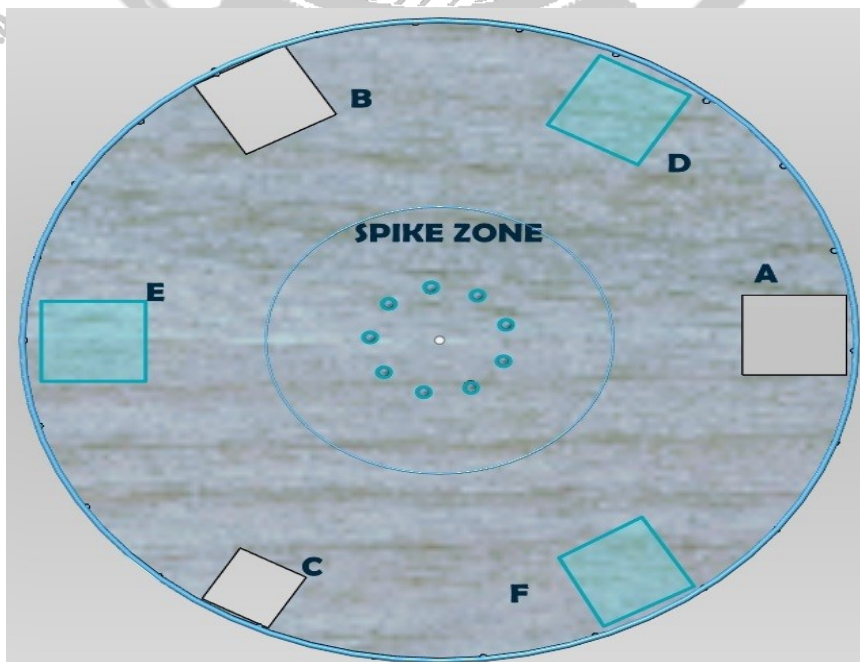
GENERAL RULES:

- Maximum 4 number of members are allowed in each team.
- Each team must have only operator and each operator must operate a single bot.
- Robot dimensions have to be within the given specifications.
- AC Supply 220V/50 Hz will be provided to each team for triggering the controller.
- The team will not be provided with any battery eliminators for charging batteries.
- No chemicals are allowed.
- Implementation of any sucking devices or glue which shall stick the robot on opponent's robot or the floor of the arena, will result in disqualification.
- Jammers are not allowed.
- Any part of robot except the wheels should not touch the ground.

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- No breaks are allowed once the match starts. If the robot is unable to perform due to some technical fault, it will be considered eliminated.
- Any robot remaining inactive willingly or unwillingly for more than 30 sec will be disqualified.
- Every match will be continued for 3 min and if both the robots remained on the arena after the fixed time, then the elimination will be done by considering their attacking game to which points will be given.
- No penalty for harming the opponent's robot though any mechanisms except those mentioned earlier.
- Decisions of the jury will be final and binding.
- Rules can be changed by organizers at any moment of time during the game if required.
- Hammers and lifters are allowed to destroy the opponent's robot and but no extra points will be awarded for that. Cutters, hydraulics, fire or any liquid or chemical weapon are strictly prohibited.

ARENA DESCRIPTION:



DEAD PIT ZONE:

The zones marked as A, B and C are the pits of dimensions 3 X 2 X 2 feet. If any robot falls into the pit by itself or by other robot in the arena, the team loses the match and is eliminated for that round. The organizers are not responsible for any kind of damage done to the robot due to falling into the dead pit zone.

START ZONE:

These are the zones marked as D, E and F. These are the starting zones where the robots will be placed before starting of each match. The dimension of the START ZONE is 2 X 2 feet.

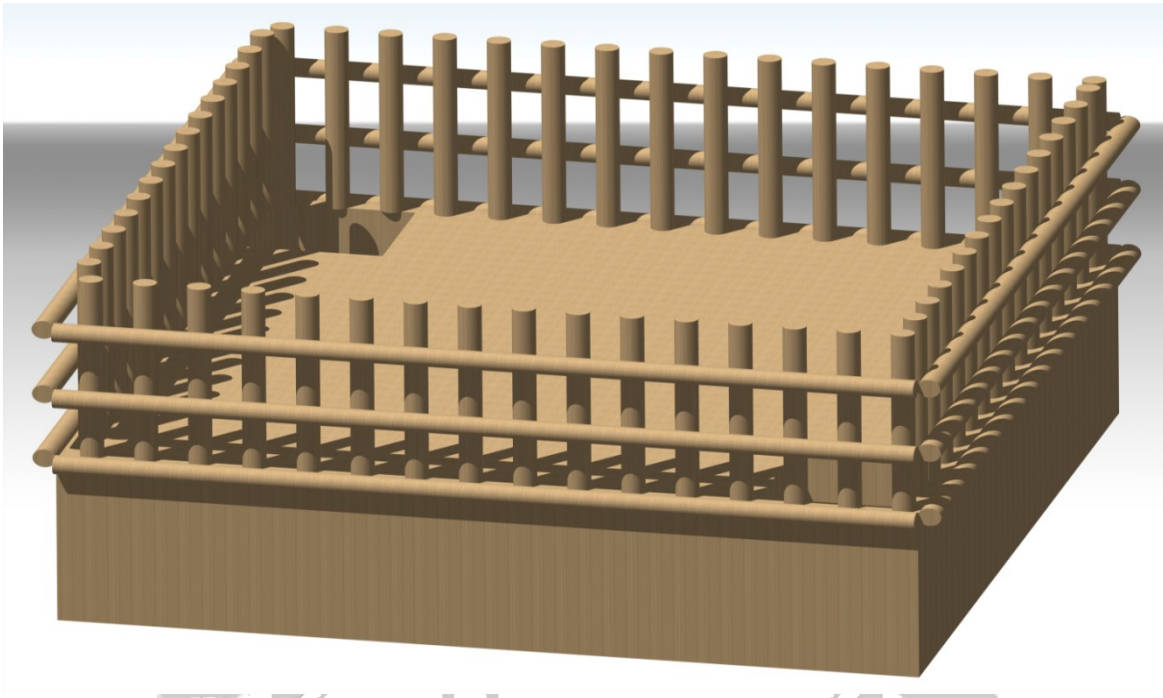
SPIKE ZONE:

It is a circular zone of radius 2.5 feet. It consists of 9 spikes of length 0.5 feet each, which would be triggered automatically if any robot enters by its own or being pushed by opponent's robot. The spikes would come up and go down at very high speed if robot enters the spike zone.

FIRE ZONE:

If any robot enters by its own or being pushed by opponent's robot, into the FIRE ZONE, then flames will be thrown on the robot. The flames will be triggered automatically as soon as the bot enters the fire zone. The location and dimensions of FIRE ZONE in the arena will be disclosed on the event day.

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The dimension of the arena is 12 x 12 feet. The height of arena excluding the upper wire net guard is 3 feet. The height of wire net guard is 2 ft.

SOME IMPORTANT POINTS:

- The match fixtures will be decided by drawing numbers by each team.
- The number which the team gets will be final.
- Organizers are liable to change fixtures at any time if required.
- Any kind of nuisance or use of inappropriate words by any team will lead to disqualification.
- The actual arena may vary from the specified arena.

For further enquiry contact the following event co-ordinators:

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