

CyberFest ' 2019

CyberFest 2019 is a second edition of Cyber Premier League conducted in the year 2018 at Maharishi International Residential School. This time with the added features, Cyberfest is coming to unite all the like minded people in Robotics and Automation field to learn and educate themselves. This event brings young Roboteers from almost 50+ schools in and around Chennai to exhibit and compete with their own talents. The competition is categorized into 3 different zones based on the grades. The zones are as follows,

- **Zone 1 - A maze Challenge**

Grade: 4 & 5

Team Size: Maximum 2 students per team

Fee: Rs.600 per student

- **Zone 2(a) - Line Follower Robot(for Grades 6 & 7)**

Grade: 6 & 7

Team Size: Maximum 2 students per team

Fee: Rs.600 per student

- **Zone 2(b) - Sumo Robot (for Grades 8 & 9)**

Grade: 8 & 9

Team Size: Maximum 2 students per team

Registration Fee: Rs.600 per student

- **Zone 3 – Project Expo (for Grades 9 & above)**

Grade: 9 & Above

Team Size: Minimum 2 & Maximum 4 students per team

No Registration Fee

Last Registration Date: 5th January 2019

ZONE - I

A-MAZE challenge

RULES & REGULATION

Who can play?

Elementary Level – Grade 4 and 5 only

What is the goal?

Rescue the people from cyclone.

Rounds:

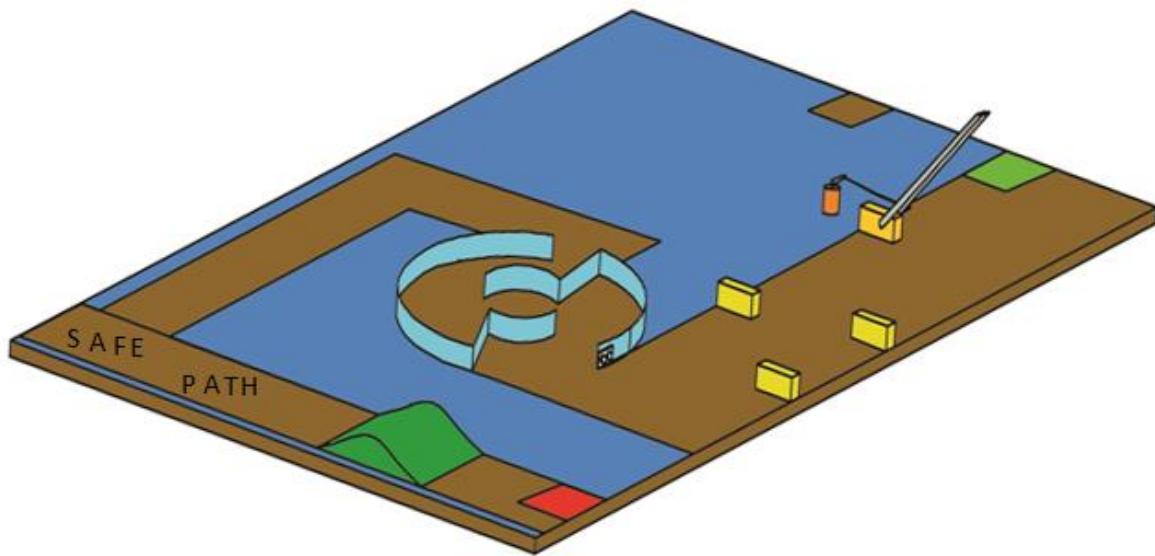
- Three rounds will be conducted based on the number of participants
- The first round is a preliminary round followed by a semi-final and a final round.
- The qualified teams from the preliminary round shall participate in the semi-final and final rounds.
- Winner of the final round will be recognized and awarded with a title “Cyber fest CPL 2019 Champion”.

General Rules:

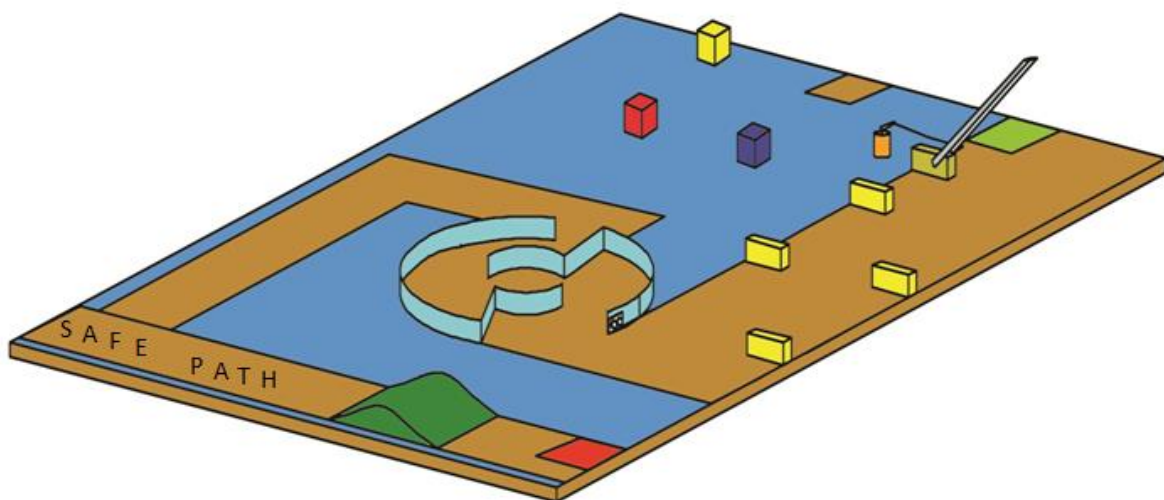
- Registered participants will only be allowed to do a task. There is no spot registration
- A team should comprise two members.
- All the participants are requested to come in a proper uniform with an ID card.
- Team members’ ID no. will be generated during team registration.
- Robots will be provided by the organizers to all the participants. After completing the challenge, participants should return the robots without any damage.

- If any damage occurs to the given robots, there may be a chance of fine based on the damage caused.

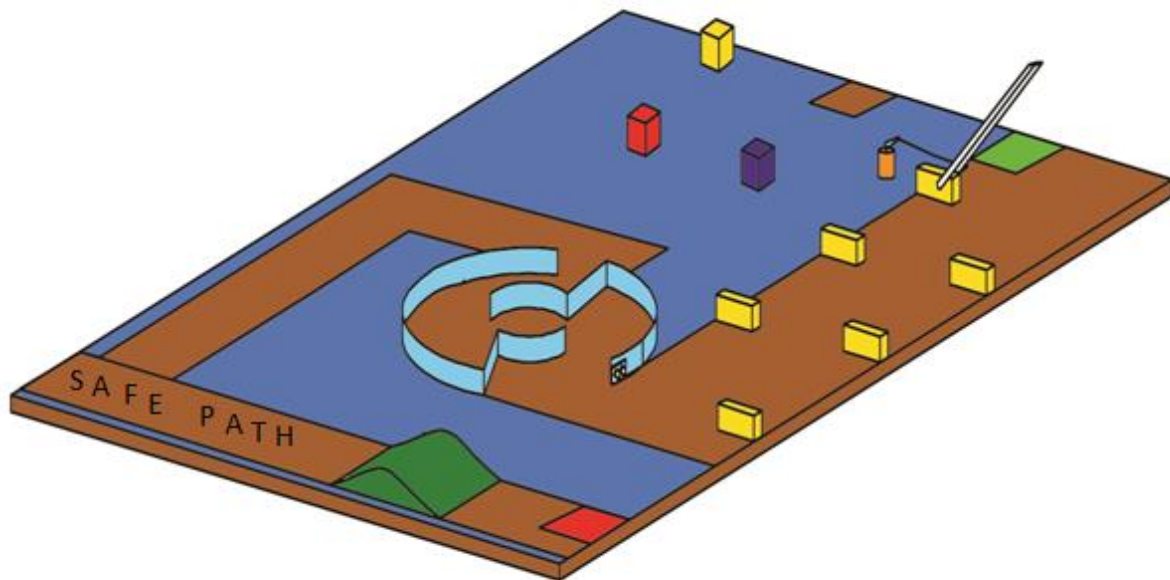
MAZE FOR PRELIMS:










MAZE FOR SEMI FINAL ROUND:



MAZE FOR FINAL ROUND:



-  - Danger zone
-  - Hill area
-  - Buildings
-  - Safe zone
-  - Cyclone area
-  - Flood area
-  - Risk free area

Game Rules:

- The Robot will be provided along with one wired remote control. The team members should control the robot only with the help of the remote.
- Robot should starts to move from the danger zone by carrying the people.
- The Robot has 5 minutes to rescue the people from the danger zone to safe zone.

- The Robot should not touch or enter the flood area in preliminary round. It should move only in the safe path.
- The Robot must cross all the affected areas in the zone.
- Robot should not fall down while crossing the hill area.
- Robot should cross the buildings in the affected areas within 2 minutes. If the time exceeds, the robot will get blocked within the affected area.
- Robot should reach the safe zone with the people.
- For Semi-final and Final rounds, the robot has to rescue the people from the flood area and drop them in the risk-free zone.

Judging Criteria:

Judging Criteria will be based on

- Time Factor
- Number of affected areas crossed without any damage in the maze.
- A maximum of three chances can be taken to cross the hill. After that for each failure, points will be deducted from the total score.
- Judges decision will be the final one without any chance of interpretation.

ZONE - 2

Line following & Sumo challenge

RULES AND REGULATIONS

Line following challenge

Who can play?

Junior Level – Grades 6 and 7 only

Goal:

- The robot should track the line and to drop the balls into the targeted container.

Requirements:

- The size of the robot should not exceed (l*b*h) = 35*35*35cm

General Rules:

- Registered participants will only be allowed to do a task. There is no spot registration.
- Each team should consist of 2 members and one person will be allowed to operate the bot at a time.
- If the bot does not satisfy the required dimension, the bot will be disqualified.
- The participants are not allowed to bring Wireless remote-controlled bots.
- Before starting the competition, each team will be provided with two trials.
- Only the committee members have the authority to take spot decision.

Rounds to play

Competition comprises of **three** rounds

➤ **Prelims**

➤ **Semi-final**

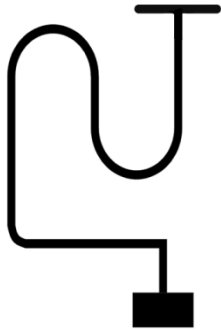
➤ **Final**

- In **Prelims**, each team should make the robot to follow the maze by carrying maximum 30 balls and should drop it in the targeted container within 3 minutes.
- In **Semi-final**, each team should make the bot to follow the maze by carrying maximum 50 balls and should drop it in the targeted container within 3 minutes.
- In **Final**, each team should make the bot to follow the maze by carrying maximum 80 balls and should drop it in the targeted container within 3 minutes.

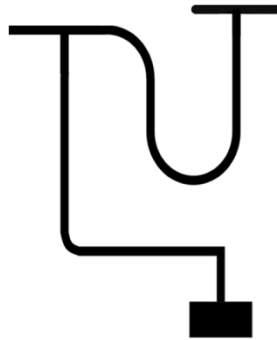
Game Rule

- Each team will be provided with only one chance to do the task.
- Touching the ping pong balls during the execution is restricted.
- At starting, the bot can be loaded with any number of balls and it should complete the task by dropping at least one ball inside the container.
- In case during the first ride, if all the balls are dropped in between the path accidentally, the bot will be disqualified from the prelims. i.e. the bot is not supposed to reach the destination container without even a single ball.
- After completing the first ride with a successful drop of at least one ball, the participants are allowed to take the bot back to the starting point for the next ride (if time permits).
- Based on the number of balls dropped within 3 minutes, the teams will be sorted out for the next rounds.

Maze



Prelims



Semi- finals



Finals

Sumo challenge

Who can play?

Junior next Level – Grades 8 and 9 only

Goal:

- Fight and eliminate the opponent robot within 3 minutes to survive in the battle ground.

Requirements:

- The weight of the robot should be within 2 Kg only.
- The size of the robot should not exceed ($l*b*h$) = 35*35*35cm

General Rules

- Registered participants will only be allowed to do a task. There is no spot registration.
- If the bot exceeds the required dimension and weight, the bot will be disqualified.
- The participants are allowed to bring a robot which can be autonomous or Wireless remote controllable.
- Only the committee members have the authority to take spot decision.
- Each team should consist of 2 members and one person will be allowed to operate the bot at a time.

Rounds to play

Competition comprises of **three** rounds,

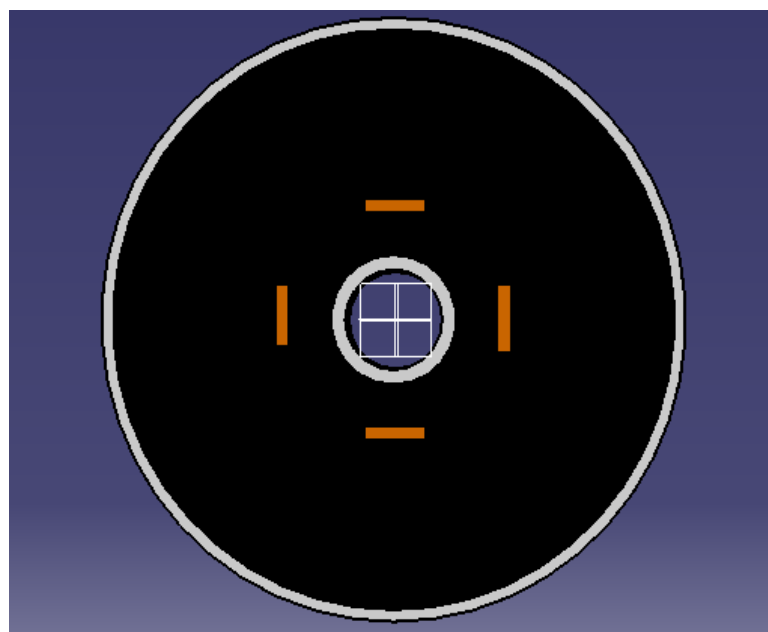
- **Prelims**
- **Semi-final**
- **Final**

- In **Prelims**, there will be no obstacle inside the battle ground.
- In **Semi-final**, there will be only one obstacle inside the battle ground.
- In **Final**, there will be two obstacles placed inside the battle ground.

Game Rules

- The participants should construct and bring one sumo robot, which should not be a ready-made product. The robot should not have any dangerous or sharp materials like blade, cutter, knife, etc.
- The battle field is a circular maze with a circular pit in the centre.
- Four robots are allowed to play at a same time in each round and the total time provided to compete with each other is only 4 minutes.
- Each robot has to fight with the other three robots inside the field and its main task is to push the opponent's robots into the circular pit / outside the maze.
- The scoring is done based on the following criteria,
 - The time taken to push all the opponent bots inside the pit / outside the maze.
 - The bot will be penalized for each hit made by the robot with the obstacles placed inside the maze.
- At the end of the round, the robot which is surviving inside the maze is the winner of that round.

Maze



— Starting point of the robot

ZONE – 3

PROJECT EXPO

Welcome to Zone – 3,

Dear students, you can make your electronic project (ROBOT) under any of these three themes which is given below,

- i) **Military Défense**
- ii) **Agriculture and Water management**
- iii) **Industrial Robot**

Rules and Regulations:

- + In a team minimum 2 and maximum 4 members can participate from **grade 9 to 12**.
- + Abstract of your project (Robot) should be submitted to our mail ID cyberbots.abstract@gmail.com on or before **31st December 2018** date with school detail and registered team name.
- + Abstract must be within any of the three themes and should not exceed more than 250 words, with 3 to 5 key words.
- + Robot/project should be in electronics.
- + Block diagram of your project/robot should be submitted along with abstract.
- + Working of your robot/project description may be in text/video/picture/link.
- + Application of your robot/project should be mentioned in points.
- + Shortlisted abstract will be intimated through the mail on or before **4th January 2019**.
- + Working model of the project should be exhibited on **19th January 2019**.

Game Rules

- ✚ Robot should be under any of the given three themes.
- ✚ Only the selected robots can perform the task.
- ✚ Each team should bring their Robot separately, robot of other's team is not allowed for your team.
- ✚ Student (participant) should come with your full uniform and school ID card or school bonafide.
- ✚ For every team's separate stall and table will be allocated and informed earlier.
- ✚ You can decorate and change your stall and table in impressive manner.
- ✚ Team should perform the task within their respective stall.
- ✚ Scores are valuated by the judgers according to your robot performance.

Picture of your stall

- ✚ Area of the stall is 2m x 1.8m (length and width).
- ✚ Table size of your zone is 1 to 1.5 m length and 0.5 to 1m width.

Backdrops

- ✚ Height of the wall is 2.5m and width of the wall is 2m.
- ✚ Student (participant) need to fill the wall with color full chart works, printouts (colour or Black & White) and posters related to your project/robot.
- ✚ Chart colour recommended (sky blue, light green, white) and thermocol is not allowed.