Association

Collège VOLNEY
54 rue du Poirier
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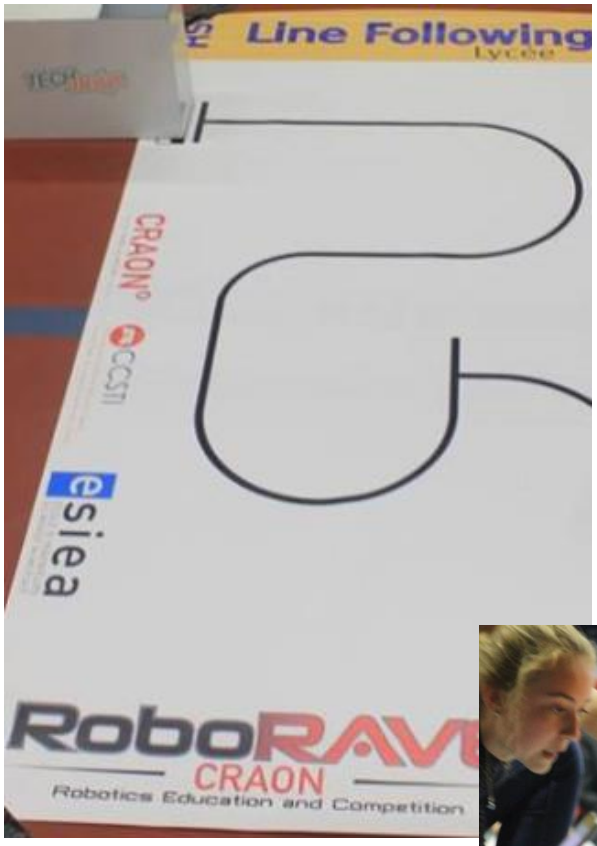
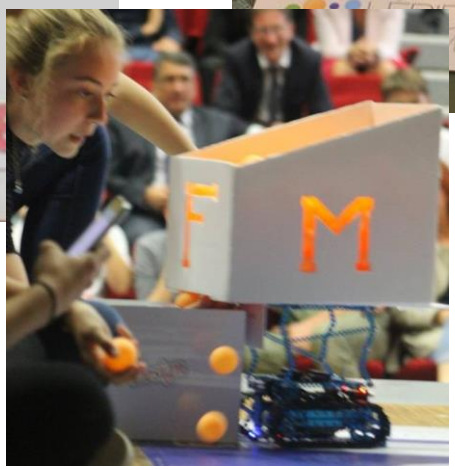
Rules

Line Following challenge 2019





RoboRAVE France - Craon

http://www.roborave53.fr/

The participants have to design and build a robot (and eventually a second robot) following the rules and the spirit of this RoboRave. This robot must complete the rules below. Each team can be helped by a coach (one coach per team, at the most) but the design and of the robots must be created by the pupils. The robots will be approved by the RoboRAVE France-Craon at your arrival. The challenge is going to have a qualifying phase and a final phase.

Chapter 1 Target of the challenge

Article 1: objective

To design, build and program an autonomous robot able to follow a black line to a tower in which the robot must pay ping pong balls, and coming back to the start. On the remaining time you must return to the tower (as many times as possible within 3 minutes) to deliver a maximum total number of 200 balls. Time will allow the teams that have managed to deliver the 200 balls to be separated.

Chapter 2 Characteristics of the runway

Article 2: the runway

- The **course consists** of a black line on a big white carpet (line width: 1 cm) and a tower (height: 20 cm, width:10 cm, length: 36 cm) with a square opening at the top of 9.5 cm side.
- The carpet is approximately 75 cm wide by 150 cm long.
- The path consists of a continuous line in school and an intersection with a line in high school.
- The tower is attached to the mat with **Velcro**.
- The 2019 path will be announced Friday, 24th of May at 9:00 am.

Chapter 3 Characteristics of the robots

Article 3: characteristics

- The whole robot (robot + the system that contains the balls) shall keep within a maximum volume of 50 000 cm3.
- The robots must be autonomous (all platforms are accepted).
- All types of sensors are allowed.
- The energy source is electric battery type or accumulator.

Chapter 4 General rules

Article 4: General rules

- The robot has 3 minutes to browse the entire challenge.
- The balls are loaded after the stopwatch.
- Teams will have a limited number of trials that will be determined by the number of teams registered. The best score added to the points obtained before and the day of the test will be selected for the final ranking.
- The first 4 teams are qualified for the final tournament and opposed in table (half, final) in 3-minute session.
- For trainings, you must bring your own balls.
- **Organization can be modified.**

Chapter 5 Scoring

Article 5: before the event (deadline Friday, 17th May 2019)

- Presentation PowerPoint: 100 pts
- Bonus video presentation in English on the blog: 25 pts

Article 6: the day of the event

- Individual presentation of their work by the team in English: 75 pts
- During the approval, points will be awarded in relation to the customization of the robot: customization of the robot and box: from 50 to 100 pts

Article 7: during the event

500 points + bonus balls

School: no intersection	**High school: an intersection**
crossing the halfway: 100	crossing the intersection: 200
reach the box: 250	reach the box: 250
delivering at least one ball: 350	delivering at least one ball: 350
crossing half the way back: 450	crossing the intersection back: 450
reach the finish line: 500	reach the finish line: 500

Bonus balls: 1 point for each ball (maximum of 200 points).

Chapter 6 Fair play

The participants must keep calm, courteous and respectful.

Article 8: disqualification

Your team will be disqualified if:

- The robot does not follow the characteristics of robots given by article 3.
- A participant does not exhibit courtesy or respect towards the judge.

Article 9: objection to the referee

- No objection to the referee's decision will be accepted.

Article 10: claims

- All claims must be made in the presence of team manager.