Association

RoboRAVE FRANCE

Collège VOLNEY
54 rue du Poirier
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CRAON
VIVRE AU POSITIF

Official rules

Line Following challenge 2023

RoboRAVE France - Craon

http://www.roborave53.fr/
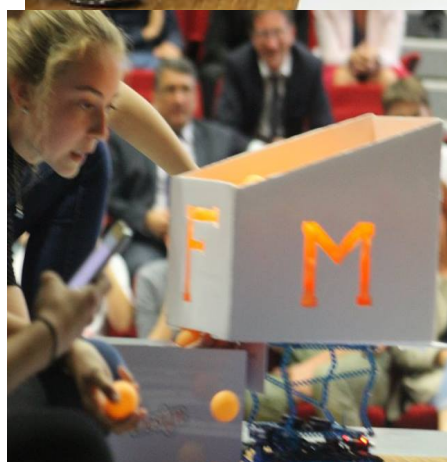
The participants have to design and build a robot (and eventually a second robot) following the rules and the spirit of this RoboRAVE.

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

Design, build, and program a line following robot that can (In three minutes time) follow a black line on a white background to a tower and deliver at least one (1) ball and then return to its starting point. Then, in the remaining time, return to the tower (as many times as needed) to deliver a maximum of 200 balls. The number of delivered balls and the time will be used as a tiebreak.

Chapter 2   Characteristics of the runway

Article 2 : the runway

- The cause consist of a black line drawn 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 consist of a continuous line with an intersection (middle school and high school)

- The tower is attached to the mat with velcro.

- The 2023 path will be announced Friday, 9th of June at 9:00 am.

Chapter 3   Characteristics of the robots

Article 3 : characteristics

- All of the robot (robot+the system that contains the balls) shall keep within a maximum volume of **50 000 cm^3**.

- The robots have to be autonomous (all platforms are accepted).

- All types of sensors are allowed.

- The energy source is absolutely electric battery type or accumulator.

Chapitre 4   Les règles générales

Article 4 : règles générales

- The robot has 3 minutes to browse the entire challenge.

- The balls are loaded after the stopwatch.

- Teams will have **10** tries during the qualification time. The **best** score will be added to points earned before the day of the event and will be retained for the final ranking.

- The first 4 qualified teams will compete in a final tournament (half and final) in session of 2 minutes).

- **The organisation could change during the event.**

Chapitre 5   Les points

Chapter 5   Points

Article 5 : Before the event (deadline Monday, 30th may 2023)

- Slides : 100 pts (see annex 1 page 5)
- bonus video presentation in English on the slides : 25 pts (see annex 2 page 5)

Article 6 : The day of the event

- Approval : 100 pts (see annex 3 page 5)
- Individual presentation of their work by the team in English: 75 pts (see annex 4 page 6)

Article 7 : During the event

500 points + bonus balls + bonus time

School : one intersection

crossing the halfway :	150
reach the box :	250
delivering at least one ball :	350
crossing half the way back :	450
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 with :

- 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.

Remember, RoboRAVE France's GOALS ARE :

1. **FUN while LEARNING**
2. **SHARING**
3. **TEAMWORK**

Chapter 7   Annex

Annex 1 : slides points

Requirements	Points	Validation
Deadline respect	prohibited	
Presentation of the project	20 pts	
Presentation of the group members	10 pts	
Organization of the team	15	
Solutions (photo, explication)	25	
Technical innovation	20	
Language quality	5 pts	
Originality of the presentation	5 pts	
Total (maximum 100 pts)		

■ Annex 2 : English video points

Requirements	Points	Validation
Deadline respect	prohibited	
Read the text	10 pts	
Recited the text	15 pts	
Language quality	5 pts	
Originality of the presentation	5 pts	
Total (maximum 25 pts)		

■ Annex 3 : approval of the robot

Requirements	Points	Validation
Autonomous robot	eliminated	
Dimensions :220 x 180 mm	eliminated	
Base chassis	0 pt	
Addition of a non-functional part manufactured by the team	50 pts	
Addition of a functional part manufactured by the team	75 pts	
Robot customization → complete aesthetic design	100 pts	
Total (maximum 100 pts)		

▪ **Annex 4** : English presentation – RoboRAVE 2023

Each team will introduce their project in front of a jury composed of 2 "euro-class" students. This presentation will be awarded with 75 points.

Each presentation will be composed of :
- an introduction of the team's name, names of the participants, school and chosen challenge /20 pts
- a presentation of their robot, its choice and certification / 20 pts
- a question of their choice to go further /15 pts
- language quality /20 pts

You will be judged on your oral production (understanding and fluency). Each member of the team will speak and the quality of your expression will be judged too (vocabulary, grammar mistakes…)

Part 1 : introduction	Points	√ X
Name of the team	/5	
Name of the participants	/5	
Name of their school	/5	
Name of the chosen challenge	/5	
Part 2 : description		
Presentation of the robot	/10	
Its certification, conditions and restrictions	/5	
Strategy chosen	/5	
Part 3 : a question	/15	
Part 4 : language quality		
understanding	/10	
fluency	/10	
Total des points (maximum 75 pts)		

Examples of questions :
Do you like robotics ?
Why do you like robotics ?
Are you in a robotic club ?
Would you like to create one ?
Have you ever participated in a robotic competition ?
Have you ever participated in a competition ? Where ?
Would you like to participate in a robotic competition in another country ? Where ?
Do you like Math ? English ?
Or any other questions !!!