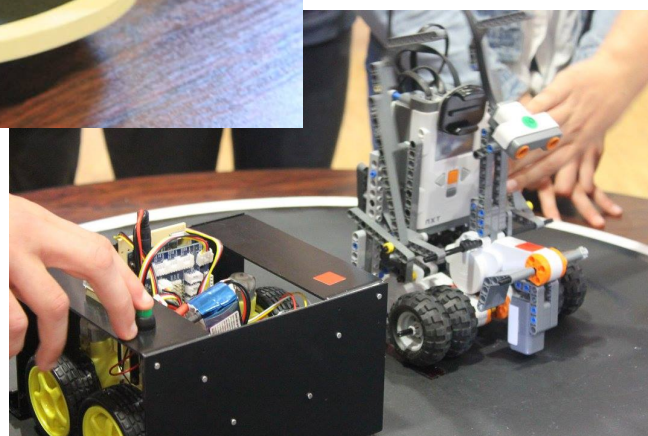
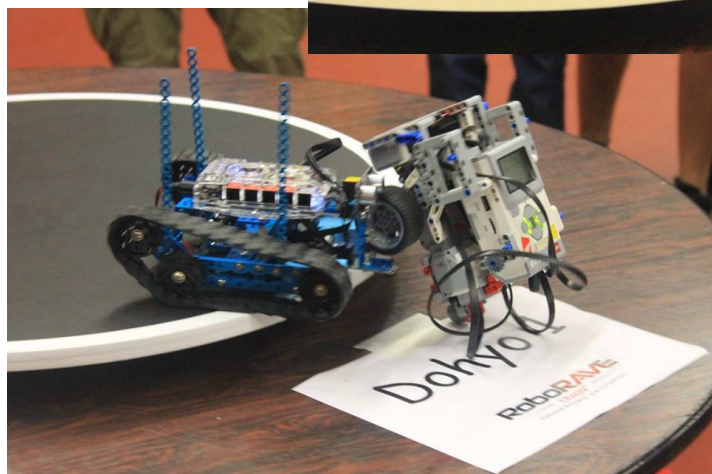
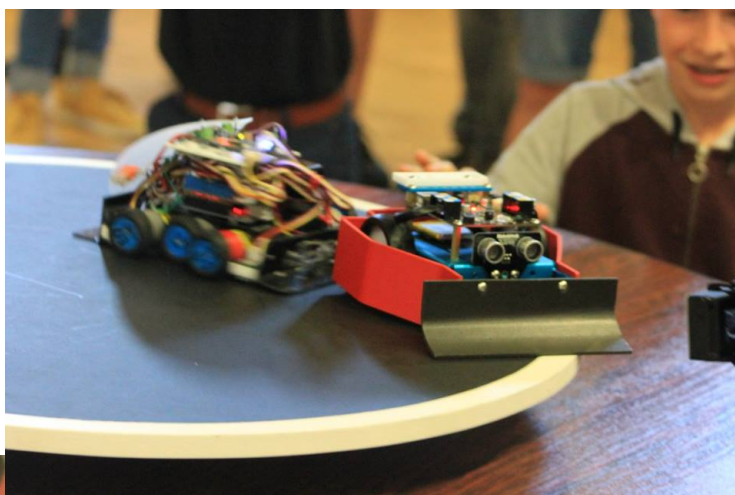


# Official rules

## SumoBot challenge 2023



The following rules correspond to the mini-Sumo Robots competitions in force in Japan and in the US, with some modifications. Only autonomous robots are accepted. The challenge will include a qualifying phase and a final phase.

## Chapter 1 Definition of a fight

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### Article 1 : Definition

Two sumo robots fight, on a sumo ring (dohyo) in accordance with the rules. Each robot is activated by a person. Robots must have been built by the participants. The fight lasts until one of the two fighters make a point (yuko), the decision is issued by a referee.

## Chapter 2 Characteristics of a robot

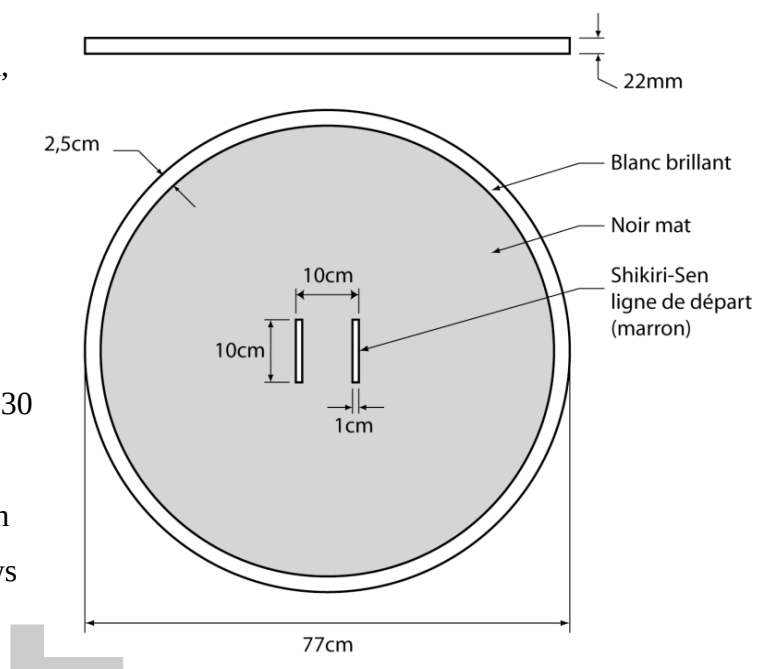
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The inside of the Dohyo represents the surface of Dohyo, included the edge.

### Article 3 : The Dohyo

The dohyo is a circle of 77 cm diameter by 18 mm minimum thickness. It is made of wood.

- Dohyo's surface is smooth and painted in mat black.
- Start lines (shikiri-sen) are indicated by two parallels lines of 10 cm long by 1 cm wide, placed 5 cm from the center of the Dohyo.
- Outer edge is indicated by a circle of 2 cm, painted in white, delimiting the Dohyo.
- The white circle is included in the dohyo.



### Article 4 : Outside the dohyo

The area outside the dohyo goes up to 30 cm beyond the boundaries of the dohyo. The color must not be white. There is no restriction on the nature and form of this area, if it follows the rules.

## Chapter 3 Characteristics

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### Article 5 : Characteristics

- After the activation, the robot must wait 3 seconds before to move.
- The maximum dimensions in the initial position is **18 cm x 25 cm** square with an unlimited height.
- The robot must weight a maximum of 1000 g.
- Autonomous robots have to stay there 3 seconds after activation.
- The energy source is absolutely electric battery type or accumulators.
- The robot must be approval before the first fight.

### Article 6 : Limitation on the robot design

- A robot must not interfere with the operations of his opponent, by projections or lights.
- A robot must not degrade the dohyo.
- A robot must not use systems that block locally (like vacuum cleaners or glue)
- A robot must not throw things (liquid, gas, powder, fire...)

## Chapter 4 General rules

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### Article 7 : General rules

- Teams win points in several meeting (group stage). Points 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.

### Article 8 : Meeting principle

- A meeting consists in 3 fight of 2 minutes each.
  - The first team to win 2 points yuko is the winner.
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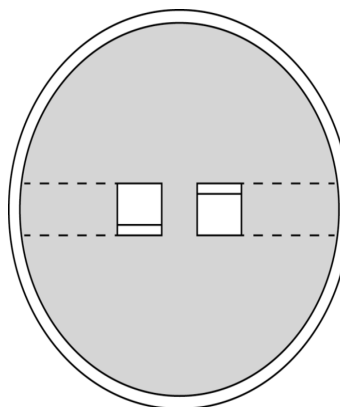
- A meeting consists in 3 fight of 2 minutes each.
- The first team to win 2 points yuko is the winner.
- The robot with the most yuko points at the end of a meeting is the winner.
- When none of the robots receives two yuko points or 1 point yuko robots, the referee gives a draw.

## Chapter 5 Proceeding of a fight

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### Article 9 : Start a fight

Before the fight, participants greet each other before putting their robot on the Dohyo. Then they place their robot behind the start line. No part of the robot must be placed in front of the starting line before the beginning of a fight. Robots will be placed aside, the front one in opposition to the front one other, see figure below. With autonomous robots, the candidates start button on the orders of the referee. The fight starts after 3 seconds. Candidates must be at 30 cm at least from the dohyo, after pressing the start button, throughout the duration of the fight.



### Article 10 : End of a fight

A fight ends when the referee announces the winner robot or announces a draw. Participants greet after talking back their robot.

## **Article 11 : Cancellation of a fight and meet replayed**

A fight is canceled or replayed under the following conditions:

- Robots are locked together or they turn in a circle and it seems that it will not change.
- Robots touch the outside of the dohyo at the same time.
- If the fight is replayed, robots must start immediately without possibility of reparation.

## **Chapter 6 Scoring - Yuko**

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### **Article 12 : Yuko**

The following conditions result in yuko point :

- When the robot ejects its opponent from the dohyo by a legal action.
  - When the opposing robot goes out of the dohyo itself (whatever the reason).
  - When the opposing robot is disqualified or have more than one violation or warning.
  - When two advantages (Yusei points) has been given.
  - When one advantage (Yusei point) has been given and the opponent has received a warning.
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## **Chapter 5 Points**

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### **Article 5 : Before the event (deadline Monday, 30<sup>th</sup> may 2023)**

- Slides : 100 pts (see annex 1 page 8)
- bonus video presentation in English on the slides : 25 pts (see annex 2 page 8)

### **Article 6 : The day of the event**

- Approval : 100 pts ( see annex 3 page 8)
- Individual presentation of their work by the team in English: 75 pts (see annex 4 page 9)

### **Article 15 : During the event**

The qualifying phase takes place as a championship (4 or 5 teams according to the number of teams).

Each fight give points.

Team A		Team B	
2 Yuko	100 points	0 Yuko	0 point
2 Yuko	100 points	1 Yuko	50 points

Or

Team A		Team B	
0 Yuko	0 point	2 Yuko	100 points
1 Yuko	50 points	2 Yuko	100 points

The score will be added to points earned before the day of the event and will be retained for the final ranking.

A maximum of 700 points can be obtain during the fight. The **best** score will be added to points earned before the day of the event and will be retained for the final ranking.

## Chapter 7 Violations

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### Article 13 : Warning

One of the following action result in a warning for the participant:

- The participants or element (control panel, etc...) enter on the dohyo before the referee announced the end of the meeting.
- The preparation for a new meeting lasts more than 30 second.
- An autonomous robot moving (out of its starting position defined in Article 8 ) before 3 seconds after the judge has given the departure signal.
- Adult are forbidden ! Fairplay is the word ..
- Any actions that are considered displaced.

### Article 14 : Violations

One of the following action is defined like a violation causes a yuko to the adversary or both.

- One or more parts of a robot with a weight of 10g at least falls out the robot.
- One of the robot no more moves on the dohyo.
- The 2 robots moves on the dohyo, but don't come into contact with each other.
- Smoke escapes from a robot.

## Article 15 : Lost meeting by violation

One of the following action causes a lost fight per violations:

- A participant doesn't come to the edge of the Dohyo when he is called.
- A participant ruins the fight. For example, destroying, deforming or damaging the Dohyo.

## Article 16 : Disqualification

One of the following results in disqualification and forced him to leave the tournament :

- The robot of one participant doesn't follow the characteristics of robots given by Article 5.
- One participant created a robot not complying with the indications given by Article 6 .
- A participant displays unsportsmanlike behavior. For example, use violent or libelous language to the adversary or the arbitrator.
- A participant voluntarily hurts his opponent.

## Chapter 8 Injury and accident

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### Article 17 : Suspension request

When a participant is injured or a robot has an accident, and the fight can't continue, a suspension of up to 5 minutes maximum can be requested by a participant.

## Chapter 9 Objection

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### Article 18 : objection to the referee

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

### Article 19 :

A participant who raises an objection on the tournament rules must explain his disagree to the managers tournament before the start of the fight.

**Remember, RoboRAVE France's GOALS ARE :**

- **FUN while LEARNING**
- **SHARING**
- **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 !!!