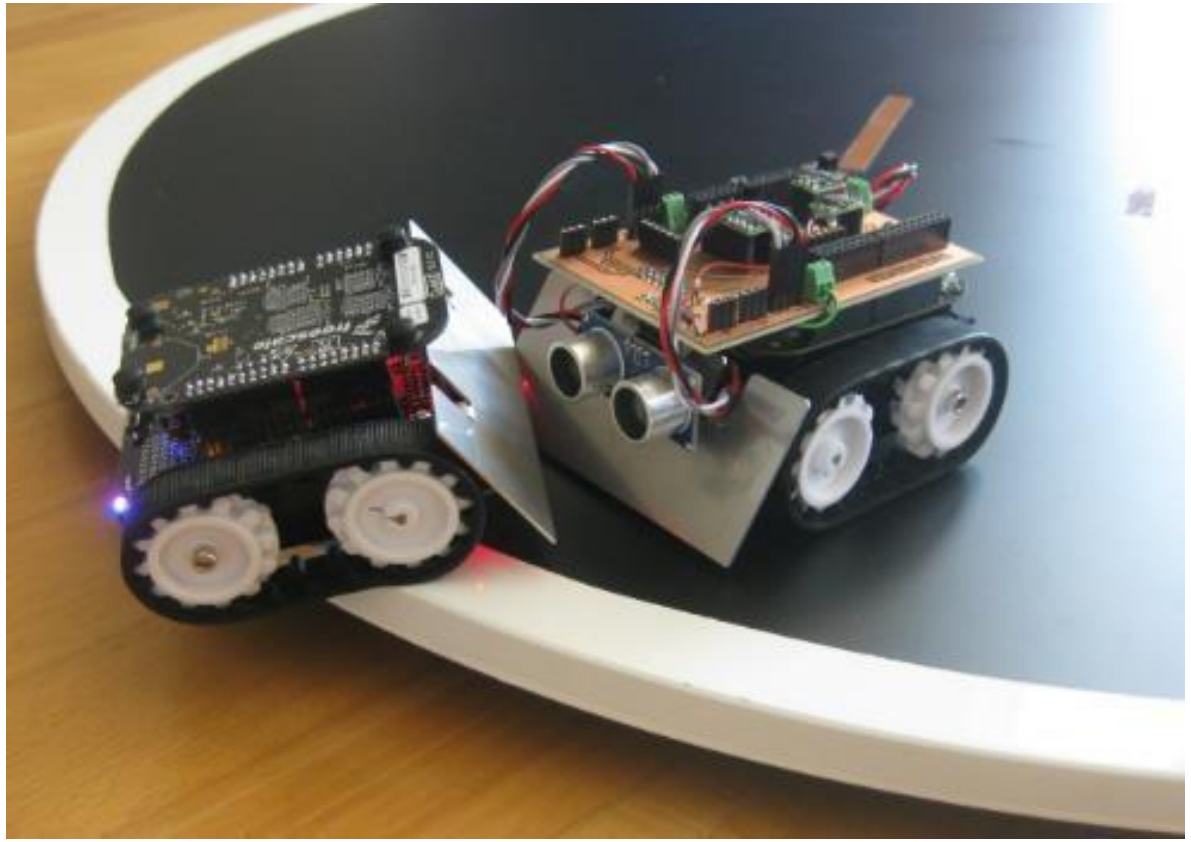
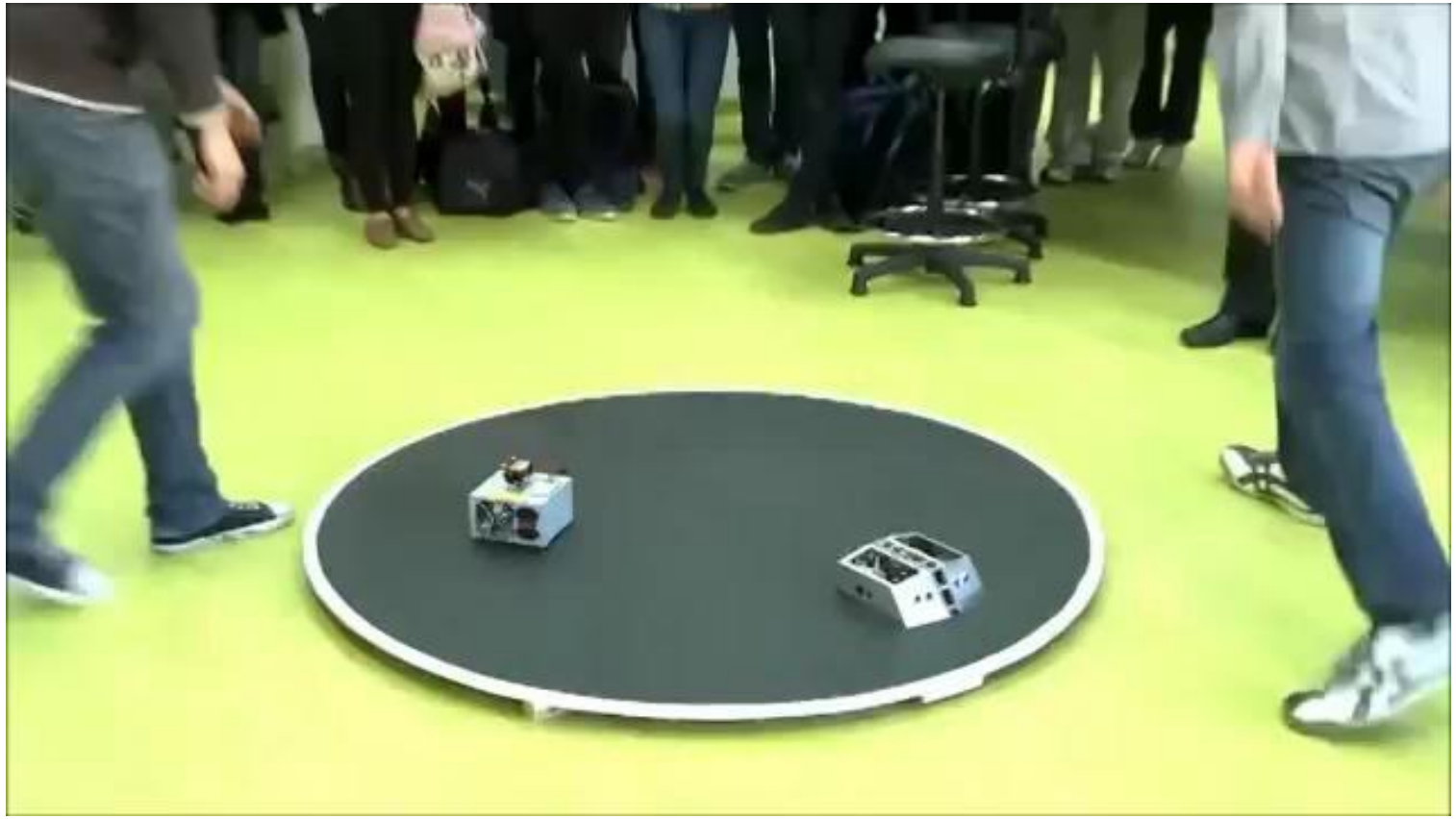
Sumo Robot

A Sumo contest involves two contestants who operate robots, that they have made themselves, by having the robots push their opponent out of the sumo ring (Dohyo) according to the game rules presented here.



Sumo Robot (video)



Rules

Number of players: **Less than 10 players in team**

Length of Event: **3 minutes**

Robot Max. Weight: **3 Kg**

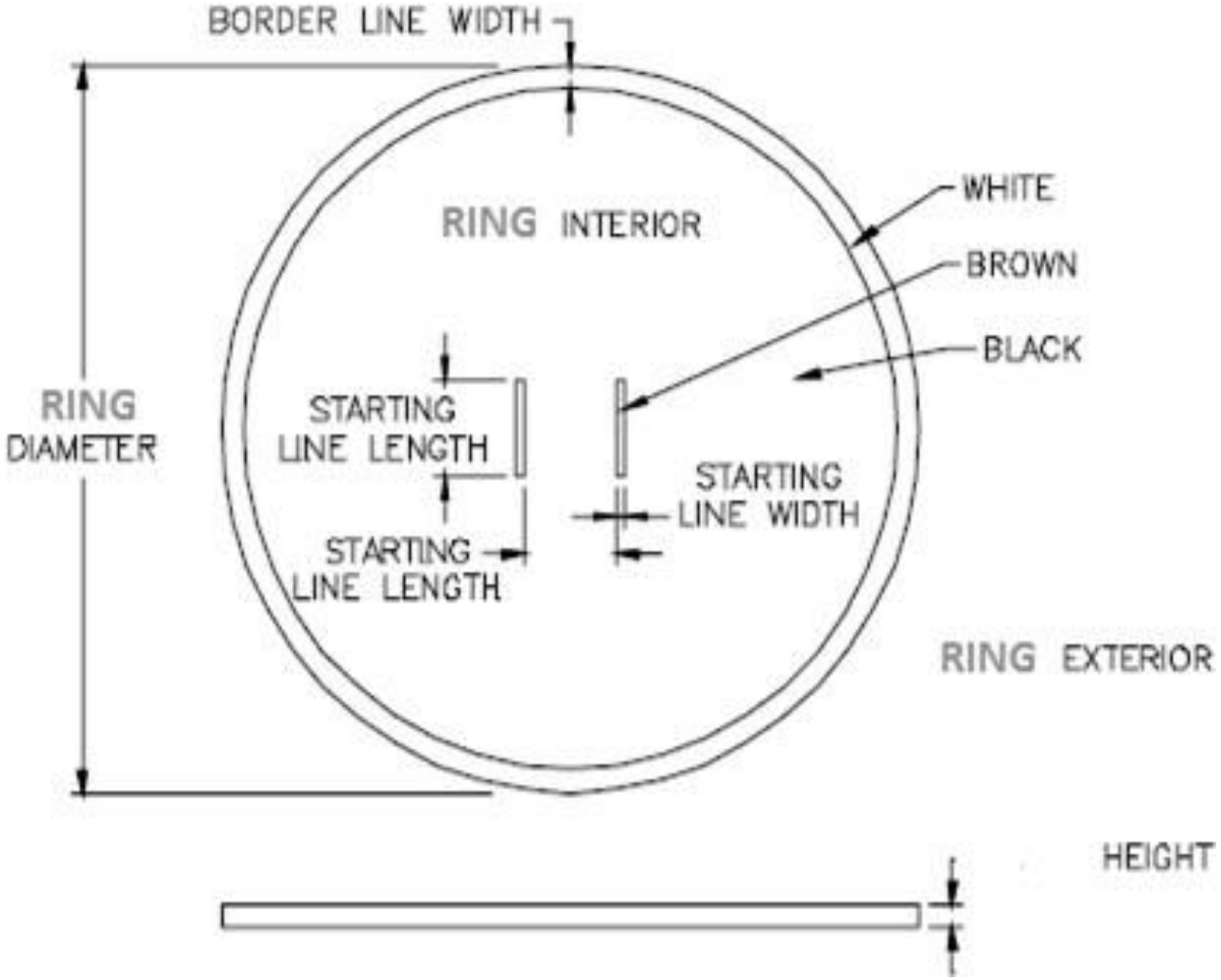
Robot Dimensions: **20 cm long by 20 cm wide, unlimited height**

Rules Cont.

- The robot must be able to fit inside a square box with a length and width as described in the table above.
- The robot's weight (including accessories) must not exceed the maximum weight for its weight division.
- There are no restrictions on the type of control method used with autonomous robots.
- There are no restrictions on the type of microprocessor or the amount of memory used in the robot.
- An autonomous robot should be designed to begin action no earlier than five seconds after the contestant presses the robot's start button.

Dohyo (ring) Specs

A **dohyo** is a flat cylinder which is illustrated in the image shown. The geometrical dimensions of the doyho are listed in the table below for the different robot divisions.



Dohyo Dimensions	Diameter	Height	Border Width	Starting Line Length	Starting Line Width
	154 cm	3 cm	5 cm	20 cm	2 cm

Restrictions on Robot Design

- **The robot will not include a device that obstructs the control of the opponent's operation, such as a jamming device or strobe light.**
- **The robot will not include any parts that might damage or deface the dohyo.**
- **The robot will not include a device that insufflates (pour, spill, drop, ooze, eject, fire, shoot, squirt, etc) any liquid, powder, or gas.**
- **The robot will not include an inflaming device.**
- **The robot will not include a throwing device.**
- **The robot will not include any part that fixes the robot to the dohyo surface and prevents it from moving (such as suckers, glue, and so on). The robot must always be able to move.**
- **The robot will not include any device that increases the apparent weight of the robot. Examples include: using vacuum, fans, or magnetic systems to pull/push the robot down onto the dohyo surface.**

Game Cancellation and Rematches

- **The robots are locked together in such a way that no more action appears to be possible or they rotate in circles several times.**
- **Both the robots are moving, but they don't appear they will ever contact each other.**
- **Both robots touch the exterior of the dohyo at the same time.**
- **Any other conditions under which the referee judges that no winner can be decided.**

Example of Sumo Robot