ROBOParade

2017 ~ 2018 Rules   12-01-2017, V1.1

The parade features robot floats constructed and programmed by student participants. Attendees will be able to watch fully autonomous robot floats follow an indoor parade route while detecting other robots in front of them. The robot floats are programmed to stop and start without human help. It is a great STEaM (Science, Technology, Engineering, Arts, and Math) learning opportunity for young students. Judges will decide various awards. This is an ideal event for beginners in autonomous robotics. The Site Host may organize People's Choice Awards and raffle prizes.

The theme of the 2018 RobopParade is **"A Celebration of World Culture".**

- A team can enter only one robot float. If a coach has multiple floats, please register multiple teams.
- A team can have between 1 to **5** team members.
- Students in grades 4-8 in the month of the event may participate.
- The registration fee per team is $50 at the May 18, 2018 World Championship event. Registration fee for local events $30.
- Each team member, as well as the coach, must bring the signed [Robofest Consent and Release Form](#) on the day of the parade.

Qualification
- Each team must pass a **Test Parade** using the Test Parade Checklist to ensure that all robot vehicles meet the specifications and functional requirements.
- The parade route will be made available for practice before the qualification period begins.
- Early qualification is encouraged. This gives a team early feedback on whether they are ready or what they need to improve.
- Upon passing the Test Parade, the float ID (flag) will be given, which allows the robot to participate in the official parade.
- Teams that do not fully meet requirements may still compete, though ability to meet requirements will be considered in the judges' evaluations.
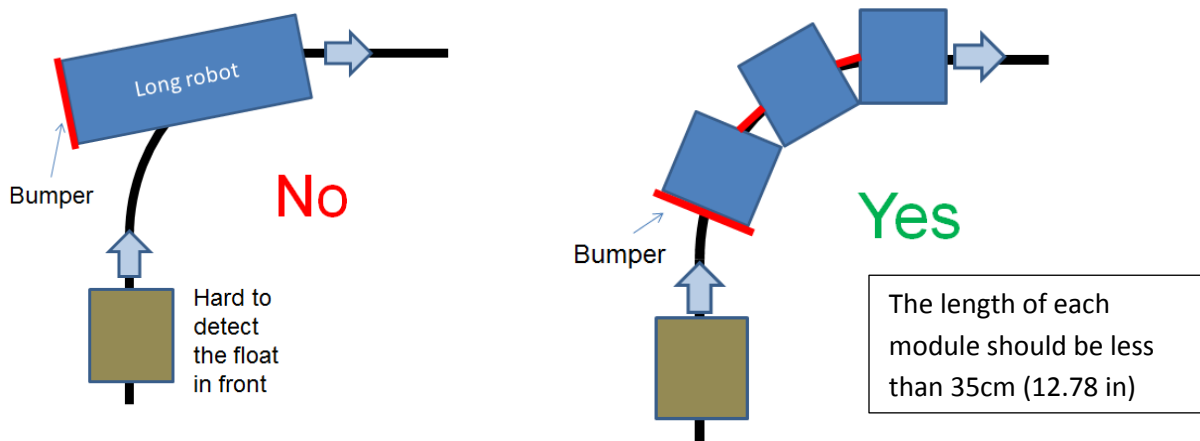
Judging
- Each team member who participates in the official RoboParade will receive a medal.
- A panel of judges will score the team's performance using the RoboParade Judging Rubric by observing teams all day and especially for official parade times. Judges will interview teams.
- Winner trophies will be awarded based on the overall scores. Special award trophies may be given to recognize an extraordinary aspect of a parade float.

Robot Requirements

- Robot type: any, as long as it is fully autonomous.
- Number of robot controllers, sensors (any type), or motors: unlimited.
- Each robot is required to carry a small flag with a number, which will be given once the robot passes the Test Parade.
- Each robot may have its own sponsor logos.
- There is no limitation on height or weight.
- Wireless interaction between the robot and team players using sound, ultrasonic, or light sensors is encouraged

Qualification Requirements

1. Width should be less than 35cm (13.78 in)
2. The rear of the float must have a flat bumper at least 6.35cm (2.5 in) tall and 12 cm (5 in) wide and be 2.54cm (1 in) off the ground so that the robot behind is able to sense your robot using its sensors.
3. There is no limitation on length. However, if overall length is longer than 35cm (13.78 in), it must have train-like flexible bending structures at curves as shown below.

4. Robot must have a reliable program to follow a black line on a bright surface.
5. Robot must be able to follow both clockwise or counter-clockwise parade routes
6. Robot must have the ability to detect a vehicle in front of it and stop, then automatically restart when the vehicle in front has cleared.
7. Robot speed must be between 9 cm/sec and 18 cm/sec.

An example of Parade Route

Teams may purchase plastic folding tables (30" x 72") to construct a practice parade route. A suggested source for the tables can be found at: http://www.buylifetime.com/Products/BLT/PID-22901.aspx . Tables can be placed on the floor on crates without legs. Alternatively, a table covered with white paper or white vinyl table cover can be used. Standard black electrical tape can be used to make a closed rectangular shape with 4 rounded corners as shown in the picture below. 2" wide masking tape can be used to connect and hold tables together. Below is an example of a possible official parade route configuration.