

6th Annual Thanksgiving RoboParade



Saturday, November 19, 2011
12:00 – 3:00 p.m.

www.robofest.net

Macomb Community College
South Campus Expo Center
Warren, Michigan

Lawrence Tech University Robofest office is organizing the 6th annual indoor Robot Thanksgiving Parade to be hosted by Macomb Community College at South Campus Expo Center. The parade features robot floats constructed and programmed by student participants. Attendees of the parade will be able to see fully autonomous robot floats that follow the 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 STEM (Science, Technology, Engineering, and Math) learning opportunity for young students. Streaming videos of the previous parades can be found on the RoboParade home page at www.robofest.net/roboParade.htm. There will be *four* People's Choice Award Trophies. Spectators who vote for favorite floats have a chance to win raffle prizes.

Team Registration and Qualification

- A team can enter only one robot float. If a coach has multiple robotic floats, please register multiple teams.
- There is a maximum of 40 robot floats in the parade. Register online at www.robofest.net. There will be a free technical workshop at LTU for registered teams. Check out the web page for details..
- A team can have up to 7 team members.
- Student in grades 4-12 may participate.
- The registration fee per team is \$20.
- Each team must come to a **test parade** using the actual parade route to ensure that all robot vehicles meet the specifications and functional requirements. Test parade dates and times at Macomb Community College are:
 - **Friday, November 18, 5:00 pm – 8:00 pm**
 - **Saturday, November 19, 9 am – 11 am** (for this slot, teams must make an appointment)

If the team's robot passes the test, then the float ID (flag) will be given. Without the flag, robots cannot participate in the official parade to be started around 2pm. There will be no exception.

Robot Requirements

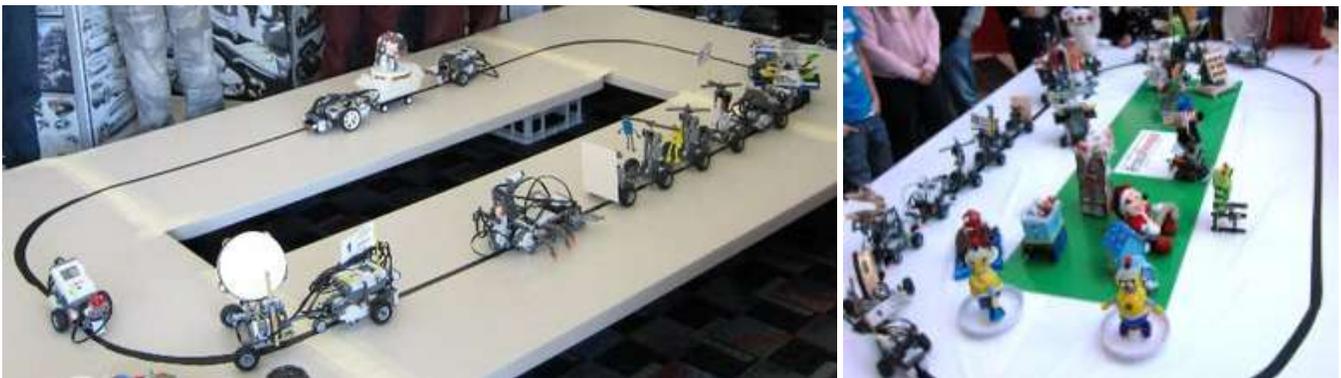
- Robot type: any, as long as it is fully autonomous.
- Number of robot controllers, sensors, or motors: unlimited.
- Size: there will be width and length limitations based on the width of the route. See the next section.
- There is no limitation on height or weight.
- The rear part of your float must have a flat bumper at least 2 inches tall and 5 inches wide and be 0.5 inches off the ground so that the robot behind is able to sense your robot using its sensors.

- Each robot may have its own sponsor logos. Each robot is required to carry a small flag with a number, which will be given if the robot passes the test.
- Program requirements:
 1. Robot must have a reliable program to follow a black line on a bright surface.
 2. Robot must have the ability to detect a vehicle in front of it and stop; then automatically re-start when the vehicle in front has cleared.
 3. Wireless interaction between the robot and team players using sound, ultrasonic, or light sensors is encouraged.
- Recommended robot speed: 4cm/sec ~ 18cm/sec.

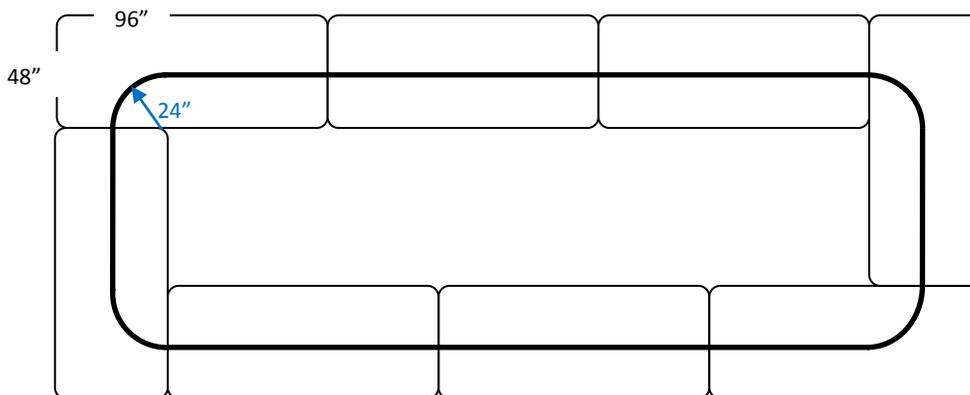
Official Parade Route

Teams may purchase plastic folding tables (30" x 72") to construct a practice parade route. Suggested tables can be found on the web at: <http://www.buylifetime.com/Products/BLT/PID-22901.aspx> . You can find the tables at local discount stores like K-mart or Lowe's for around \$50. Note that Robofest Games (www.robofest.net) use the same tables, so you can reuse them. Tables can be placed on the floor on crates without legs. Alternatively, you may create a practice route by covering any table with white paper or white vinyl.

Standard electrical tape (black) 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.



We are considering the following dimension and shape for the official parade.



The RoboParade is a fun and motivating event to promote cooperation, harmony and creativity. We hope you will be a part of it! For more information on the RoboParade, please contact Jerri Ureel roboparade@gmail.com, 248-204-3569; The event is open to the public and admission is free.

