

# Sumo – Plastic Fasteners Only

(version 20190119.00)

**Robot Size limit** : 30.5 x 30.5 cm  
**Robot Weight Limit** : 1200g  
**Robot Control** : Autonomous  
**Arena** : 106.7 cm diameter circle

**Overview:** Sumo competitions have been standardized by many different organizations. The contest at Roborama will be very similar to these standards, but with some differences.

**Objective:** In this competition two competing robots attempt to push their opponent out of a circular arena. Robots must meet specific weight and size limits. Competition will be held in one sumo class, “plastic fasteners only”. Robots that compete in the “plastic fasteners only” class can only use components that have plastic snap together type fasteners (i.e., no nuts or screws or bolts). A robot made only using the VEX IQ, LEGO or similar type building systems would be an example a “plastic fasteners only” robot. No specific building systems are endorsed in this sumo class and a mix of systems is legal.

**Robot:** Competing robots must run autonomously. The construction materials for the “plastic fasteners only” sumo classes are limited to components that use plastic fasteners to join the robot parts. The intent is to allow a sumo class that uses some of the popular snap together construction systems. The use of a mix of types of construction systems or the fabrication of custom “blocks” (for example a 3D printed block) is allowed. Custom blocks must show a reason for existence, for example interfacing between plastic fastener systems or sensors or providing a unique functional capability. They cannot be simply a collection of blocks merged into a single block. The snap together components used to build the robot may not be glued, taped or tie wrapped together.

**General Rules:** The rules used for this competition are outlined at <http://www.robotroom.com/SumoRules.html> with the exceptions noted in these rules. If a conflict between the rules at the link above and this document occurs, the rule will be interpreted per this document.

**Arena:** The arena for all sumo classes in the competition is approximately 106.7 cm diameter circle. The arena has a black surface except for a white ~1-inch-wide white line along the circumference of the circle. The arenas surface will be made of either paper, construction foam, or painted wood. It may or may not be elevated above the floor. If the arena is elevated, it will be raised about 1 inch above the floor.

**Scoring:** Robots will compete with other robots in the competition in a double elimination tournament.

**Judging:** The contest will have one or more judges. They will ensure the rules are followed and impose scoring penalties or remove a robot from competition if the robot is operating in an unsafe manner or not complying with the rules. The decisions of the judges are final.