



Rules for the Finale

Engineering Physics' Robot Competition 2023

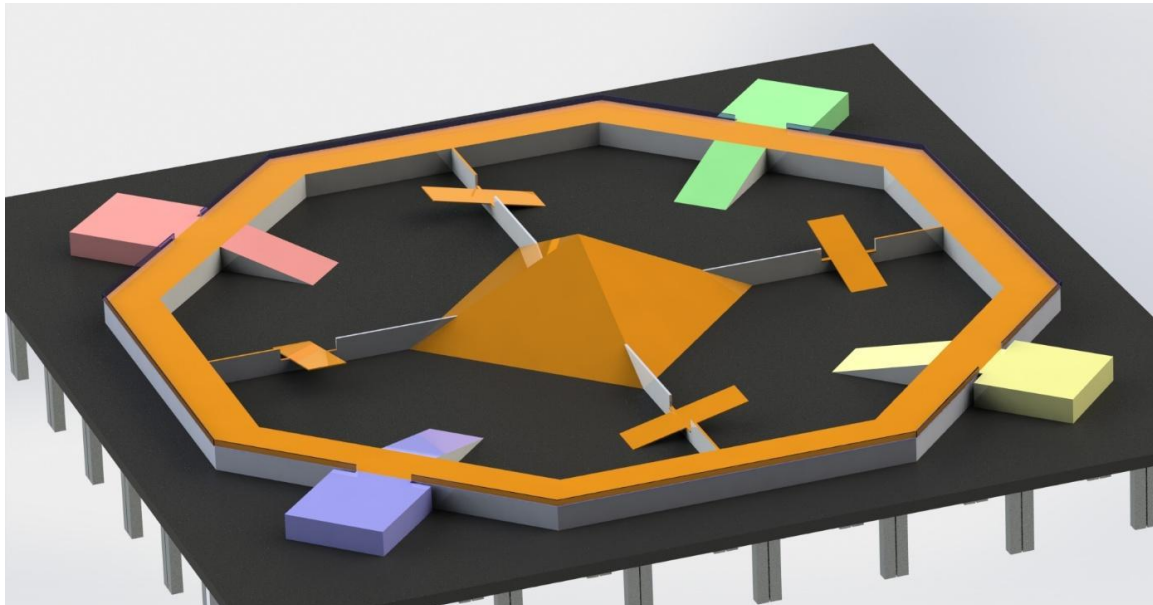




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1 Description

The Finale is the classic Capture the Flag. In **10 minutes**, the teams must collect as many points as possible. Points are collected by picking up flags from the track to their own nest where they must be set down standing in narrow cylindrical holders.

The holders will be mounted in the nest and be wide enough for the flags to go in and deep enough that they will not fall out. Only one flag per holder is allowed, which is not a problem as there will be enough holders in the nest for all flags. Figure 1 shows how it could look with the holders.

The flags will have flagpoles made of wood, be about 10-15 cm long and about 2 mm in diameter. The flags themselves will be made of paper. If a flag breaks, it is considered out of play. Fallen flags are not removed by the competition management during the course of the competition so the team is free to try to pick up a flag at a later time. If a flag is down when the time is up, points for it will not be counted.

In *the Finale*, the top of the pyramid will no longer be a plateau, but is now more of a volcano. The flags will be placed before the start of the competition by the competition management, at a height of approx. 0-40 cm above the playing field. The teams will not be told exactly where the flags will be placed but the placement will be the same for all teams' zones. The flags will have the same color as the zone it is placed in, i.e. pink flags closest to the pink nest, etc. There will also be a gold flag that is worth more points than the others and for that flag it is first come, first served. The shape, location, and speed of the gold flag may differ from the other flags.

The teams may only pick the flags that do not correspond to the team's own color. For example: the team starting in the pink nest gets to pick all flags except pink flags, i.e. no teams will have flags to pick up in their own zone.

2 Rules

It is forbidden to trespass on other teams' nests or deliberately sabotage the flags. See the document *General rules for the main competition* for additional regulations.





3 Assessment

There will be three different points on the flags: 1, 2 and 3 points. Generally speaking, flags with higher scores will be placed more difficult to reach than those with lower scores. If a team picks up at least one flag of each color that is not their own, the team gets a one-time bonus of 3 points. The gold flag is worth the most with a value of 5 points. Should several teams have the same number of points when the time has run out, the placement will be decided by *Sudden Death*. This is described in the document *General rules for the main competition*.

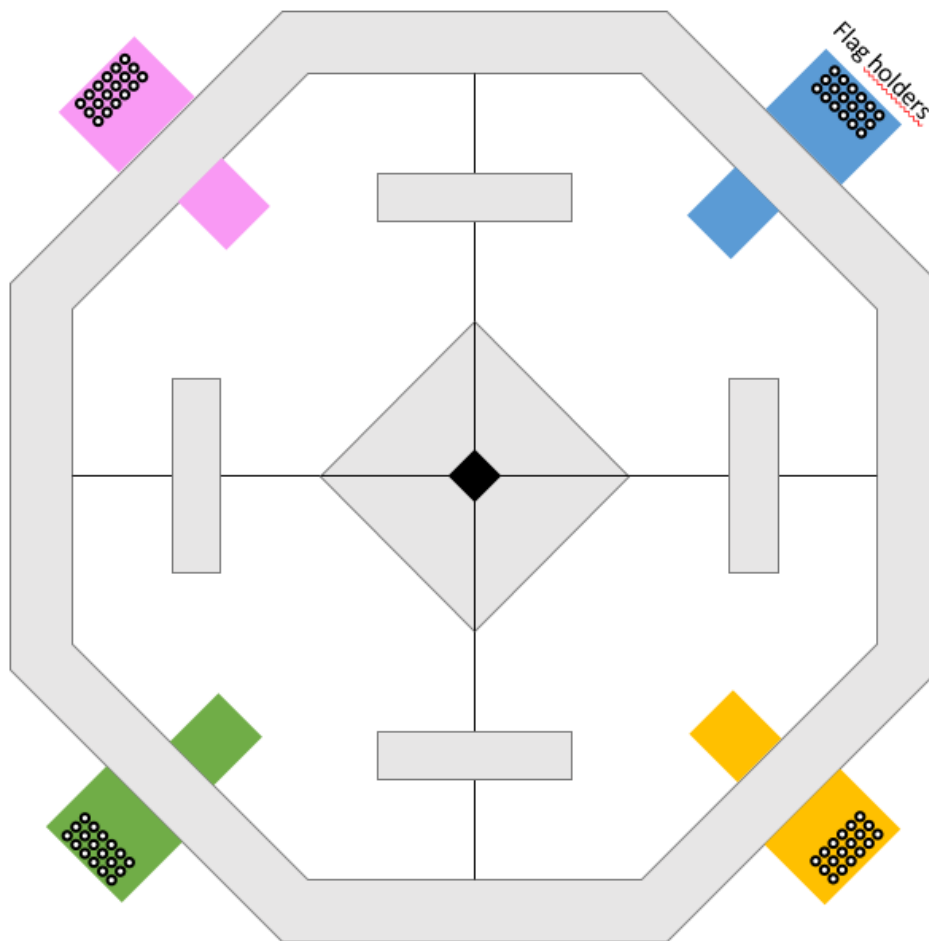


Figure 1. Illustration of the competition course. The rings in the nest symbolize the holders that the flags are placed in for points. The flags are not marked as their position is revealed





in situ. Note that the top of the pyramid is no longer flat but now more of a volcano. The black on top is a hole that the robot can get stuck in.

