RULES OF OPEN Category - 2021
Virtual Competition

The rules and updates presented on this document are complementary to the official document "RULES OF OPEN Category - 2020/2021". In any case of disparity of information or doubt over the official document, this document should be considered over. On a hierarchy level for the validity of the rules, this document comes first and then the general rules. In any case, information not covered by these two documents are considered as extraordinary situations and will be handled by the competition judges and the organization as they arise.

General Considerations

As it is a virtual competition, the focus of the evaluation will be on simulations to solve the problem, totaling 70% of the final grade, complemented by the evaluation on the presentation of the TDP, adding 30% of the final grade.

The simulations will run on a computer, physical or virtual, provided by the event's organization. The specification will be released at a later time.

For the simulation, a free-to-use simulator can be used, such as those used by the teams in last year's competition. The team must specify in its TDP which simulator it will use, which must always be the most recent version available. For each simulator, a standardized simulation environment will be provided by the staff.

The TDP presentation will take place via a virtual meeting, such as ZOOM, and participating teams are allowed to decide on its format and style, as long as the criteria presented in the specific section are respected.

The time for each round will be taken by the "simulation time" provided by the simulation platform on equivalent devices for all teams and totals 5 minutes. For each restart, the time will be added.

TDP PRESENTATION

The TDP presentation must reflect the document submitted to the organization for team registration. The presentation will be virtual in a virtual meeting. The time to each team presentation cannot be less than 5 minutes nor more than 10 minutes.

The structure of the meeting will follow the following order:
1. Entry of all evaluators, members of the team that will be under evaluation and other spectators - without a defined time;
2. Screen sharing start - 1 minute;
3. TDP Presentation - 5 ~ 10 minutes;
4. Questions from evaluators - up to 5 minutes each evaluator;
5. Audience Questions - Up to 5 minutes;
6. End of sharing - 1 minute.

The total time for each presentation must be a maximum of 30 minutes including all the steps described above.

If within the maximum time allowed for the presentation, there can be a time for a presentation of the team's engagement with the community and its extension projects. This part of the presentation does not directly enter into the evaluation criteria, but serves to get the evaluators to know the teams better and become familiar with their project style, which is impracticable due to the current meeting restrictions.

There are 5 (five) evaluation criteria, each contributing to 20% of each evaluator's grade. The score will be the average of the final grades of each evaluator. The criteria will be:
● **Adequacy of presentation time:** considers whether the teams made good use of the time available;
● **Mastery of the theme:** considers whether the members who participate in the presentation master the theme of the challenge and the team project;
● **Strategy:** considers whether the team presented a clear and consistent strategy for solving the problem;
● **Innovation:** considers whether the team's project brings any innovation both to the solution of the problem and to the project itself;
● **Alignment with the real problem:** considers whether the team proposed and executed, in simulation, a solution applicable in the real world.

In order to guarantee the greatest possible equality in the evaluations, the judges must not have any relationship with the teams that will be evaluated. If this type of conflict of interest occurs, the judge in question will not be able to evaluate the team in the TDP presentation.

LAST COMPETITION QUESTIONS

ABOUT THE ZERO BLOCK

The rules allow loads marked as "00" in numerical representation on white cubes or "0000" in bar code on black cubes, but the shelf for placing the cubes/loads contains only spaces from 1 to 15.

The solution to this impasse will be obtained taking into account what was considered in the last competition. If, by drawing, any round has the cubes/loads designated as zero they will be part of the round and must be signaled by the team to have a score equivalent to half the score of the cube/load when placed on the correct shelf.

Signage can be sound, visual or a combination of these.

For black bar coded cubes/loads the score for zero signaling when present in the arena will be 250 points. For white cubes with numerical designation, the score will be 500 points when properly signaled if they are present in the competition arena.

It is noteworthy that the arena will be the same for all teams in each round due to the difficulties of the virtual modality. The initial arrangement of the arena will be drawn in advance so that it can be prepared for each round and will be revealed to the teams only at the time of competition.

STARTING POSITION

At the beginning of the round, an initial position and robot orientation will be drawn for all teams and it will be positioned by the organization in the simulation arena. The random choice will be made live in the virtual meeting using the website <https://www.random.org/integers/> with two distinct configurations:
- **For arena position:** 10 numbers between 1 and 7 will be drawn and presented in two columns in the order they are drawn. The robot's starting position in the arena will be the first set of numbers that indicate a white area in Table 1 of the general rules;
- **For the robot's orientation:** 1 number between 1 and 4 will be drawn. It alone will represent the robot's orientation in the arena. The possibilities are made using the shelf as a reference and are:
  - 1 - facing the bookcase;
  - 2 - with the shelf on your left (rotated 90º to the right in relation to the shelf);
  - 3 - with the shelf at its rear (rotated 180º to the right in relation to the shelf);
  - 4 - with the shelf to your right (rotated 270º to the right in relation to the shelf).

COMPETITION ENVIRONMENT AND NUMBER OF ROUNDS

For the 2021 competition in virtual modality, an arena configuration will be made available for the teams to train and this same configuration will be used in the test round, where both the competitors and the organization will check the functionality of the computers and their network connection.

In the scoring rounds there will be new and unique arena configurations for all competitors. As the simulation runs in an environment controlled by the organization, computer access will be restricted during this period, preventing any advantage for any team.

Four scenarios will be presented for each scoring round. These scenarios with different settings but equal scores will only be revealed at the starting time of each round.

Teams are entitled to two restarts for each round, totaling three valid scoring attempts without breaking the total time of 5 minutes. For team classification, the highest score of valid attempts will be taken into account.