

Final grade

The final grade is composed by:

- 10% milestone 3
- 40% achievements
- 30% report
- 20% video (scientific quality)

Achievements

All achievement items are graded on 6 (half points) and averaged.

- **management (20%):**
 - *time management*: the team respects the deadlines, and plans well its usage of time (e.g., Gantt chart) to avoid rushing at the end.
 - *budget management*: the team stays within its budget limits.
 - *team management*: the tasks are equally shared within the team.
 - *process management*: the team communicates well with the coach, the experts, the workshops and the organizers.
- **functionalities (40%):**
 - *localisation & navigation*: the robot must be able to move autonomously in the arena, and to autonomously find its way back to the collection point.
 - *obstacle avoidance*: the robot must not get stuck against any obstacles (bricks or walls) or move any obstacles. Touching obstacles is fine as long as they do not move and the robot is not affected in its operation.
 - *being able to move toys*: the robot must be able to purposely move the toys in the arena.
 - *being able to drop toys at the collection point*: the robot must be able to drop the toys (or push/pull them if no container is used) into the collection area.
 - *robustness*: all the features of the robot must be working at the start and at the end of the competition (i.e., no broken or damaged parts).
- **quality (40%):**
 - **mechanical design**
 - *drawings*: the drawings contain all the elements required for the production of the pieces (sizes, tolerances, surface states, materials, etc.)
 - *design*: the design choices are well motivated and purposeful. The mechanical elements must be well sized to resist to the required loads.
 - **electronics design**
 - *schematics*: the schematics are clear and all the interconnections between the electronic parts are well thought and completely documented.
 - *design*: the electronic elements must be well sized to resist to the required loads.
 - **software**: the software design should be well motivated. The software should be able to deal with unexpected situations without getting stuck.
 - **integration**
 - *software integration*: all the different software components correctly work together.
 - *mechatronic integration*: the mechanical and electronic parts are well mounted. There are no loose parts or cables. The cabling and connections are properly done.