

Climbing Robot Competition experience at University of Catania

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Abstract

Robotic competitions are spreading all over the world for their importance in attracting students and disseminating the use of new technologies. The spirit of these competitions is to direct students towards science and technology and at the same time to entertain. The robotic group of the University of Catania found very useful this kind of events and, every year, involves small groups of students, providing them only the basic concepts and logistic support, without directly managing the team.

One of the two main competitions that are encouraged at the University of Catania is the Eurobot that is mainly addressed to young students from engineering schools, universities and private scientific clubs. The rules of this competition are generally very simple and change every year. This choice allows new team to enter the competition without the needs of previous year expertise and to have all the teams at the same level each year.

The other competition is the CLAWAR Climbing Robot Competition that has been organized each year since 2000 during the CLAWAR Conference. CLAWAR is a network between universities, research centres and industries that operate in Europe. The aim of the network is to share industries needs and research knowledge. This competition is addressed not only to students but also to research group from many different areas and country. The rules, very flexible, are always the same: to design a robot that is able to climb a flat vertical wall (magnetic or non-magnetic) avoiding obstacles in the path.

Every year the University of Catania, one of the CLAWAR Network partner, has presented a different climbing machines that was able to deal with specific competition tasks. In this paper a description of the different machines, rules, some result and human/educational aspect will be outlined.



Figure 1. Some of the machines developed and presented at the CLAWAR Climbing Competition by University of Catania