

LUND SUMMER COURSE 2007 "SIM ROBOTS NOW IN SPACE"

Names of group members:

Samia Clavinini

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Name of the robot:

Samanti

Mechanical solution: During the first week, we tried many different kinds of robots with different wheels. In addition to this, we tried to check the speed as well as the stability of our robot. Finally, we decided for our robot the medium size of wheels since we think that combines both stability, speed and the ability to climb on the plateau. Concerning sensors, we embodied our robot with double bumper in order to be able to recognize the obstacles. Moreover, the light sensor have been put at the front part of the robot so as to follow the white line and to detect black spots. The robot was not decorated with many things because we need a light and stable structure.

Software solution: For fulfilling the tasks of the contest, we need to set the values for the light sensor. This has been done by taking the values for green, black, white while we were moving the robot on the contest ground. The obtained values were 30 for green, 34 for black and 47 for white.

The code we wrote is simple. In particular, our robot is able to follow the white line, but unfortunately without recognizing the black spots. Besides, it is able to avoid obstacles by turning on the left side, if it heats an obstacle with the right bumper and the opposite.

Problems: The major problem we had to solve was detecting the black spot because we had only one light sensor that is not very sensitive and confuses with the color of the carpet, a mix of green black. Besides, we did not have enough time to try many codes and solutions since one person of our team left without knowing that she had already joined another team.