SdR

The Association School of Robotics is a no profit committed to promoting robotics applications beneficial to humanity.

Our activities range from conferences and seminars, ti training courses in Educational Robotics for students and teachers.

We have tailored our classes for students ranging from preschooling to college, developing educational tools and methodologies both for K12 and teens.

Since 2009, the School of Robotics has been appointed as Training Agency by the Italian Ministry for the Education.

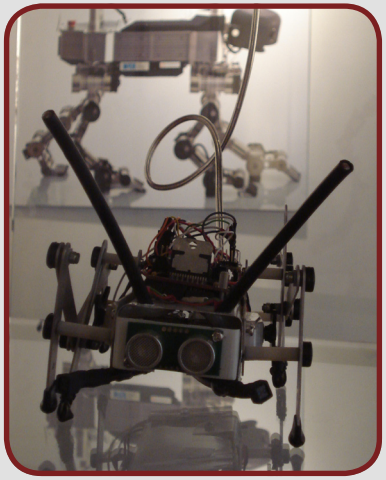
The School of Robotics is Regional Center of the Roberta project. Even though Roberta has been designed for girls, its methodology works very weel for both girls and boys.

Being aware of the complex relationship between Robotics and the Society, we organize dissemination events to discuss important issues about robotics&society: both traditional scientific seminars with experts and also some more artistic and the novel forms of scientific communication, theatre, artistic exhibitions, readings, movies.

Since 2003, the School of Robotics is deeply involved in the birth and in the development of Roboethics, the new ethics applied to Robotics.

DAVIDE CANEPA - Junior researcher

At Campus Party 2011 in Granada I would like to present a project - which I have developed applying Lab VIEW, the popular data-acquisition application - to image recognition to command mobile robots. I have employed LabVIEW (LV from now on) to have a webcam recognising images (letters, numbers) and, always via LV, have these images translated in commands to the robot: to move, to turn, etc. The robot gets these commands via Bluetooth. Children can even draw the images, which LV translates in commands to the robot, because I have "trained" LV to recognise also low-precise patterns. These way, also very little kids can start commanding a robot via images. This application is a very smart and playful educational tool for children. LV can acquire images of any shape and colour: more is the image complex, more LV is working to translate it in machine language. The robot that I have used is Lego NXT, set up in Explorer mode, with 2 engines for mobility, and a third to move the ultra red sensor and a small camera. The ultra red sensor and the camera send their data to a pc (feedback). It is by this sensor that the robot can autonomously correct possible command errors disabling the user-command when wrong or dangerous, and resetting itself in safety position. Users can also command the robot from pc: the mobile robot, which can move also on rugged terrains thank to its caterpillar tracks, can send to pc the webcam acquired images, giving to the user the picture of the environment. We have already tested this application with kids, with great enthusiasm and success.



ALESSANDRO DIVANO - Industrial designer

Robodesign is a project which is based on a year-long researches jointly developed by the School of Robotics and the Department of Architecture and Industrial Design of the University of Genoa, Italy. It aims at finding and selecting the best robots' design, which is carefully studied fitting fundamental human paradigms and needs, and be accurately mold for the set robots' functions. We have worked on the design for the following classes of robots:

1. Underwater robotics for entertainment and museum applications;
2. Robots and interactive devices for users with special needs (autism, elders etc);
3. Humanoids.

For each robot's design we considered the human-centered point of view and the specifics of a technological application. In so doing we applied roboethical recommendations and rules also imagining new and more human-cooperative robotics applications.

At Campus Party Millenium we would like to present our last robotics design, that is:

- In the class of humanoid robots, we have introduced the concept of a "garbage robot" to work with people on an ecological life style;
- For underwater robotics, we have developed several robot's models for aquarium and museum.
- For users' special needs, we focused on robotics for autistic children, with the design of a special wristwatch, which can detect children's mood and can communicate it to tutors and educators.
- Another project is focused on the physical wellness: the design of a robotics device able to massage different parts of our body.

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