

## **PROJECT ROB & IDE:**

### **The Story of Robot and android**

Paolo Bianchetti<sup>1</sup>, Linda Giannini<sup>2</sup>, Donato Mazzei<sup>3</sup>, Donatella Merlo<sup>4</sup>,  
Emanuele Micheli<sup>5</sup>, Bruno Vello<sup>6</sup>

#### ***Abstract:***

It is a project originating from the Forum of Network of Robotics Robot@Scuola, a virtual community for the knowledge of Robotic Science, coordinated by the School of robotics of Genoa. The community includes different schools ranging from kindergarten to high senior school. Various didactic and educational experience are shared on the net and each school has acquired new experience and technologies. The object of study and research is not only Robotics and its technologies but also Robotics in the imagery of students of every grade, and the history of Robotics.

#### ***Introduzione***

A group of schools<sup>7</sup>, together with the Scuola di Robotica<sup>8</sup>, suggested in the schoolyear 2005-2006 to use the internet as a place where to share ideas and experiences, transforming it into an educational and formative community and supervising the project from its ideation to its realisation. The project is still being carried out in the current schoolyear, trying to work out together a Robot's future performances. Great attention is being given to the ethical and philosophical aspects regarding the relation between Man and intelligent and independent machines. The project is taking different directions and involves various intersecting "microworlds": imagination, (kindergarten), observation and narration (primary school), technology (high school). Another important forum is the Blog Rob&ide, where the different schools come into contact, each with its own "language". The final goal hypothesized is to create and control a robot which can mimic human abilities, sharing the robot on the net through remote control. The machine can be used in the study of anatomy: the muscular system, the organs of sense, articulations, art studies (colours and figures), programming: language and logic; historical and philosophical studies; the relation between Man and Machines. The project can be regarded as a fantastic adventure for students of all grades, a timeless journey together with their teachers into the world of fantasy and technology.

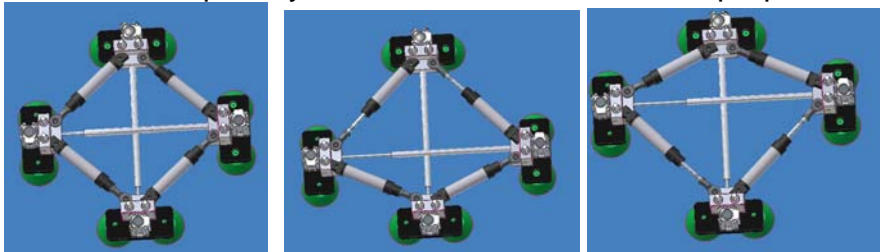
"Augusto Righi", a technical high school (ITIS), is playing an active role in the project. The group operating in the school will contribute to the project "Rob & ide" by designing and constructing mechanical parts of the robot. The plans will be presented at the competitive examination promoted by ADM (association Machine Design), sponsored by Solid Works.

**Project n.1 Climbing Robot:** a climbing Robot with three different grades of freedom able to climb a vertical plan with the aid of suction cups.

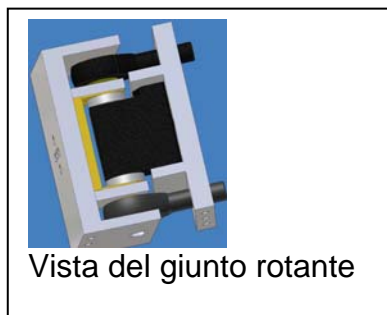
Project n. 2 SPIDER ROBOT : planning and designing a climbing robot which partially resembles a spider



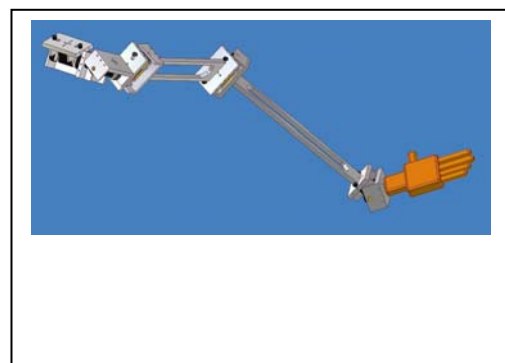
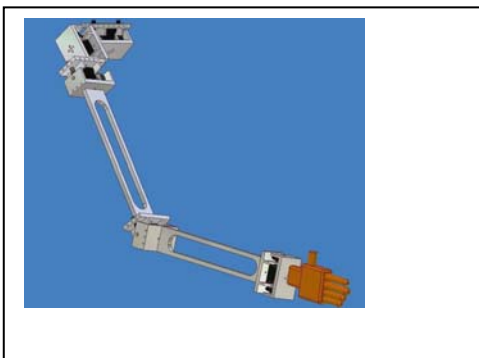
The machine should be in possess of three grades of freedom (D.O.F.) , two traslations on plan xy and a rotation around axis z perpendicular to the plan.

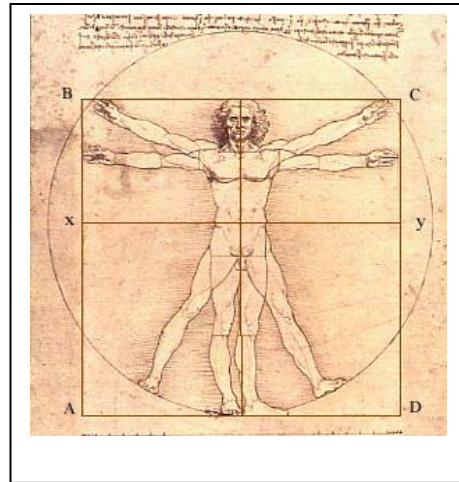


**Project n. 2 SPIDER ROBOT :** planning and designing a climbing robot which partially resembles a spider



**Project n.3 HUMANOID ROBOT:** Planning and designing the mechanical structure of a humanoid robot, taking point the Vitruvian Man of ILeonardo da Vinci.





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- <sup>1</sup> Paolo Bianchetti, Scuola di Robotica, Genova [bianchetti@scuoladirobotica.it](mailto:bianchetti@scuoladirobotica.it)  
<sup>2</sup> Linda Giannini, I.C "Don Milani" Latina [calip@mbox.panservice.it](mailto:calip@mbox.panservice.it)  
<sup>3</sup> Donato Mazzei, Polo Tecnico professionale industriale ITIS Righi Treviglio  
[donato.mazzei@libero.it](mailto:donato.mazzei@libero.it)  
<sup>4</sup> Donatella Merlo, Scuola Elementare "Nino Costa" Pinerolo (To) [donatellamerlo@tiscali.it](mailto:donatellamerlo@tiscali.it)  
<sup>5</sup> Emanuele Micheli, Scuola di Robotica Genova [micheli@scuoladirobotica.it](mailto:micheli@scuoladirobotica.it)  
<sup>6</sup> Bruno Vello, I.T.I. "Don Bosco" Sampierdarena Genova [brunovello@libero.it](mailto:brunovello@libero.it)  
<sup>7</sup> [Lazio] Istituto Comprensivo Don Milani Latina - [[Liguria] ITI Don Bosco di Genova  
Sampierdarena -  
[Lombardia] Polo Tecnico professionale industriale ITIS "A.Righi" Treviglio (BG) [Piemonte] 1  
Circolo Pinerolo (TO)  
<sup>8</sup> Scuola di Robotica <http://www.scuoladirobotica.it/>