

THE BIROBOTICS
INSTITUTE



Scuola Superiore
Sant'Anna

Robotics Class - Final Projects

MSc in Computer Science

2016



Project no. 1 (*Desogus – Marini – Moratilla*)

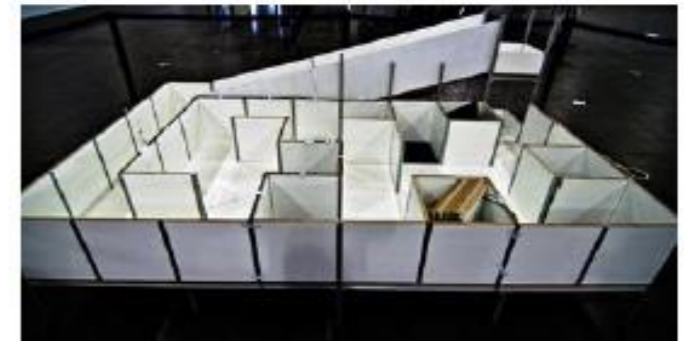
AIBO Search & Rescue

Visually guided exploration of a maze. The robot must be able to fully explore a maze and search for “victims” painted on the walls.



Skills: control architectures, navigation, computer vision

Tools: AIBO robot + libraries, URBI middleware



Expected results: Live demo of the AIBO robot performing in a previously unseen maze



Project no. 2 (*Cecconi – Loddo*)

Building a robotic arm for pick and place

Assembling of a robotic manipulator using servomotors. Definition of direct and inverse kinematics for the development of the controller. Implementation of low level joint control and high level visually guided end-effector positioning.

Skills: robot kinematics, control, computer vision

Tools: MATLAB, camera, Arduino, servomotors

Expected results: the manipulator must be able to pick and place object using visual input.

