



Politecnico di Milano
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Low cost service robotics

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About me

- 1st year Ph.D. student at Artificial Intelligence & Robotics Lab - Politecnico di Milano
- Electronic engineering master degree
- Low cost service robotics



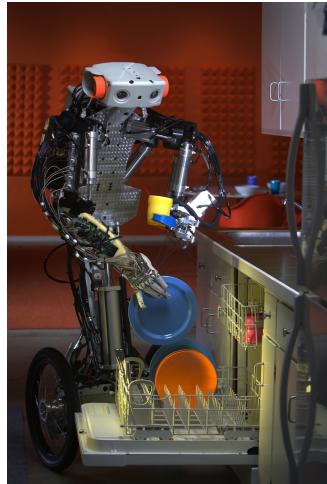
Robotics for the masses

A robot in every house

- Robotics has been expected to enter the mass market since years
- We are still waiting!

Why?

- The biggest problems are related to cost
- Hardware is expensive
- Lot of time and efforts needed to get things to work



What to do?

Our view of robots

- Distributed hardware and software systems
- Hardware and software have to cooperate to reach a goal

What do we need?

- Low-cost communication bus
- Middleware that can run on hardware ranging from 8-bit microcontroller up to full computers
- Set of ready to use smart modules
- Formal approach to define application needs

My work

What I will do

- Analyze requisites for low cost hardware & software distributed systems
- Choose a low cost communication bus and middleware
- Build some ready to use smart modules
- Have some demo working!

In a nutshell

- Open source hardware and software
- Fast prototyping
- ROS concepts applied to hardware