

Purposeful Situation Awareness

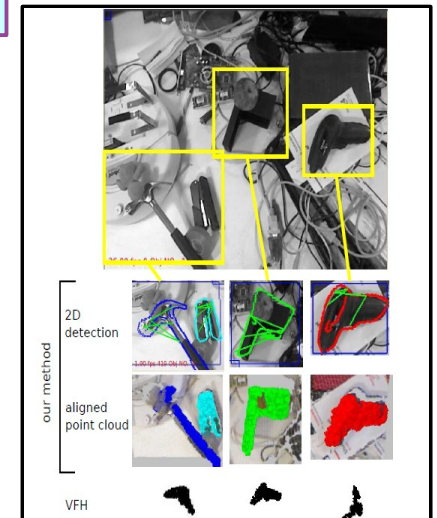
Goal

Breaking the current limits of humanoid robot performances by “cognition in action”.

Real time Vision:

- Real-time vision for object recognition
- Cluttered environment

Machine Learning
Purpose and Situation bound
Perception, Planning
and Control



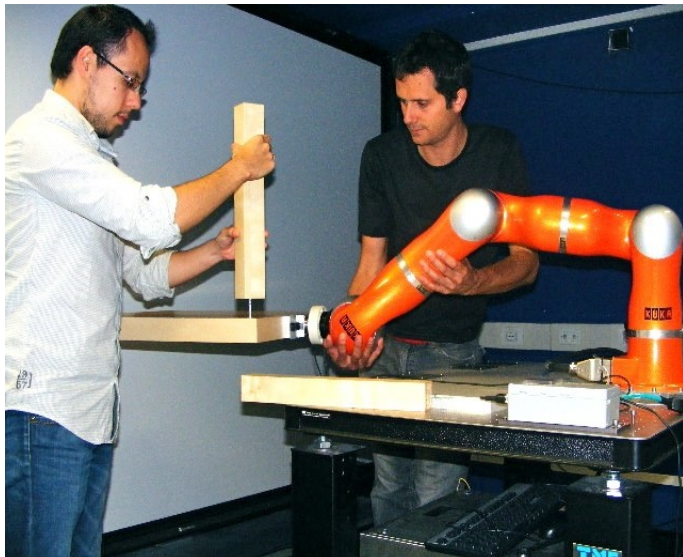
High level control:

- Walking without thinking
- Complex whole body motion

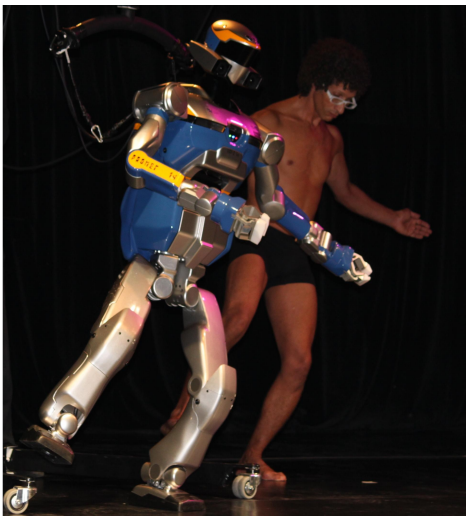
Real time planning:

- Compact representation of the geometry related to the controllers
- Learning the feasible transition

Purposeful Situation Awareness



- Project size: STREP
- Consortium:
 - CNRS LAAS
 - INRIA Rhone-Alpes
 - Bristol University
 - IIT
 - Aldebaran



- Case study:
Real assembly task
based on industrial
scenario.