SEVENTH FRAMEWORK PROGRAMME

AMARSi

Information and Communication Technologies

Unit E5
Cognitive Systems, Interaction, Robotics

EU Large Scale Integration Project (IP)

March 2010 – February 2014

10 Partners

9.2 Million Euros Budget

7 Million Euros EU-FP7-ICT funding

7 Research Packages

- Human Motor Primitives
- Compliant Systems
- Morphological Computation
- Adaptive Modules
- Learning
- Control Architectures
- Robotic Experimentation and Evaluation

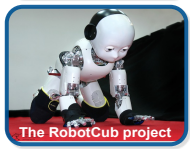
Open source outcomes

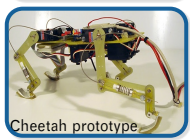
- Quadruped robot
- Complaint extension to iCub
- Software for learning architectures

Human and animal movements are still utterly astonishing when compared to robots.
The AMARSi Project aims at bridging this gap.

Research will include

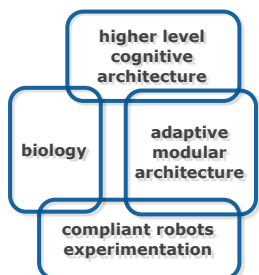
- analysis and comparison between human motor control and robotics
- development of damage-robust, safe and fast compliant mechanics
- exploitation of morphological computation
- advancing algorithms for unsupervised, reinforcement and imitation learning
- dynamical and neural models in control architectures across cognitive levels
- unified framework for locomotion and manipulation behaviour





The results will demonstrate rich motor skills on the iCub humanoid robot and on the quadruped Cheetah.

Robots will have a wider use and higher impact thanks to their more dexterous motion. The compliant and natural movements will make them blend into everyday routines, make them safe and psychologically acceptable.



http://www.amarsi-project.eu

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