Gennaro Raiola

Curriculum Vitae

Education

2015-current	*Ph.D. student in Robotics* at CEA-List ✪ <u>www</u>.
2013-2015	*Ph.D. student in Robotics* at Robotics and Computer Vision Lab - ENSTA-ParisTech ✪ <u>www</u>.
2010-2012	*Master's Degree (M.Sc) with honor in Automation and Control Engineering* given by the University of Naples "Federico II".
2006-2010	*Bachelor's Degree (B.Sc) in Computer Engineering* given by the University of Naples "Federico II".

Profession

2012-2013	*Research Engineer in Motion Control of Humanoid Robots* at PAL Robotics S.L. Barcelona ✪ <u>www</u>.

Research

Ph.D. Thesis	"Probabilistic virtual guides for co-manipulation" <u>Supervisors</u>: Prof. Freek Stulp (ENSTA-ParisTech), Dr. Xavier Lamy (CEA-List). <u>Topics</u>: Cobotics, Industrial applications, Controls, Machine Learning.
M.Sc. Thesis	"Learning Parameterized Skills through Models with Expanded Kernels" <u>Supervisors</u>: Prof. Bruno Siciliano (PRISMA lab.) and Prof. Freek Stulp (ENSTA-ParisTech). <u>Topics</u>: Motion Primitives, Machine Learning.

Technical Skills and Software projects

Technical Skills

Programming	C/C++, Python, ROS, MATLAB, php, Qt, Gazebo, Boost, RTAI, Eigen
Systems/Tools	Linux/Ubuntu, CMake, Latex, QtCreator, Eclipse, git, svn
Hardware	Arduino

Software projects

Software "virtual-fixtures" ⌂ ⊙
Libraries of virtual guides for co-manipulation.

Software "m3ros-control" ⌂
C++ bridge to integrate the control layer of the Meka robot into a ROS environment.

Software "DmpBbo" ⌂ ⊙ ⊙
C++ framework for motion primitives and black-box optimization.

Software "Stack-of-Task" ⌂ ⊙
Integration of the stack of tasks inverse kinematics solver on the Reem-H and Reem-C robots at PAL Robotics.

Publications

2015 Gennaro Raiola, Xavier Lamy, and Freek Stulp.
"Co-manipulation with Multiple Probabilistic Virtual Guides".
In *International Conference on Intelligent Robots and Systems (IROS)*.

2015 Gennaro Raiola, Pedro Rodriguez-Ayerbe, Xavier Lamy, Sami Tliba, and Freek Stulp.
"Parallel Guiding Virtual Fixtures: Control and Stability".
In *IEEE Multi-Conference on Systems and Control (MSC)*.

2014 Freek Stulp, Laura Herlant, Antoine Hoarau, and Gennaro Raiola.
"Simultaneous On-line Discovery and Improvement of Robotic Skill Options".
In *International Conference on Intelligent Robots and Systems (IROS)*.

2013 Freek Stulp, Gennaro Raiola, Antoine Hoarau, Serena Ivaldi, and Olivier Sigaud.
"Compact Parameterized Skills with a Single Regression".
In *IEEE-RAS International Conference on Humanoid Robots*.

Service

Reviewer for international conferences:
- IEEE-RAS International Conference on Humanoid Robots.
- IEEE Multi-Conference on Systems and Control (MSC).
- IEEE International Conference on Robotics and Automation (ICRA).
- International Conference on Intelligent Robots and Systems (IROS).

Languages

italian native proficiency

english professional working proficiency

french limited working proficiency