



Gennaro Raiola

Curriculum Vitae

Education

- 2016-current *Ph.D. student in Robotics*
at CEA-List (French Alternative Energies and Atomic Energy Commission)
🌐 [www](#).
- 2014-2015 *Ph.D. student in Robotics*
at Robotics and Computer Vision Lab - ENSTA-ParisTech 🌐 [www](#).
- 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 🌐 [www](#).

Research

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

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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"  
Library of virtual guides for co-manipulation.
- Software "mekabot" 
Meka robot packages.
- 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". 
In *International Conference on Intelligent Robots and Systems (IROS)*.
- 2013 Freek Stulp, Gennaro Raiola, Antoine Hoarau, Serena Ivaldi, and Olivier Sigaud.
"Learning 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