

# Curriculum Vitae

## Personal Information

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Date of Birth	Jan 22, 1986
Nationality	Italian

## Publications

- P. Stegagno, M. Cognetti, G. Oriolo, H. H. Bühlhoff, A. Franchi. *Ground and aerial mutual localization using anonymous relative-bearing measurements*. [IEEE Transactions on Robotics](#), vol. 32, no. 5, 2016
- J. King, M. Cognetti, S. Srinivasa. *Rearrangement planning using object-centric and robot-centric action spaces*. [2016 IEEE Int. Conf. on Robotics and Automation](#), Stockholm, Sweden, May 2016
- M. Cognetti, D. De Simone, L. Lanari, G. Oriolo. *Real-Time Planning and Execution of Evasive Motions for a Humanoid Robot*. [2016 IEEE Int. Conf. on Robotics and Automation](#), Stockholm, Sweden, May 2016
- M. Cognetti, V. Fioretti, G. Oriolo. *Whole-body Planning for Humanoids along Deformable Tasks*. [2016 IEEE Int. Conf. on Robotics and Automation](#), Stockholm, Sweden, May 2016
- M. Cognetti, P. Mohammadi, G. Oriolo. *Whole-Body Motion Planning for Humanoids based on CoM Movement Primitives*. [15th IEEE-RAS Int. Conf. on Humanoid Robots](#), Seoul, Korea, Nov. 2015
- L. Rosa, M. Cognetti, A. Nicastrò, P. Alvarez, G. Oriolo. *Multi-task Cooperative Control in a Heterogeneous Ground-Air Robot Group*. [3rd IFAC Workshop on Multivehicle Systems](#), Genova, Italy, May 2015
- M. Cognetti, P. Mohammadi, G. Oriolo, M. Vendittelli. *Task-Oriented Whole-Body Planning for Humanoids based on Hybrid Motion Generation*. [2014 IEEE/RSJ Int. Conf. on Intelligent Robots & Systems](#), Chicago, Illinois, USA, Sep. 2014
- M. Cognetti, G. Oriolo, P. Peliti, L. Rosa, P. Stegagno. *Cooperative Control of a Heterogeneous Multi-Robot System based on Relative Localization*. [2014 IEEE/RSJ Int. Conf. on Intelligent Robots & Systems](#), Chicago, Illinois, USA, Sep. 2014
- P. Stegagno, M. Cognetti, L. Rosa, P. Peliti, G. Oriolo. *Relative Localization and Identification in a Heterogeneous Multi-Robot System*. [2013 IEEE Int. Conf. on Robotics and Automation](#), Karlsruhe, Germany, May 2013
- M. Cognetti, P. Stegagno, A. Franchi, G. Oriolo. *Two Measurement Scenarios for Anonymous Mutual Localization in Multi-UAV Systems*. [2nd IFAC Workshop on Multivehicle Systems](#), Espoo, Finland, Oct. 2012
- M. Cognetti, P. Stegagno, A. Franchi, G. Oriolo, H. H. Bühlhoff. *3-D Mutual Localization with Anonymous Bearing Measurements*. [2012 IEEE Int. Conf. on Robotics and Automation](#), St. Paul, MN, May 2012
- P. Stegagno, M. Cognetti, A. Franchi, G. Oriolo. *Mutual localization using anonymous bearing measurements*. [2011 IEEE/RSJ Int. Conf. on Intelligent Robots and Systems](#), San Francisco, CA, Sept. 2011

## Current Position

- 2016-Now **Postdoctoral researcher** at the Dipartimento di Ingegneria Informatica, Automatica e Gestionale, Sapienza University of Rome  
**Research topics:** motion planning, humanoid robots, identification and control of multi(aerial and mobile)-robot systems, robotic programming and simulation
- 2012-2016 **Ph.D. student** at the Dipartimento di Ingegneria Informatica, Automatica e Gestionale, Sapienza University of Rome  
**Research topics:** motion planning, humanoid robots, identification and control of multi(aerial and mobile)-robot systems, robotic programming and simulation

## Education

- 2008-2011 **M.Sc. in Control Engineering**, Sapienza University of Rome – final grading 110/110 cum laude  
**Topics:** non-linear system theory, non-linear control laws, optimization, robotics, neural fuzzy control laws  
**Relevant projects:**
- 2D/3D Mutual Localization with Anonymous Bearing Measurements
  - Robotics (PID and BackStepping for a UAV quadrotor in Matlab/Simulink and Gazebo/Player)
  - Computer vision (3D reconstruction from n-views) in Matlab

- Thesis** *Mutual localization in 3-D environment with application to a quadrotor team* - advisor **Prof. G. Oriolo**  
**Topics:**
- multi-sensor data fusion techniques, particularly particle filters
  - development of tasks (C++) into the *MIP* framework
  - validation into a multi-robot simulation environment: SwarmSimX provided by the Max Planck Institute in Tübingen

**School:** Sapienza - University of Rome in collaboration with Max Planck Institute for Biological Cybernetics in Tübingen (Germany)

- 2005-2008 **B.Sc. in Ingegneria Automatica e dei Sistemi di Automazione** – Sapienza University of Rome – final grading 110/110 cum laude

- Thesis** *Motion planning for redundant robot with assigned end-effector path* - advisor **Prof. G. Oriolo**  
**School:** Sapienza - University of Rome

## Abroad experiences

- 2015 **Visiting scholar – Robotics Institute at Carnegie Mellon University**  
supervisor: **Prof. Siddhartha Srinivasa**  
**Research topic:** rearrangement planning
- pushing model using physics integrators
  - object-centric and robot-centric action spaces
  - state-space reduction

- 2011 **Hosting university:** Robotics Institute at Carnegie Mellon University  
**Visiting scholar** – Max Planck Institute for Biological Cybernetics

2010

**Relevant projects:**

- mutual localization for aerial vehicles
- particle filters

**Hosting university:** Max Planck Institute for Biological Cybernetics – Tübingen (Germany)

**Erasmus experience**

**Relevant projects:**

- artificial intelligence algorithms
- fuzzy logic theory
- fuzzy control on a non-linear inverse pendulum
- fuzzy-based agents in WildLife
- cellular automata in Golly

**Hosting university:** University of Örebro (Sweden) - Faculty of Engineering

**Language skills**

Mother tongue

Other language

*Self-assessment  
European level<sup>(\*)</sup>*

**English**

**Italian**

**English**

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
B2 Independent user	B2 Independent user	B2 Independent user	B2 Independent user	B2 Independent user

<sup>(\*)</sup> Common European Framework of Reference (CEF) level

**Technical skills**

- **Programming languages (selected):**  
C/C++, Java, Html, Php, JavaScript, bash scripting, Python
- **Software (selected):**  
OpenCV, OrocOSBFL, Armadillo, Eigen, Boost, ROS, Matlab/Simulink
- **Multi-robot simulation environments:**  
Player/Stage/Gazebo, V-REP, OpenRAVE
- **Photo/Video editing:** Adobe Premiere, Adobe Photoshop, Adobe Illustrator
- **Creation of pdf documents:** L<sup>A</sup>T<sub>E</sub>X

**Social skills**

- strong attitude in teamwork and great commitment
- maintain enthusiasm and “can-do” attitude under pressure
- set challenging personal goals and standards
- ability to openly communicate with colleagues and professors creating sympathetic relationships
- working with curiosity and passion to investigate research topics

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