

GIULIO CERRUTI

Robot1c\$ 3ng1neer, PhD

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WORK EXPERIENCE

Lead Research Robotics Engineer

[Dyson](#)

📅 JAN 2019 – ONGOING

📍 Malmesbury (UK)

Control and SW Robotics Engineer @ Robotics Research Team

[*Main activities*]

- Designing advanced control algorithms for advanced multi-body robotics platforms
- Implementing and testing control strategies both on numerical simulator and physical platforms
- Providing design requirements impacting control performance to designers for platform improvements
- Identifying best control strategies to meet functional requirements
- Cooperating in the design of a comprehensive and cross-platform control framework

Senior Mechatronics Engineer

[Italian Institute of Technology \(IIT\)](#)

📅 JULY 2017 – DEC 2018

📍 Genova (IT)

Project management, team coordination, design and development of upper and lower limb exoskeletons @ [Rehab technologies](#)

[*Main activities*]

- Ensure technological and technical advancement of both projects according to clinical requirements
- Implement daily coordination to support multidisciplinary teams in the product development, by defining priorities, tracking progress and boosting communication and teamwork
- Challenge concepts in order to achieve the optimum design within the boundaries of time, specification and cost, maintain and manage the risks
- Contribute to technical developments as a mechatronics/control engineer in the design of both robotics platforms
- Coordinate and communicate project status within the organisations to ensure effective and timely input

[*Main achievements*]

- Simultaneous management of multiple projects
- Reorganized daily coordination. shaped in function of each team expertise (mechanical, electronic and software)
- Effective link between software and hardware development thanks to my mechatronics experience

Research Robotics Engineer

[SoftBank Robotics Europe](#)

📅 JANUARY 2014 – JUNE 2017

📍 Nantes (FR)

Design and development of advanced robotic platforms (i.e. robotics hand and biped)

[*Main activities*]

- Implementation of high level control algorithms and GUI (C++, Python, Qt)
- Low level control of brushless DC motors: FOC, position, velocity and force control, impedance control (C)

[*Main achievements*]

- Delivered a 5-fingered robotics hand respecting functional and technical requirements before the expected deadline
- Defined key technical specifications for designing complex robotics platforms
- Implemented an optimal (QP-based) and context-dependent control framework for an agile biped robot able to walk and jump

Master Thesis Internship

Shanghai Jiao Tong University

📅 MARCH 2013 – AUGUST 2013

📍 Shanghai (CHN)

Development of a real-time software framework and motion planning strategy for a quadruped robot

[*Main achievements*]

- Autonomously identified project requirements
- Established constructive communication with lab members despite language and cultural differences

EDUCATION

PHD

Robotics Eng.

📅 2014 – 2016

LS2N - ECN

Design and control of an anthropomorphic and dexterous **robotic hand** for a humanoid robot. Project conducted in collaboration with SoftBank Robotics Europe

SUPPLEMENTARY DEGREE

High education in ICT

📅 2008 – 2013

ISICT

MASTER DEGREE

Robotics Eng.

📅 2011 – 2013

EMARO

- Double degree: Italian 110/110, French "Très bien"
- Got Erasmus Mundus Grants
- One year @ **Università degli studi di Genova (UNIGE)**
- One semester @ **Ecole Centrale de Nantes (ECN)**
- One semester @ **Shanghai Jiao Tong University**

BACHELOR DEGREE

Computer Science Eng.

📅 2008 – 2011

UNIGE

110/110 with honours

PATENTS & PUBLICATIONS

- 2020 *Gait Patterns Generation Based on Basis Functions Interpolation for the TWIN Lower-Limb Exoskeleton*
📍 ICRA 2020
- 2016 *Main destinée à équiper un robot à caractère humanoïde*
📍 Espacenet
- 2016 *ALPHA: A hybrid self-adaptable hand for a social humanoid robot*
📍 IROS 2016
- 2016 *A Motion Planning Architecture for Conveyance Tasks with a Quadruped Robot*
📍 IAS14
- 2015 *Design method for an anthropomorphic hand able to gesture and grasp*
📍 ICRA 2015

SOFTWARE SKILLS

LANGUAGES	C, C++, Python
TOOLS	MATLAB, Simulink, Git, Docker
OS	Ubuntu, Windows

COMMUNICATION SKILLS

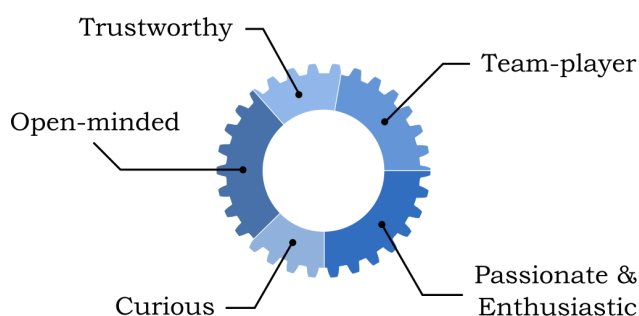
ITALIAN: NATIVE SPEAKER

FRENCH: BULAT C2

ENGLISH: TOEFL: 101/120



STRENGTHS



OTHER

CERTIFICATES
& LICENCES

Maritime Driving Licence,
First aid on board of ships,
Survival techniques, Basic
and Advanced Fire Fighting,
Lifeguard Licence

HOBBIES

Kitesurf, Cooking