



Manuela Uliano

ABOUT ME

Motivated engineer with experience in **integration of robotic devices in ROS**. Working on **control of collaborative manipulators and anthropomorphic grippers** to automatize industrial manipulation of deformable objects. Experience in the **definition and development of teleoperation systems**. Strong supporter of communication and interpersonal relationships. Reliable in autonomous work but believing that innovative ideas come from teamworking. Always thrilled to learn new things and think critically.

WORK EXPERIENCE

[04/2021 – Current] **Research Fellowship**

The BioRobotics Institute, SSSA - Human-Robot-Interaction Laboratory

City: Pisa

Country: Italy

Main activities and responsibilities:

Research topic: Multipurpose robotics for manipulation of deformable materials in manufacturing processes (APRIL 2020 EU project).

- Development of a high-level Grasp Library for the grasp choice of flexible and delicate objects in industrial contexts.
- Development of the Grasp Library dictionary, that allows the translation of the high-level information coming from the Grasp Library into the low-level information for the motion planning purpose.
- Development of a dual-arm teleoperated platform, that includes a self-collision avoidance algorithm (tutoring of a MSc student).

Collaboration: Shared research activities with national and international partners, both in industry and academia (DFKI, Prensilia s.r.l.).

[11/2017 – 02/2018] **Traineeship**

Politecnico di Torino - Laboratory for Engineering of the Neuromuscular System (LISiN)

City: Turin

Country: Italy

Main activities and responsibilities:

Development, characterization and testing of a programmable impedance meter used in conjunction with a generator of lesions at the level of the afferent nerves for the treatment of chronic pain.

EDUCATION AND TRAINING

[03/2018 – 03/2021] **MSc Biomedical Engineering**

Politecnico di Torino

Address: Turin, Italy

Final grade: 110/110 cum laude

Thesis: Development of a teleoperated hand-arm robotic platform for the evaluation of shared autonomy algorithms.

Main subject / occupational skills covered:

- Definition of components and requirements of the single-arm teleoperated platform.
- Integration of robotic devices in ROS and software development of different teleoperation strategies for the hand and the arm.
- Experimental protocol definition and execution for the evaluation of performances of the system in terms of precision, accuracy, delay and drift.

[09/2014 – 03/2018] **BSc Biomedical Engineering**

Politecnico di Torino

Address: Turin, Italy

Final grade: 103/110

Thesis: Development, characterization and testing of a programmable impedance meter.

HSD

Scientific high school “A. Romita”

Address: 86100, Campobasso, Italy

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

DIGITAL SKILLS

My Digital Skills

Programming

C/C++ | MATLAB | Python | LabVIEW

OS & frameworks

Linux | ROS | Microsoft Windows | Microsoft Visual Studio

Software & Tools

Mimics | SimVascular | Rhinoceros 3D | LaTeX | Inkscape | Microsoft Office | Git Hub | MSC Nastran | VMTK | Patran

CONFERENCES AND SEMINARS

[07/03/2022 – 10/03/2022] **ACM/IEEE International Conference on Human-Robot Interaction** Online
(Originally Sapporo, Hokkaido, Japan)

Uliano, M., Mazzeo, A., Penzotti, M., Cini, F., Controzzi, M.; Modelling human behaviour in a Grasp Library for robotic applications: ongoing activities, Workshop on Modeling Human Behavior in Human-Robot Interactions at ACM/IEEE HRI 2022 (oral presentation)