

# Ludovica Viola

## BIOMEDICAL ENGINEERING

### CONTACTS



### ABOUT ME

Highly motivated and curious biomedical engineering student with a strong passion for innovation and healthcare.

I am currently doing my Phd at the University of Genoa

### LANGUAGES

Italian - Native  
English -  
Fluent French -  
Base Spanish -  
Base

### COMPUTER SKILLS

**Programming** languages: C++, Matlab, Simulink, Python, Arduino

**Software:** Microsoft Office, Imagej

### SOFT SKILLS

Teamwork, problema solving, leadership

### EXPERIENCES

#### Private tutor

Private Tutor of Math, Physics, Chemistry and English Collaboration with the Norwegian University of Science and Technology

#### Publication

*"Design of a system to detect the force applied by tourniquets in a manikin's limb"* Viola, L.; Lagazzi, E.; Ballardini, G.; Drogo, A.; Bonetti, M.; Marrone, E.; Chirico, M.; Ricci, S.

### PROJECTS

**Analysis of Biomedical signal** : use sensor information to predict what the subject is doing (standing, walking, sitting, lying down), and how this activity evolves over time.

**Neurosensory Engineering:** Cochlear implant Simulator and retinal prosthetics Simulators

**Rehabilitation Engineering:** Postural control analysis from Hunova platform and Gait Analysis and pose estimation  
**Biomedical Imaging:** Rigid co-registration of two MRI volumes based on fiducial points and Filtered Bank-Project Algorithm

**Bioengineering of Human Movement:** Motion capture using IMU sensor, Multi-channel Electromyography during functional task and Sensorimotor Adaptation

**Biomedical Robotics:** Forward and Inverse Kinematics in Matlab and Design of a reaching task and of a controller for a planar manipulator using different force fields with Phantom.

### EDUCATION

#### Imperial College London

Experimental thesis  
April - October 2023



#### University of Genoa

Master in Bioengineering -  
Rehabilitation Engineering and  
Interaction Technology  
2021 - 2023

Bachelor in Biomedical Engineering  
2017 - 2021



UNIVERSITÀ DEGLI STUDI  
DI GENOVA