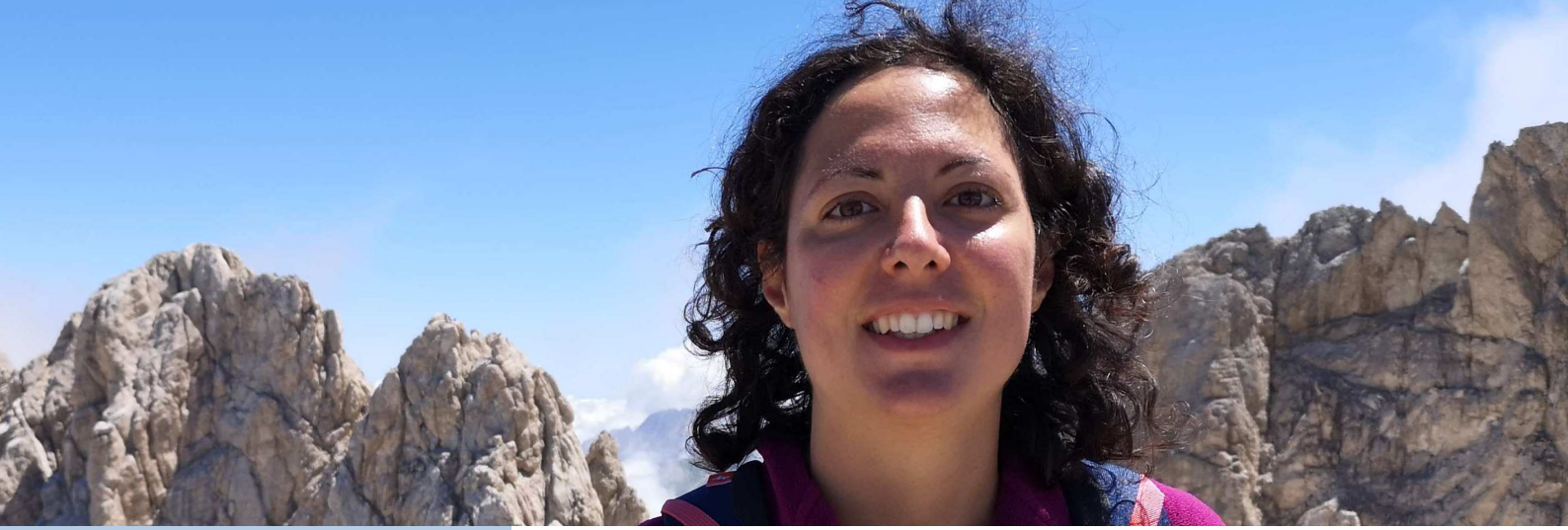

# FRANCESCA LEONE

## BIOMEDICAL ENGINEER

## SKILLS

### PERSONAL SKILLS

Critical thinking
Time management
Teamwork
Enthusiasm

### LANGUAGE SKILLS

Strong proficiency in English, and Italian.

### PROGRAMMING SKILLS

Matlab, Simulink, Labview, C, C++, Java, Python, NumPy and Pandas, Sklearn, R, Neuron, Freesurfer, FSL, CST.

### OTHER SKILLS

- Tennis player, FIT score 4.2.
- Voluntary member at BNL International Tennis Tournament
- Driving License B

## FEATURED PUBBLICATIONS

- A Parallel classification strategy for multi-DoF upper-limb prosthesis. (Submitted to JNER, 2021)
- Control strategies and performance assessment of upper-limb TMR prostheses: A review. (Sensors 2021, Special Issue: Biosensors)
- Simultaneous sEMG classification of wrist/hand gestures and forces. (Frontiers in Neurorobotics 2019)
- Classifcazione sEMG simultanea di movimenti di mano/polso e delle forze, Convegno Nazionale CINI sull'Intelligenza Articiale, Ital-IA 2019.

## ABOUT ME

I am a Bioengineer with experience in machine learning algorithms for intuitive and fluid control of multiple degrees of freedom upper-limb prosthesis. I have experience in research and multidisciplinary projects.

## WORK EXPERIENCES

RESEARCH SCIENTIST AT CREO LAB

CREO Lab, University Campus Bio-Medico of Rome | Nov 2020 - Jun 2021

- Developed a hand/wrist gestures and force classification system.
- Developed a classification system for the simultaneous control of 3 Degrees of Freedom related to different prosthetic modules (e.g., elbow, wrist, and hand).
- Study of the integration of Pattern Recognition algorithms with the Transcutaneous Electrical Nervous Stimulation (TENS) technique for the closed-loop prosthetic control.

## TALKS AND ATTENDED COURSES

- **Worked at the following European Projects:** WiFi Myo-Hand, ReGiveMeFive, European Union's Horizon 2020, Soma, PCR1-2, PPRAS 1-3. (2017-2021)
- **As a speaker participated in the Neuroscience workshop** at the University of Tübingen University Research Center, organized by Prof. Dr. Ulf Ziemann and Dr. Christoph Zrenner. (June 2017)
- **Attended courses:** Organization and Management Complements SIC at the Pediatric Hospital Bambino Gesù (2016), Certified Associate in Project Management Training Course (2018), XXXVIII National School of the GNB (Bressanone, 2019)

## EDUCATION

**PhD in Science and Engineering for Humans and the Enviroment**

University Campus Bio-Medico of Rome | Nov 2017 - July 2021

- Research Fields: Machine Learning, prosthetic control, multi-DoFs PR algorithms for upper-limb amputees.
- Areas of Application: Advanced prosthetic control systems.

**MSc, Biomedical Engineering**

University of Roma Tre | Oct 2014 - March 2017

- Grade: 110/110, with honors
- Thesis title: Analysis of the dependence of the eigenvector centrality values from the cortical parcellation of the superior frontal lobe: a study of brain connectivity in resting-state in pediatric subjects.

**BSc, Electronic Engineering**

University of Roma Tre | Oct 2011 - Oct 2014

- Grade: 108/110
- Thesis title: Study of protein contamination during depositions for microcontact printing by use of chemometric techniques.