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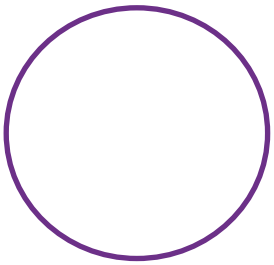

Beatrice Lagomarsino

Nationality: **Date of birth:** 10/04/1998 **Gender:**

Email address:

Work:

WORK EXPERIENCE

PhD Student

[11/2022 – Current]

City: University of Genoa | **Country:** Italy

Curriculum: Robotics and intelligent machines.
Collaboration with Movendo Technology srl, Genoa, Italy
Study area: rehabilitation, computer vision

Teaching assistant

[10/2023 – 12/2023]

City: University of Genoa | **Country:** Italy

Class: Rehabilitation engineering and prosthetic devices, Master's Degree in Bioengineering

EDUCATION AND TRAINING

Master's Degree in Bioengineering

University of Genoa [09/2020 – 10/2022]

Country: Italy | **Final grade:** 110/110 cum laude | **Thesis:** Adaptive response of muscle activity in exoskeleton-assisted locomotion (in collaboration with Unipolar Spinal Unit of the Santa Corona Hospital, Pietra Ligure, Savona, Italy)

Bachelor's Degree in Biomedical Engineering

University of Genoa [09/2017 – 09/2020]

Country: Italy | **Final grade:** 93/110 | **Thesis:** Analysis of data of motor rehabilitation through exergames for musculoskeletal disorders. Processing of data from rehabilitation activities through serious- games. Algorithms for the evaluation of patient performance through the definition and classification of indicators of movement

Diploma from classical high school

High School Giovanni da Vigo [2012 – 2017]

Country: Italy

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

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

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

MATLAB / Python / ARDUINO IDE / LaTeX / C++

CONFERENCES AND SEMINARS

[10/2023] Rome, Italy

5th Italian Conference on Robotics and Intelligent Machines Poster presented 'Technology-assisted Continuum of Care: from Hospital to Home'

[06/2023] Brissago Switzerland

Towards a Continuum of Robot-assisted Therapy Summer School Plenary lectures by experts in the field of assistive technology and neurorehabilitation
Case studies, and discussion with patients and therapists
Poster presented *'Adaptive response of muscle activity to exoskeleton-assisted walking'*

[06/2023] Genoa, Italy

Deep Learning and Computer Vision School (DLCV) Poster presented, *'Advanced computer-vision techniques in body machine interfaces for rehabilitation and assistance of people with neurological diseases'*

[07/2022] Genoa, Italy

8th International Summer School of Neuroengineering

PROJECTS

[03/2024 – Current]

The Role of Depth for Human Motion Assessment with a Single RGB-D Camera: Preliminary Findings The study analyses the accuracy and precision of single-camera markerless motion capture technology for telerehabilitation compared to a gold-standard marker-based system. This research identifies the strengths and limitations of camera-based motion analysis, furthering the advancement of telerehabilitation for neurological disorders.

[01/2024 – Current]

Markerless Assessment of Bilateral Upper Limb Neuromotor Deficits Following Cervical Spinal Cord Injury Th e study introduces a markerless method based on different pose estimation algorithms to comprehensively assess bilateral upper limb neuromotor abilities post-cSCI. This investigation establishes the foundation for examining the suitability, repeatability and the capacity to highlight different motor patterns through video analysis. The proposed markerless assessment presents a promising solution for clinicians to evaluate and monitor neuromotor deficits in cervical spinal cord injury rehabilitation.

[10/2022 – Current]

Adaptive response of muscle activity to exoskeleton-assisted walking This work aims to understand whether prolonged exposure to maximum assistance from the exoskeleton induces adaptive changes in muscle activity and how muscle patterns differ between exoskeleton-assisted and unassisted walking. The results proved to be important for optimising the regulation of assistance in exoskeleton-assisted walking, in terms of levels and timing of assistance changes, to improve rehabilitation outcomes.

EXTRACURRICULAR ACTIVITY

[11/2023]

HACKATHON RODEO Competition

The project aims to strengthen the focus on road safety education in young people and to promote skills, active citizenship and ethics in the fields of road safety and road education.

Olimpiadi di Robotica Competition

It is a national competition organized by the Italian Institute of Technology (IIT) and the Ministry of Education, University, and Research (MIUR). It targets high school students across Italy, aiming to foster interest in robotics and STEM (Science, Technology, Engineering, and Mathematics) disciplines. During the competition, students engage in various challenges that require designing, building, and programming robots to perform specific tasks.