



# Nicoletta Sileoni

## EDUCATION

University of Pisa, Italy

2020-2023

Master Degree, Biomedical Engineering - Curriculum Biomedical technologies

Thesis Title: Valutazioni combinate tramite gait analysis e medical imaging della biomeccanica del ginocchio su pazienti operati con osteotomia valgizzante di tibia: risultati di un nuovo dispositivo custom. Thesis supervisors: Giovanni Vozzi, Alberto Leardini, Claudio Belvedere

University of Pisa, Italy

2016-2020

Bachelor Degree, Biomedical Engineering-Curriculum -Curriculum Industriale

Thesis Title: Studio cinematico dei vari pattern di spinta su sedia a rotelle. Thesis supervisor: Alessio Artoni

Maturità scientifica

2015

Liceo Classico Giacomo Leopardi, Recanati

## SKILLS

Matlab

Software CAD CAE CAM  
FEM (Solidworks, Auto-  
CAD, Ansys)

COMSOL Multiphysics

Autodesk Fusion360

Fritzing e EagleCAD

Software di slicing (Cura  
Slic3r Ultimaker, Mesh-  
lab)

OpenSim

Teaching

## LANGUAGES

Italiano: Madrelingua

Inglese: B2

## WORK EXPERIENCE

Internship

Dec 2022-July 2023

IRCCS Istituto Ortopedico Rizzoli , Bologna (Italy)

Gait Analysis data processing, review of results statistical analysis using various statistical tools, Matlab e Statistical Parametric mapping.

## ACADEMIC PROJECTS

Design of a piezoelectric transducer for acoustic heart-  
beat control, heart rate monitor and pulse oximeter  
Tool: EagleCAD, Fritzing, Arduino

2021

The device provides acoustic monitoring of the heart rate and an assessment of the level of oxygenation of the blood. Its small size makes it wearable, allowing monitoring during sporting activity.

Rehabilitation bike

Tool: Fusion360, Arduino

2022

Risk analysis, reference regulations and standards applied. Design and machining techniques for structural components, tables and checks, creation of moulds for injection moulding and milling with Fusion360 software, electronic prototyping with Arduino.

## CERTIFICATIONS

"Industry 4.0 learning path" certification

2023

20/09/2023