GIORGIA SPREAFICO

I am a biomedical engineer, presently enrolled in a PhD program in Biorobotics at Scuola Superiore Sant'Anna. My primary research involves the electro-mechanical design and development of **capacitive sensor systems**, which I apply in two distinct research areas: (i) as part of the European Project (ODIN), I utilize these sensors as **proximity sensors** in *collaborative robotics* to automatize hospital processes which can benefit from automations (ii) in my role as a third-party industrial project member (commissioned by MEDICA S.P.A), I embed these sensors onto *endoluminal devices* as **pressure sensors** for advanced diagnostic purposes.

PERSONAL

Name
Giorgia Spreafico

Driving licence
B

LANGUAGES

Italian ★★★★★

English ★★★★

INTERESTS

- Hiking
- Running
- Sailing
- Travelling

EDUCATION AND QUALIFICATIONS

Oct 2021 - Present
PHD Biorobotics
Biorobotics Institute of Scuola Superiore Sant'Anna, Pisa

Sep 2017 - Feb 2020
Master Degree in Biomedical Engineering
Università di Pisa, Pisa
Final Mark 110/110 cum laude

Sep 2014 - Apr 2017
Bachelor Degree in Biomedical Engineering
Università di Pisa, Pisa

WORK EXPERIENCE

Oct 2021 - Present
Industrial PHD
MEDICA SPA, Pontedera PI

Jun 2020 - Sep 2021
Graduate Research Fellow
Biorobotics Institute of Scuola Superiore Sant'Anna, Pisa

Main responsibilities and activities:
- Design and development of innovative sensing systems
- Electronic design and development of complex PCB (both rigid and flexible). Selection and integration of off-the shelf electric components.
- Practical use of laboratory equipment such as oscilloscopes, signal generators, power supplies
- Development of real time applications using Labview for sensors signal acquisition and processing, measurement analysis and data visualization.
- Development of testing setup and protocols.
- Mechanical design of components by means of CAD tools (Solidworks).

Feb 2020 - Jun 2020
Engineering consultancy work
OXEQUA srls, Lucca

Design of mechanical components for orthodontic devices by means of CAD tools (SOLIDWORKS)

SKILLS

Object oriented programming (Python, C/C++) ★★★☆☆

Graphical programming (Labview) ★★★★☆

- Functional programming (Haskell) ★★☆☆☆
- 3D CAD design (Solidworks) ★★★☆☆
- ECAD PCD design (Easyeda, Eagle) ★★★★☆
- Firmware development (ST Microelectronics) ★★★☆☆
- FEM analisys (COMSOL Multiphysics) ★★☆☆☆
- ROS ★☆☆☆☆

CERTIFICATES

2023 **ISIPM base**

Istituto Italiano di Project Management

2019 **English Academic Certification IELTS (British Council) C1**

IELTS English for International Opportunity

2018 **LABVIEW ASSOCIATE DEVELOPER (CLAD)**

ASSOCIATE DEVELOPER

PATENTS

DIAGNOSTIC DEVICE AND SYSTEM AND METHOD FOR THE PRODUCTION THEREOF

(WO2022172220A1)