Niccolò Pagliarani,

Date of birth: 05/11/1997 | **Nationality:** Italian | **Gender** Male | (+39) 3469465954 |
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PhD student in Biorobotics, The Biorobotics Institute, SSSA

INTERNSHIPs

01/04/2019 – 31/05/2019 – Cesena, Italy

BSC THESIS-INTERN – HOSPITAL M. BUFALINI

- study of the state of the art both from the technological point of view and the clinical applications of implantable devices (pacemakers and defibrillators) and cardiac mapping systems; understanding the role of the bioengineer and the dynamics in hospital;
- assistance in electrophysiology rooms during implants and ablation procedures for a total of 75 hours;
- export biomedical data (EGM) from the Navx Ensite precision mapping system for subsequent processing in MATLAB

01/10/2020 – 31/01/2021 – Pontedera, Italy

LAB TRAINING– THE BIOROBOTICS INSTITUTE, SCUOLA SUPERIORE SANT'ANNA

Surgical robotics and Allied technology Laboratory

"Fabrication and characterization of silicon-based thermochromic tissue mimicking phantoms for Focused Ultrasound Surgery".
Silicone Lab, CAD, LabView and MATLAB, testing with non invasive robotic platform HIFUSK, based on the LBR Med KUKA robot and winner of the KUKA Innovation Awards 2020.
Supervisors: prof.ssa Arianna Menciassi, Laura Morchi.

My work contributes to a **conference paper submitted on 3rd May (EMBC2021) with other authors**:
" A Reusable Thermochromic Phantom for Testing High Intensity Focused Ultrasound Technologies"
(More details on PUBLICATIONS).

08/02/2021 – CURRENT – Pontedera, Italy

MSC THESIS-RESEARCH INTERN – THE BIOROBOTICS INSTITUTE, SCUOLA SUPERIORE SANT'ANNA

Soft Robotics Area-Soft Mechatronics for Biorobotics Laboratory

Master thesis internship: "Studying low melting point alloys for developing a variable stiffness mechanism embedded in a soft manipulator for minimally invasive surgery".
Supervisors: prof.ssa Cecilia Laschi**,** prof. Matteo Cianchetti, Luca Arleo

EDUCATION

2011-2016

HIGH SCIENTIFIC SCHOOL DIPLOMA– Liceo A. Einstein, Rimini, Italy

100/100

Class representative, PET certification, participation in the Olympics in mathematics and natural sciences, course in preparation for the admission to scientific courses, enhanced Latin course, summer schools and conferences.

01/10/2016 – 20/07/2019

BIOMEDICAL ENGINEERING – Università di Bologna, Cesena Campus, Italy

GPA: 29.61/30, 110 cum laude
Experimental thesis in clinical engineering in collaboration with Hospital M. Bufalini and Abbott :
"New high resolution mapping catheters for the study of atrial fibrillation"

In particular, the work presents the rotor theory which holds that atrial fibrillation has a maintenance mechanism based on spiral-shaped activation patterns. Since rotors can be defined as phase singularities that satisfy an appropriate temporal persistence, an electroanatomical data analysis system (already used in the previous case studies) was used in MATLAB environment for the generation of phase maps and identification of phase singularities. In particular, the electrical activity of a patient suffering from persistent AF and subjected to catheter ablation was studied in two acquisition segments.

Supervisors: prof.ssa Cristiana Corsi**,** Dott. Paolo Sabbatani

01/10/2019 – 08/10/2021

BIONICS ENGINEERING – Università di Pisa and Scuola Superiore Sant'Anna, Pisa, Italy

GPA: 29.74/30, 110 cum laude

Soft Mechatronics for Biorobotics Laboratory

Experimental thesis in soft robotics field: Variable stiffness mechanism based on low meltin point alloys in a soft manipulator for minimally invasive surgery

Supervisors: prof.ssa Cecilia Laschi, prof. Matteo Cianchetti

01/10/2021 – ongoing

PhD in Biorobotics –Scuola Superiore Sant'Anna, The Biorobotics Institute, Pisa, Italy

Soft Mechatronics for Biorobotics Laboratory

currently involved in the EU-funded project SoftGrip, whose goal is the development of a self-actuating soft robotic gripper for the autonomous picking of delicate objects

Supervisors: prof. Matteo Cianchetti

LANGUAGE SKILLS

Mother tongue(s): ITALIAN

Other language(s): ENGLISH

IELTS certificate

(overall band 7.0)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1 (7)	C2 (8)	C1(7)	C1(7)	C1 (6.5)

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

DIGITAL SKILLS

MATLAB&Simulink | Anysys | NI LABVIEW | C, C++ | Robot operating system - ROS | YARP | CAD (SolidWorks, Inventor, Solid Edge)

Microsoft-Mac operating systems, Microsoft Office(Power Point, Excel, Word)

TECHNICAL SKILLS

Use of laboratory equipment (Instron, Laser Cutter)

Basic knowledge of 3D printing and silicone casting tecnique

HONOUR AND AWARDS

2017—2021

- Merit scholarship for students of the course with highest GPA enrolled in the academic year 2020/21 to study courses at the University of Pisa (position above the 90th percentile of the distribution of the sum of the proceeds of the marks of the examinations taken by the act of registration on 10 August 2020).
- Winner for the international competition 2019-2020 of Bionics Engineering (ranking third in the entire classification).
- Competition announcement winner for the awarding of study prizes to deserving students enrolled in the academic year 2018/19 to study courses at the University of Bologna (ranking seventh in the entire department of Engineering and Architecture).
- Competition announcement winner for the awarding of study prizes to deserving students enrolled in the academic year 2017/18 to study courses at the University of Bologna (ranking third in the entire department of Engineering and Architecture).
- Competition announcement winner for the assignment of incentives to deserving students enrolled in study courses in the academic year 2016/17 of particular national and community interest of the University of Bologna.

PUBLICATIONS

Conference paper submitted to EMBC2021(43rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society) on 3rd May 2021: "A Reusable Thermochromic Phantom for Testing High Intensity Focused Ultrasound Technologies", L. Morchi, M. Gini, A. Mariani, N. Pagliarani, A. Cafarelli, S. Tognarelli, *Member, IEEE,* and A. Menciassi, *Senior Member, IEEE*

VOLUNTEERING

- 2015-2017 Volunteer for the fair trade company ALTROMERCATO, PACHAMAMA, Rimini: setting up of stalls for the sale of eco-friendly products, assistance of volunteers in the shop: sorting of goods, orders and cashier.
- 2004-2016 AGESCI, Rimini: Scout.
- 2017-2018 Cicerone FAI, Rimini: visitor guide of the Rimini Civic Museum, the Surgeon's House and other historical monuments of the city of Rimini.
- 2020 CARITAS, Rimini: joining the group of project LAZZARO UN'ALTRA OPPORTUNITA': selection of second-hand clothes to be offered for sale and customer assistance.

CONFERENCES

- *International workshop on Embodied Intelligence 24-26/03/2021*, Online
- *Dal gene editing all'intelligenza artificiale 9-14/11/2020*, Science for peace, Fondazione U. Veronesi, Online
- *Ciclo Fuori dalla Matrice 2020*, Associazione Allievi Scuola Superiore Sant'Anna, Online
- *Traffico Essere Umani 9-14/11/2015*, Science for peace, Fondazione U. Veronesi, Università Bocconi, Milano
- *Summer School-Conoscere le scienze 14-19/07/2015*, Liceo A. Einstein, Rimini

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