



# Giampiero Bartolomei

## BIOMEDICAL ENGINEER

## CONTACTS

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## PROFILE

Biomedical Engineer with a multidisciplinary background, skilled in the development of wearable devices, advanced physiological signal analysis, and integration of artificial intelligence algorithms. Possesses a strong foundation in clinical engineering, adopting an innovative approach dedicated to rapid prototyping and applied research.

## COMPETENCES

- Fluent In English
- Microsoft Office Suite
- Programming languages (Matlab, Python, firmware)
- Data Analysis & AI
- PCB Design (Autodesk Eagle, Fritzing)
- 3D Printing
- CEI & ISO normatives.

## EDUCATION

### Master's degree in Biomedical Engineering (LM-21)

Università Campus Biomedico di Roma, 110/110 2021 - 2024  
Clinical Engineering Curriculum (LM-21),  
Thesis: "Toward Measurements of vital signs and posture recognition during sleep via an FBG-based smart mattress"  
(N.REG. 2024137818/M299 MATR. INLM01/17377)

### Bachelor's degree in Clinical Engineering (L-9)

Università degli studi "La Sapienza" di Roma, 100/110 2018-2021  
Thesis: "Una simulazione del potenziale d'azione: il modello Hodgkin-Huxley"  
(ID: 3712791 MATR: 1858242)

### High school Scientific Diploma

Istituto Giovanni Paolo II, Ostia(RM), 100/100 2018

## WORKING EXPERIENCES

### Research Fellow

2024-2025

National Research Council of Italy (CNR),  
Institute of Cognitive Sciences & Technologies (ISTC)

Hardware, Firmware & Software development for the experimental interactive devices: Transitional Wearable Companions ([see there](#)), with focus on integrating AI algorithms.

## CERTIFICATES

### License to Practice as an Engineer Section A - Industrial Sector

(issued by the National Council of Engineers of Italy)

### General and Specific Training Course for Workers (12 hours) - Advanced training program in "Accident Prevention and Workplace Hygiene".

(Issued by Istituto Informa)

### Matlab Fundamentals (16.5 hours), Machine Learning with Matlab (12 hours)

(Issued by Mathworks)

### Cambridge English Certificate Council of Europe Level B1

(reference number 175IT9335013)

## PUBLICATIONS

### "Echo: an AI-based toy to encourage symbolic play in children with autism spectrum disorder"

Bartolomei, Ozcan, Granato, Baldassarre & Sperati.  
In Proceedings of International Conference on Tangible, Embedded and Embodied Interaction - Tei '25 - Bordeaux  
<https://doi.org/10.1145/3689050.3705987>

### "Sleeping Posture Classification Through a Multi-Sensing Smart Mattress Based On Fiber Bragg Grating Sensors: A Feasibility Study"

D'Antoni, De Tommasi, Bartolomei, Lo Presti, Vollero, Silvestri, Schena, Merone & Massaroni. 2024 IEEE International Workshop on Metrology for Industry 4.0 & IoT (MetroInd4.0 & IoT), Firenze, Italy, 2024, pp. 322-327,  
[10.1109/MetroInd4.0IoT61288.2024.10584179](https://doi.org/10.1109/MetroInd4.0IoT61288.2024.10584179)