

UNIVERSITA' DEGLI STUDI DI GENOVA

AREA RICERCA, TRASFERIMENTO TECNOLOGICO E TERZA MISSIONE

SERVIZIO RICERCA

SETTORE RICERCA NAZIONALE

IL RETTORE

- Visto il Decreto Rettorale n. 3623 del 16/09/2025, con il quale è stato indetto il concorso per titoli e colloquio, per il conferimento di 1 borsa di ricerca post-lauream, di tipo starting, della durata di 6 mesi, dell'importo lordo di € 8.124,00 (ottomilacentotrentaquattro/00), eventualmente rinnovabile, per lo svolgimento di una ricerca sul tema: "Integration and Demonstration of Tactile Sensing Systems in Robotic Grippers", nell'ambito del progetto IntelliMAN, presso il Dipartimento DITEN dell'Università degli Studi di Genova;
- Visto il Decreto Rettorale n. 4081 del 13/10/2025 con il quale è stata costituita la Commissione giudicatrice per il conferimento della suddetta borsa di ricerca;
- Visto il verbale della Commissione giudicatrice del concorso in parola, riunitasi in data 16/10/2025;
- Constatata la regolarità della procedura seguita;

DECRETA

Art. 1

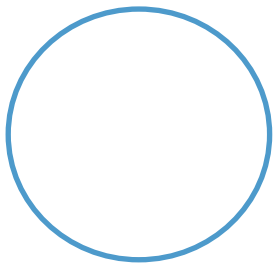
Sono approvati gli atti del concorso di cui in premessa e la seguente graduatoria di merito:

- | | |
|--------------------------|--------------|
| 1. Dott. Yaacoub Mohamad | punti 82/100 |
|--------------------------|--------------|

Sotto condizione dell'accertamento dei requisiti di cui al bando, è dichiarato vincitore del concorso in parola il Dott. Yaacoub Mohamad.

Genova,

IL RETTORE
(firmato digitalmente)



Mohamad Yaacoub

WORK EXPERIENCE

 **Univeristy of Genoa** – Genoa, Italy

City: Genoa | Country: Italy

Laboratory Instructor

[01/12/2024 – 10/05/2025]

- Led sensor lab sessions, ensuring safety compliance and hands-on training in measurement and data acquisition.
- Designed and managed lab exercises aligned with the course syllabus, including hardware and software setup.

 **University of Genoa** – Genoa, Italy

City: Genoa | Country: Italy

Ph.D.

[01/11/2022 – Current]

- Designing lightweight AI-based algorithms for force reconstruction from tactile sensing systems based on PVDF polymers.
- Developing a multi-sensory glove utilizing data fusion and embedded machine learning to enhance tactile perception.

EDUCATION AND TRAINING

Ph.D. in science and technology for electronic and telecommunication engineering

University of Genoa [01/11/2022 – 31/10/2025]

City: Genoa | Country: Italy

Master's in Signal, Telecommunications, Image, and Speech Processing.

Lebanese University [2021 – 2022]

City: Beirut | Country: Lebanon

Master's in Electronics and Telecommunication.

Lebanese University [2020 – 2021]

City: Beirut | Country: Lebanon

PROJECTS

[01/09/2022 – Current]

EU Project IntelliMan: AI-Powered Manipulation System for Advanced Robotic Services, Manufacturing, and Prosthetics.

[01/11/2022 – Current]

PhD research Topic: Efficient Data Driven Algorithms for Tactile Data Processing in Embedded and Wearable Systems.

[05/07/2022 – 20/07/2022]

Master thesis: Acoustic Drone Detection Based on Transfer Learning and Frequency Domain Features.

LANGUAGE SKILLS

Mother tongue(s): Arabic

Other language(s): English | French

PUBLICATIONS

[2025]

Machine Learning Based Contact Force Estimation Using a PVDF Tactile Sensing System

[2025]

Real-Time Object Recognition Based on Parallel Ultra-Low-Power Microcontroller: A case study on Multisensory Glove

[2025]

Hardness and Texture Recognition based on PVDF Sensors and Embedded Machine Learning: A case study on Hannes prosthetic hand

[2025]

Embedded Neural Networks for Shape, Size, and Stiffness Recognition Using Multisensory Glove

[2025]

Wearable Multisensory Glove for Shape, Size, and Stiffness Recognition Based on Off-the-Shelf Components

[2025]

Neural Architecture Search for Optimized TinyML Applications

[2025]

Data Glove System: Real-Time Resistance Classification with Embedded Machine Learning

[2025]

Optimized TinyML Implementation for Resource-Constrained Microcontrollers

[2025]

FPGA Implementation of a Convolutional Recurrent Neural Network for Real-Time Sensor Data Processing

[2025]

On-Edge 1-D Convolutional Neural Network for Hand-Gesture Classification

[2024]

TinyML System for Touch Modality Classification Based on Multisensory Glove

[2024]

Multisensory Wearable Glove for Object Recognition Based Embedded Machine Learning

[2024]

On Edge Pinch Force Classification Using IMU Sensors and Convolutional Neural Networks

[2024]

Elderly Activity Recognition Based Embedded Machine Learning

[2023]

Pilot Study: Response of a Piezoelectric Polymer based Sensing system to Indentation

[2022]

Acoustic Drone Detection Based on Transfer Learning and Frequency Domain Features

TECHNICAL SKILLS

Python Programming: Proficient in data science and machine learning frameworks such as TensorFlow, PyTorch.

Expertise in implementing and deploying TinyML models on edge devices.

Time-Frequency Analysis: Expertise in time-frequency analysis techniques.

Digital Signal Processing: Skilled in applying digital signal processing methods to time-series data

Proficient in MATLAB and C++, with strong skills in algorithm development and data analysis.

