



Fabio Mastromarino

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EDUCATION AND TRAINING

Master's degree in Automation Engineering(D.M.270/04)

Polytechnic of Bari [11/11/2021 – 22/11/2023]

Address: Via Amendola 126/b, 70126 Bari (Italy)

Website: <https://www.poliba.it/>

Field(s) of study: ROBOTICS - LM06-21

Final grade: 110/110 Cum Laude – Level in EQF: EQF level 7

Type of credits: CFU – Number of credits: 120

Thesis: Path planning and optimization for autonomous mobile robot in unknown indoor environment

- Master's thesis project in Data Model Identification and Intelligent Control within the Leonardo Drone Contest
- Project in Dynamic Systems Theory
- Project in Data Model Identification and Intelligent Control
- Project in Programmable Digital Systems
- Project in Functional Design
- Project in Power Electronic Converters

Bachelor degree in Computer and Automation Engineering (D.M.270/04)

Polytechnic of Bari

Address: Via Amendola 126/b, 70126 Bari (Italy)

Website: <https://www.poliba.it/>

Level in EQF: EQF level 6

Type of credits: CFU – Number of credits: 180

Thesis: Multiple attacks detection on discrete event system

- Bachelor's thesis project in Industrial Automation

High School Diploma

Public Scientific High School "Gaetano Salvemini" [09/2011 – 07/2016]

Address: Via Prezzolini, 9, 70126 Bari (Italy)

Website: <https://liceosalvemini Bari.edu.it/>

Web-based course: ROS For Beginners (ROS Noetic, Melodic, Kinetic)

Udemy

Website: <https://www.udemy.com/>

Web-based course: ROS2 for Beginners Level 2 - (TF, URDF, RViz, Gazebo)

Udemy

Website: <https://www.udemy.com/>



Grade 9

Trinity College London

City: London

Country: United Kingdom

Website: <https://www.trinitycollege.com/>

Final grade: CEFR B2.3

Certificate in ESOL International (Speaking and Listening)

General English Course, Waystage 3

Wall Street English [10/04/2012 – 10/04/2014]

Address: Via Melo da Bari, 47, 70121 Bari (Italy)

Website: <https://www.wallstreetenglish.com/>

Undergraduate work-study program “Makers and digital craftsmen”

Laserinn Scarl

City: Valenzano, Bari

Country: Italy

Final grade: 98/100

- CAD modeling in Rhinoceros 5
- Slicing and press preparation using ultimaker Care
- 3D printing and prototyping with FDM technology

HONOURS AND AWARDS

Awarded the Polytechnic of Bari scholarship for graduating students in the academic year

2022/2023, D.R. n. 698

Polytechnic of Bari [23/11/2023]

PROJECTS

Master’s thesis project - “Path planning and optimization for autonomous mobile robot in unknown indoor environment ”

[03/2023 – 07/2023]

- Thesis project in Data Model Identification and Intelligent Control within the Leonardo Drone Contest
- Development and testing of platform algorithms and route optimization for autonomous mobile robots in an unknown indoor environment in Python and C++
- Design of simulation environments in ROS using Gazebo and RViz

University project in Data Model Identification

[10/2022 – 01/2023]

- MATLAB Toolbox development for the identification of linear and nonlinear dynamic system models from empirical datasets, through ARX, ARMAX, Hammerstein-Wiener and neural networks



University project in Digital Programmable Systems

[04/2022 – 07/2022]

- Design, development in C and testing of a 3D scanner using a VL53L1X sensor on STM architecture in STM32CubeIDE environment

University project in Human Machine Interaction

[03/2022 – 07/2022]

- Modeling, rendering and rigging of a hexapod robot using Blender, creating an interactive 3D simulation through Unity Engine using the developed model.

University project in Power Electronic Converters

[04/2022 – 06/2022]

- Analysis and testing of half-bridge and full-bridge power converters using NI Multisim

University project in Functional Design

[04/2022 – 04/2022]

- Mechanical study through solidworks of a spherical wrist that exploits a differential.

University project in Dynamical Systems Theory

[11/2021 – 01/2022]

- Modeling and controlling a flotta of UGV through distributed consent theory, using Matlab and Simulink

Bachelor's thesis project "Multiple attacks detection on discrete event system"

[06/2021 – 09/2021]

- Model-based design of Fault-Tolerance control logics for a discrete event system using Matlab and Simulink, implementation on a microprocessor

LANGUAGE SKILLS

Mother tongue(s): **Italian**

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

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

DIGITAL SKILLS

Programming languages

MySQL / Kotlin / C# / C / ROS2 / HTML / Python / CSS / XML / ROS / Bootstrap / Java

IDE

Android Studio / Eclipse / Visual Studio / STM32CubeIDE / MDK Keil uVision / GitHub / PyCharm

Soft skills

Creatività / Problem Solving / Curiosità / Apprendimento rapido / Approccio critico / Team Working

Model Based Design

Matlab / Simulink



CAD modeling

SolidWorks / Rhinoceros / Inventor / Fusion360 / Blender

Electronic

Fritzing / Simscape electric / NI Multisim

3D Printing

UltiMaker Cura / IdeaMaker

Interactive simulations

RViz / Gazebo / Unity Engine

Computer Graphics and UX

Suite Adobe (Illustrator, InDesign, Photoshop) / Figma / Autodesk Sketchbook

Office automation

Word / Keynote / Excel / Numbers / Pages / Power Point

DRIVING LICENCE

Driving Licence: B 28/10/2016 – 08/11/2026

HOBBIES AND INTERESTS

Arts

Drawing, Painting

Music

Piano

Fencing

Foil

I AUTHORIZE THE TREATMENT OF MY PERSONAL DATA PRESENT IN THE CV IN ACCORDANCE WITH ART. 13 OF THE LEGISLATIVE DECREE OF 30 JUNE 2003, N. 196 "CODE REGARDING THE PROTECTION OF PERSONAL DATA" AND OF ART. 13 OF THE GDPR (EU REGULATION 2016/679)

Bari, 15/12/2023

Fabio Mastromarino