

## PERSONAL INFORMATION

## Giulio Fieramosca



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<https://github.com/giuliof>  
Telegram XXXXXXXXXXXX

Gender Male | Date of birth XXXXXXXXXXXX | Nationality Italian

## EDUCATION AND TRAINING

2017 - 2020	<b>Master Degree in Electronics Engineering</b>	110/110
Institute	Università di Pisa, Scuola di Ingegneria	
Main subjects	Embedded systems, hardware description languages, digital and analog design, basis of telecommunications and RF design, basis of concurrent programming and networking	
Thesis	Verification of an FPGA Accelerator for Fail-Operational Management of Lithium Ion Batteries in Autonomous Electric Vehicles	
2013 - 2016	<b>Bachelor Degree in Electronics Engineering</b>	110/110 with honors
Institute	Università di Pisa, Scuola di Ingegneria	
Main subjects	Circuit analysis, analog and digital circuits, assembly/C++ microcontroller programming, instrumentation and measures	
Thesis	Caratterizzazione e funzionamento di un chemiresistore a base grafene – Analysis and behavior of a graphene-based chemical gas sensor	
2008 - 2013	<b>High school graduation</b>	93/100
Institute	Liceo Scientifico "Il Pontormo", Via Sanzio 159, 50053 Empoli (FI)	

## WORK EXPERIENCES

FEB 2021 - ...	<b>Firmware developer</b>	
Employer	Alkeria Srl Via Giuntini, 25 - int. 36 56021 Cascina (PI)	
JAN 2018 - FEB 2021	<b>Electronic designer</b>	
Tasks	– PCB development with MDB (Multi Drop Bus) and protocol-A physical layers for vending application; – C/C++ firmware development on AVR microcontroller (Xmega family); – integration of an ARM SOM for IOT enabling;	
Employer	In Time Link Srl Via Marsala 29 H/I Roma 00185 (RM)	
NOV 2019 - DEC 2019	<b>Firmware developer</b>	
Tasks	Extension of a wearable device based on nRF52832 platform. Development of a sensor interface library. Development of a BLE-based interface;	
Employer	Digitech S.r.l. via Boccioni, 2 56037 Peccioli (PI)	
DEC 2016	<b>Electronic designer</b>	

Tasks Development of an RFID unit for access management: firmware, board soldering and chassis design.

#### 2014 - 2016 Teacher for Arduino course

Tasks I performed 6 courses as a co-teacher for *A.S.E.V.*, *AD Labs*, *FabLab Toscana* and *GOLEM association*.

### OTHER EXPERIENCES

- 2019 Reimplementation of a wireless system for timing in archery competitions. Commissioned by *Arcieri Poggibonsi* group (local archer group).
- JUN 2018 *University project*: design of a doubly balanced CMOS Gilbert cell mixer for MB-OFDM UWB receiver. Simulation with Keysight ADS and system analysis with Matlab Toolbox.
- MAY 2018 *University project*: development of a logic state analyzer and protocol decoder on Altera FPGA (*MAX1000*). Wrote Verilog code for the acquisition peripheral and NIOS C code for interfacing with PC.
- JAN 2018 *University project*: Verilog description and synthesis on Altera DE2 of an interactive game.
- JUN 2017 *University project*: Verilog description and synthesis of a digital frequency generator and an SPI transceiver based on Digilent Zybo Board.
- 2015 Development of an evaluation board based on AVR XMEGA256A3BU microcontroller, inclusive of programming unit.
- 2010 Collaboration in "*Rumorinfondo*" sound design installation.
- 2008 - ... Volunteering in GOLEM Linux User Group, in field of recovering old computer units and their reconditioning. Occasionally I teach in basic courses, I hold small meetings and I develop small Free/Open source and Open Hardware projects.

### PUBLICATIONS

- S.CAMMARATA, G. FIERAMOSCA ET AL., "*Doubly-Balanced Gilbert Cell Down-Conversion Mixer in AMS 0.35 um SiGe CMOS for Mode-1 MB-OFDM UWB Receivers*", Springer, 2018
- G. FIERAMOSCA, S. PANICHI, "*Arduino da Zero a Maker*", Sandit Libri, Ott 2016

### DIGITAL SKILLS

**Languages**

- **Software development:** C/C++, with a focus in firmware for Microchip AVR microcontrollers;
- **Hardware synthesis:** Verilog and VHDL mainly applied to Xilinx and Altera platforms;
- **Scripting:** Python, basis of data analysis (*scipy*) and graphics (*tkinter*), bash;
- **Web Development:** HTML, PHP, CSS. Basis for writing simple websites.

**Applications**

- office suite and L<sup>A</sup>T<sub>E</sub>X;
- Quartus environment for digital synthesis;
- gcc toolchain for C/C++ programming;
- KiCAD and Eagle for PCB design;
- SPICE electronic circuit simulator (LTspice, OrCAD PSpice);
- git versioning system;
- Base knowledge of 2D CAD applied to lasercutters (i.e. *LibreCAD*).

**Operating systems** Linux-based, Windows, MacOS

### TECHNICAL SKILLS

High knowledge of lab instruments (oscilloscope, multimeter, logic analyzer, spectrum analyzer, ...);  
High experience in PCB handling and assembling, usage of soldering iron and soldering hot air station for both THT and SMD components.

### LANGUAGE SKILLS

**Mother tongue** Italian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Inglese	B2	B2	B2	B2	B2

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

[Common European Framework of Reference for Languages](#)

Certifications **English** - Cambridge P.E.T. (B1 level) achieved on 30/04/2012

#### FURTHER INFORMATION

Personal interests

- I'm an enthusiast in informatics history and I collect some home computers with an informal group;
- I'm a licensed ham radio operator with IU5MOC callsign;

Driving license B

In compliance with the Italian Legislative Decree no. 196/03, I hereby authorize the use of my personal data.