



Federico Nesti

27/10/1993

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PROFILE

I am an electronics engineer very interested in control applications. I am applying to become a robotics engineer and at the moment I am an electronics and control engineer for U-PHOS project, selected by SNSB, DLR and ESA for Rexus/Bexus Project, flying on Rexus 22 rocket (March 2017). My fields of interest are biomedical, electronics, robotics, automated systems, space applications.

EDUCATION

- **MASTER DEGREE in ROBOTICS AND AUTOMATION ENGINEERING**

2015 – Ongoing / Università degli Studi di Pisa



- **BACHELOR DEGREE in ELECTRONICS ENGINEERING**

2012 – 2015 / Università degli Studi di Pisa



Grade 110 cum laude / 110

Title of thesis The negative feedback amplifier: history and design

Abstract Brief overview of historical articles by Black, Bode and Nyquist, control theory, and the first design of the negative feedback amplifier, in order to develop a long distance telephone communication system.

- **LICEO SCIENTIFICO**

2007 – 2012 / Liceo “F. Buonarroti”, Pisa

Grade 100 cum laude/100



JOBS AND EXPERIENCES

- **ELECTRONICS and CONTROL ENGINEER, Data acquisition System Responsible**

[U-PHOS TEAM](#), Rexus/Bexus Programme, SNSB, DLR, ESA / 2015 – ongoing



- Temperature Control of the paraffine wax
- Power Consumption Control on the heaters
- Pressure and acceleration data collection (analog sensors)
- Temperature Data collection (FBG sensors, optical fiber)

COMPUTER SKILLS

- *Operating Systems:* Windows, Linux.
- *Programming languages:* C, C++, ATMEEL assembly, Matlab scripting.
- *Engineering Software:* Matlab, Simulink, PSpice, KiCAD, FreeCAD, AVR Studio, Code::Blocks, CoIDE, STM32F4mxCUBE (for Discovery Board), Eclipse (for Real Time Programming)

LANGUAGE SKILLS

- FLUENT ENGLISH (Writing, Speaking, Listening)
- BASIC FRENCH (Speaking, Listening)

UNIVERSITY PROJECTS

- **Image to Sound:** real time program which takes an image as input, elaborates it with RGB techniques, and plays a MIDI music (up to 16 different instruments) dependant on the characteristics of the image. Music characteristics (as tonality, execution speed, number of instruments, play/pause, transpose commands) chosen by the user.
- **PP-Tuner:** design and prototipation of an automatic guitar tuner. A single board which detects the note from a microphone, and drives a servo motor to tune the string.