



Giorgio Quaranta

Micro and Nano Technology Engineer

I am an engineer on innovation, qualified in physics of solid-state, nanomaterials, techniques for processing and characterising nanomaterials, nanostructures, nano-electronics and electronic microsystems, analog/digital microcircuits and micro-nanosystem.

Five words about me: *motivated, passionate, organized, creative and hard-working.*

Personal and contact details

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Date of Birth: 18/06/1991
Sex: Male
Driving Licence: B

Find Out More About Me:



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Education

Master's Degree
Engineer Diploma

International Master in Micro and Nano Technologies for ICT SEP 2013 - PRESENT

Managing and designing highly scientific and innovative products and processes in all areas of industrial and applied research based on micro/nano devices and related technologies.

Four semesters, held in four different European Centres:



PoliTo (Politecnico di Torino - Italy).

- Physics of solid-state
- Nanomaterials
- Techniques for processing and characterising nanomaterials



EPFL (Ecole polytechnique Fédérale de Lausanne - Switzerland).

- Analog microcircuits
- Digital microcircuits
- Micro-nano systems



INPG (Institut national polytechnique de Grenoble - France).

- Nanostructures
- Nano-electronics
- Electronic microsystems



CSEM (Swiss Center for Electronics and Microtechnology in Basel – Switzerland).

- Master Thesis Project “*Optimization of resonant waveguide for optical security*”

Bachelor's Degree

Physical Engineering



SEP 2010 – SEP 2013

- Quantum physics
- Optics and photonics
- Solid-state physics
- Nuclear physics
- Physics and technology of nanostructures
- Thermal PVD (Physical Vapour Deposition)
- Raman Spectroscopy
- Physics of complex systems
- Electrotechnical, electronic, electromagnetic fields
- Measures
- Mathematics and chemistry as applied to engineering

Projects and Internships

CSEM S.A. Master Thesis Project	Optimization of resonant waveguide for optical security	MAR 2015 – PRESENT
	Study and optimization of arrays of resonant waveguide-gratings designed for optical elements for optical security, working in fabrication (UV-casting), characterization (AFM and Optical Microscopy) and engineering development, in parallel with analytical and numerical solving.	
EPFL University Laboratory	Laboratory in EDA based design	OCT 2015 – JAN 2015
	State-of-the-art EDA (Electronic Design Automation) tools and design kits for the design of analog and digital integrated circuit (based of full-custom and semi-custom designs).	
CSEM S.A. Internship	Near-Field Optical simulations in a RCWA Matlab Platform	JUN 2014 – AUG 2014
	Integration of Near Field Optical simulations of micro and nano-structures in a Matlab Platform, in order to increase the accuracy of simulations of grating structures, based on RCWA (Rigorous Coupled Wave Analysis) method and the evaluation of the local absorption.	
INPG University Project	Head Up Display (HUD) used in dangerous environments	FEB 2014 – MAY 2014
	Teamwork project on the development of a MEMS device: market analysis for the proposed product, general block description, electrical and mechanical simulations of the micro mirror structure using COMSOL simulation tool and finally advertisement and presentation of the product to a selected audience.	
PoliTo University Project	Analysis, state-of-the-art and market of DSCs	MAY 2014 – JUN 2014
PoliTo University Project	Resistivity measurements at cryogenic temperatures	MAR 2013 – MAY 2013

Other Skills and Achievements

Languages	Italian (mother tongue) English (C1 proficient user)
Computer Skills	Matlab Cadence VHDL Comsol LabView Origin LTspice Silvaco Ansys Mathematica Pascal C++ HTML Latex CMS Joomla Windows OS Linux OS
Communication and Organization Skills	Developed the capacity to discuss profitably in a multicultural team. Good sense of organization. Results orientation.
Hobbies and personal achievements	Genius for computers and electronic devices. Attended Italian final of Mathematics Games in Ravenna (2008). Swimming for 16 years. Played guitar for 16 years. School-leaving certificate in Music Theory and "Solfeggio". First Aid Course (Red Cross).

Recommendation Letters and Project Details available on request.

I authorize the treatment of my personal data.

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