



Giorgio Quaranta

Ph.D. Student in Optics & Photonics
Micro and Nano Technology Engineer

I am a Ph.D. student in applied nanophotonics, developing optical structures based on thin-film for industrial up-scalable applications, such as optical security, spectrometers, optical combiners for near-eye displays. I am also an engineer on innovation, qualified in a broad range of micro and nanotechnology fields.

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

Personal and contact details

Current Location: Basel (Switzerland)
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Nationality: Italian
Date of Birth: 18/06/1991
Sex: Male
Driving Licence: B


Find Out More About Me:

- www.giorgioquaranta.it
- [linkedin.com/in/giorgioquaranta](https://www.linkedin.com/in/giorgioquaranta)
- scholar.google.com/citations?user=tZLVjE8AAAAJ
- orcid.org/0000-0003-3471-3802

Education

CSEM S.A., EPFL
PhD Project

PhD Project in Nanophotonics for Industrial Applications

 NOV 2015 – PRESENT

Study of thin film optical structures based on resonant waveguide gratings for up-scalable applications, such as optical security, spectrometers, near-eye displays.

Engineering project support in the fields of optical security, spectrometers, multispectral imaging, near-eye displays, metasurfaces, sensing.

PoliTo, INPG, EPFL, CSEM
Master's Degree

International Master in Micro and Nano Technologies for ICT


 SEP 2013 – SEP 2015

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 in Italy, France, Switzerland.

PoliTo
Bachelor's Degree


Physical Engineering

 SEP 2010 – SEP 2013

Projects and Internships


CSEM S.A., EPFL
Master Thesis Project

Optimization of Waveguide Gratings for Optical Security

 MAR 2015 – AUG 2015


CSEM S.A., EPFL
Internship

Near-Field Optical Simulations in a RCWA Matlab Platform

 JUN 2014 – AUG 2014

INPG
University Project

Head Up Display (HUD) for Dangerous Environments

 FEB 2014 – MAY 2014

Skills and Achievements

Languages	Italian: native English: fluent/business	French: elementary German: elementary	
Technical Skills	<i>Cleanroom user:</i> electron beam lithography, nanoimprint lithography, AFM, SEM, and more <i>Optical engineer:</i> optical simulators (RCWA, FDTD, FETD, FEM, SIE), optical metrology		
Computer Skills	Matlab Comsol LabView Origin	Pascal C++ Python Latex	HTML Blender Windows OS Linux OS
Hobbies and personal achievements	Computers & latest technologies Swimming for 16 years (a few in a Master Team) Played guitar for 16 years School-leaving certificate in Music Theory and "Solfeggio" First Aid Course (Red Cross)		
Other experiences	1 month of <i>au pair</i> experience in a British family (gardening, babysitting, house maintenance) 6 years of volunteer experience as teacher of guitar and solfeggio at a parish recreation center		

Peer-reviewed publications:

- G. Quaranta, G. Basset, O. J. F. Martin, and B. Gallinet, "Color-Selective and Versatile Light Steering with up-Scalable Subwavelength Planar Optics," ACS Photonics 4(5), 1060–1066 (2017).
- G. Quaranta, G. Basset, Z. Benes, O. J. F. Martin, and B. Gallinet, "Light refocusing with up-scalable resonant waveguide gratings in confocal prolate spheroid arrangements," JNP, JNOACQ 12(1), 016004 (2018).

Patent applications:

- G. Quaranta and G. Basset, "Optical security device," EP3205512.
- G. Basset and G. Quaranta, "Optical Combiner and Applications Thereof", WO2017137127.

Conference proceedings:

- G. Basset, G. Quaranta, F. Lütolf, L. Davoine, and M. Schnieper, "Subwavelength gratings for OVDs-From local interactions to using light-transport," arXiv preprint arXiv:1511.05543 (2015).
- G. Quaranta, G. Basset, O. J. F. Martin, and B. Gallinet, "Steering and filtering white light with resonant waveguide gratings," in (International Society for Optics and Photonics, 2017), 10354, p. 1035408.

Reviewer:

- Optics Express.
- Journal of the Optical Society of America A.
- Journal of the Optical Society of America B.

I authorize the treatment of my personal data.

Basel, Switzerland – April 2018

