Mario Tonin

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PERSONAL PROFILE

A versatile photonics engineer specializing in lasers and micro-technologies. Significant experience in the design and assembly of optical paths for laser applications, imaging and diffractive optics. Curious and detail oriented, enjoys demanding work that requires patience and precision. Thrives to work in a multidisciplinary environment, independently or part of a team, demonstrating the organization and the motivation necessary to meet demanding target.

OBJECTIVE

Now seeking a new challenging position which will make best use of my knowledge and will allow me to keep expanding my understanding of optics and other scientific domains, while developing new useful products and instruments.

CAREER SUMMARY

2016 - present
Marin, Switzerland

R&D Project Manager
Boegli Gravures SA

- Optimization and design of new optical paths for custom made laser engraving machines using femtosecond and picosecond lasers at micron precision
- Adjustment and servicing of laser engraving machines used in production
- Design and construction of a prototype engraving machine based on Spatial Light Modulators and Computer Generated Holograms
- Managing the development of several projects with various university teams
- Conception of optical devices and imaging systems from off-the-shelf components for machine vision
- Programmation with Python and C++ for data analysis, image processing, scientific computing and process automation
- Developing new engraving processes based on plasma etching for sub-micron structures
- Development of new products for micro-optic applications
- Writing of 4 patents applications
- Organization of the R&D server and implementation of a knowledge base

2011 - 2015
Lausanne, Switzerland

Ph.D Student / Teaching Assistant
EPFL

- Implementation of optical trapping within hollow photonic crystal cavities
- Developing, performing simulations and fabrication of silicon photonic crystal samples in the CMI clean room
- Conception and assembling of a photonic force microscope
- Selecting, buying and testing scientific instruments for the laboratory
- Principal teaching assistant for Bachelor level lectures in physics and optics, writing of exercise for the students, supervision and organization of the tutors for the lecture

EDUCATION AND QUALIFICATIONS

2011 - 2015 Lausanne, Switzerland	**Ph.D**, École Polytechnique Fédérale de Lausanne
2008 - 2011 Strasbourg, France	**Engineering Diploma**, Telecom Physics Strasbourg
2009 - 2011 Strasbourg, France	**Master** in Nanophotonics, Strasbourg University

SKILLS

●●●●● **Optics**
Path design | Laser | Imagery
Interferometry | Digital optics

●●●●● **IT**
Office suite | Autodesk Inventor
VirtualLab Fusion

●●●●● **Micro and nano-fabrication**
Microfluidics | Micro-optics
Silicon photonics crystals

●●●○○ **Programming**
Python | C++

LANGUAGES

●●●●● **French**
Mother tongue

●●●○○ **German**
Working Proficiency

●●●●● **English**
Fluent

PUBLICATIONS

h-index : 7

Publications in peer-reviewed papers including Physical Review Letters, Lab-on-Chip, Applied Physics Letters, …
Full list available on my website in the « about me » section or on my LinkedIn profile

PERSONAL DETAILS

Driving License: Full/Clean
Health: Excellent; Non-smoker

INTERESTS AND ACTIVITIES

Astrophotography, photography, windsurfing, ski touring

REFERENCES AVAILABLE UPON REQUEST