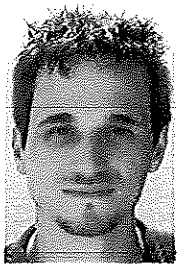

Geoffrey PIRARD

Physics Engineer

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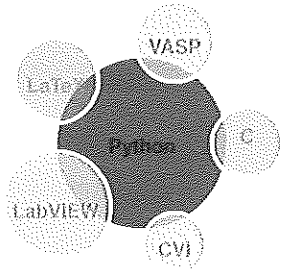
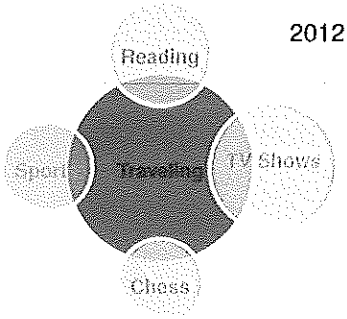
Programming



Languages

French ★★★★★
English ★★★★☆
Spanish ★★★☆☆

Interests



Certifications

2014–2016	**Fundamentals of Nanoelectronics, Part B: Quantum Transport**	PurdueX
	Fundamentals of Nanoelectronics: Basic Concepts	PurdueX
	Introduction to Graphene Science and Technology	ChalmersX
	Mastering Quantum Mechanics	MITx
	Introduction to Computer Science and Programming Using Python	MITx
	Introduction to Computational Thinking and Data Science	MITx

Education

2014 — **Engineering Diploma** — INSA Toulouse
Majoring in Physics

2012 — **ERASMUS semester** — NTNU
Particle physics, Quantum Optics, Medical Physics Project

Experience

2014 — **Diploma thesis (5 months)** — LAAS-CNRS
Ab initio density functional theory study of interactions between several surfaces (gold, H- and OH- terminated silicon, silica) with molecules and DNA. This work included crystallography to design the surfaces and the use of VASP (Vienna *Ab initio* Simulation Package) software to perform the calculations. Comparative analyses between dry and hydrated surfaces were conducted in order to simulate the system in different environments.

2012 — **Medical Physics Project (3 months)** — NTNU & Trondheim Hospital
Comparison of chicken cartilage images from two types of microscopy: multiphoton microscopy with second harmonic generation and transmission electron microscopy. I investigated the possible origins of the unexpected mismatch between the SHG forward and backward signals by analyzing the ultrastructure with TEM. The final purpose is to employ SHG microscopy as a non-invasive medical tool for the diagnosis of cartilage diseases.

2012 — **Summer Student & Trainee (2 months)** — CERN
Software development for resonance measurements in the Proton Synchrotron. The purpose of this software was to provide automated measurements in order to correct the tune resonance that prevents the particle beam to follow its ideal orbit.

Summer Students Lectures. Professors from all around the world provided an overview of theoretical, experimental and applied particle physics. They also introduced us to accelerator physics as well as the detectors, instrumentation and computing set up to collect and treat data.

8 March 2017