

# Geoffrey PIRARD

Physics Engineer

## Certifications

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

### Address

1 bis  
Impasse de l'écluse  
Lespinasse, France

### Mail

geoffrey.pirard@  
gmx.com

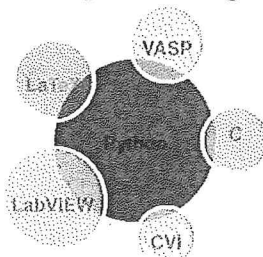
### Web

geoffrey-pirard

## Education

2014	<b>Engineering Diploma</b> Majoring in Physics	INSA Toulouse
2012	<b>ERASMUS semester</b> Particle physics, Quantum Optics, Medical Physics Project	NTNU

## Programming



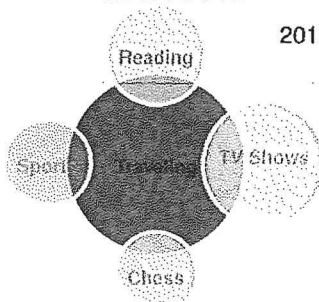
## Experience

2014	<b>Diploma thesis (5 months)</b> <i>Ab initio</i> 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 <i>Ab initio</i> 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.	LAAS-CNRS
2012	<b>Medical Physics Project (3 months)</b> Comparison of chicken cartilage images from two types of microscopy: multi-photon 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 ultra-structure with TEM. The final purpose is to employ SHG microscopy as a non-invasive medical tool for the diagnosis of cartilage diseases.	NTNU & Trondheim Hospital

## Languages

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

## Interests



2012	<b>Summer Student &amp; Trainee (2 months)</b> 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.	CERN
	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