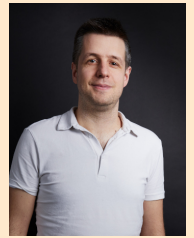


Alexandre DAREAU

PhD, Physicist, R&D Hardware Engineer, Coding Enthusiast

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📍 Villejuif, Paris Region (France) 📞 +33 6 88 50 01 03
👤 Born in January 1988 (36y) in Tarbes (France) | Married, one child



(I like to solve problems, create, tackle new challenges and keep learning along the way.)

From academic research to R&D in a fast-expanding deep-tech startup, I have built a solid expertise in optics, hardware-software interfacing and physical system modeling, while developing a generalist approach to rapidly conceptualize and tackle complex systems or problems. Evolving in an international, highly competitive environment allowed me to harness my taste for organization and teamwork, by managing R&D projects, coordinating technical teams and building innovation strategies.

SKILLS

Optics and lasers)
System Engineering)
Software Engineering)
Complex System Modeling)
Data Analysis)
Project Management)
Team Management)

PROGRAMMING

Python)
Matlab)
InfluxDB)
LaTeX)
Linux systems (bash))
ssh)
git)

LANGUAGE

French) mother tongue
English) fluent, professional

SIDE PROJECTS

~\$ **HAL**: the atom locator
> github.com/adareau/HAL

A python app for data collection and analysis, targeted for fitting 2D data, designed to be as modular and versatile as possible. Currently not maintained.

~\$ **getpaper**: the article finder
> github.com/adareau/getpaper

A command-line tool to find a scientific paper online from its reference.

~\$ **paperwatch**: morning routine
> github.com/adareau/paperwatch

A rss-flux scrapper, watching for interesting scientific publications and generating a report each morning.

HOBBIES & INTERESTS

Music making

Playing the piano, keyboards, guitars and other instruments, composing music on my favorite DAW.

Self-hosting

I like to mess up with my server(s), install and administrate self-hosted services, because they are useful or just for the sake of fun.

WORK EXPERIENCE

Today
Aug. 2021

(R&D Project & Tech. lead | PASQAL, Massy (France)

► **Project: Building a next-gen Quantum Processor prototype**

- coordination of a team of six engineers and 2M€ budget
- technical lead for preliminary prototype design
- procurement, lab installation, reporting & documentation management

► **Technical and organizational steering** (assisting the dep. CTO)

- R&D department organization: project mode implementation, recruitment
- scientific steering, building technical roadmap and strategy
- coordination / sponsoring of medium-sized R&D projects

► **Side projects & other individual contributions**

- temperature monitoring system for the labs & building) `python` `influxDB`
- pressure gauges interfacing for bakeout monitoring

Jul. 2021
Nov. 2018

(Postdoctoral Researcher | Lab. Charles Fabry, Palaiseau (France)
in the Quantum Gases group, led by Chris Westbrook

► **Atom interferometry with ultra-cold metastable Helium**

- refactor the control software, improve configuration management `matlab`
- code tools for data analysis: GUI for 2D fitting & data collection `python` `Qt`
- statistical analysis of ensembles of atoms (detected one by one)
- experimental setup upgrade : lasers, vacuum, change of the atom detector

Oct. 2018
Apr. 2016

(Postdoctoral Researcher | TU Wien, Vienna (Austria)
in the Applied Quantum Physics group, led by Pr. Arno Rauschenbeutel

► **Single cesium atoms trapping and cooling with optical nanofibers**

- fluorescence data analysis : spatial correlations in the photon-counting regime
- modeling of atom trapping and cooling near the nanofiber
> analytical model & numerical simulations `python`

Mar. 2016
Sept. 2011

(PhD Student | Lab. Kastler Brossel - ENS, Paris (France)
in the Bose-Einstein Condensate group, led by Pr. Jean Dalibard

► **Experimental quantum simulation with ultra-cold gases**

- building a cold-atom setup : optics, electronics, ultra-high vacuum
- software control and device interfacing for the setup `matlab` `C#`
- building a ultra-narrow "clock" laser
- modeling of interacting quantum systems, data analysis `python`

EDUCATION

2015 **PhD in Quantum Physics** | ENS Ulm (Paris, France)
2011 **Master in Physics** | ENS Ulm (Paris, France)
2009 **Bachelor in Physics** | ENS Ulm (Paris, France)
2008 **Admission to Ecole Normale Supérieure de Paris**
2007 **Prep School** | Lycée Pierre de Fermat (Toulouse, France)
2006 **Baccalauréat** | Scientific track (Lourdes, France)

MORE ABOUT MYSELF

As one page is not always enough, you will find more information about myself, my former research and publication record on my personal website. Just go to www.adareau.net or flash this QR code

