

# Christophe-Marie Duquesne

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Software engineer, Doctor in Applied Mathematics

I love to ship beautiful code, and I am looking for fun, ambitious projects.

Python, Linux

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## Corporate Experience

- Since 2013** *Data Scientist for **Amadeus** | **Travel Intelligence*** (Munich, Germany).
- Hadoop-based Mining on Travel Industry Data (Max 1 PetaByte). Wrote Flask web services, shipped as Debian packages and continuously integrated with Jenkins. Participated in various devops tasks: log collection, user authentication, transfer between data centers.
- 2009-2013** *PhD in Operations Research with **Amadeus*** (Sophia Antipolis, France).
- Researched how to assign aircraft on an airline network in the most efficient way. Authored a C++ solver, a Python suite of 20+ command line tools, and Hadoop data mining scripts. Worked as a teaching assistant at the university and further improved my communication and public speaking skills.
- 2008 (3 months)** *Internship at **Rio Tinto Alcan*** (Clermont Ferrand, France).
- Authored a C++ library for optimizing the revenue of a metal factory. The software was based on a Linear Programming model and outperformed the existing in-house tool.

## Open Source Contributions

- Python** Contributor to **pulp-or**, a Linear Programming library. Author of **flasfka**, an http bridge for posting/getting messages to Apache Kafka. Author of **persistendicts**, a library exposing various databases with Python dict-like interfaces
- Lua** Author of **lighttpd-external-auth**, a lighttpd magnet script allowing access control via mechanisms such as OpenId.
- Go** Author of **github.com/chmduquesne/rollinghash/adler32**, a rolling version of the Adler32 hash. Contributor to **jackpal/gateway**, a library for discovering the address of a LAN gateway used in **Tapei-Torrent**.
- C++** Author of **yaposib**, a Python binding to **coin-OSI**. Awarded **full membership** in the coin-or foundation in return.
- C** Author of **lazympsolverlibs**, a set of proxy libraries targeting cplex, gurobi and xpress.

<b>Java</b>	Author of <b>talkmyphone</b> , an android application allowing phone control via gtalk (10.000+ downloads, forked 50 times on googlecode). It was then successfully handed over to <b>other developers</b> .
<b>Misc</b>	Experience with Linux, Ada, Bash, Makefile, m4, autotools, cmake... Documented on my <b>github</b> account and my <b>blog</b> .

## Education

<b>2009-2012</b>	<p><i>PhD in Mathematics and Computer Science at G-SCOP Laboratory (Grenoble, France).</i></p> <p><b>Integration of Fleet Deployment and of Passenger Service in Airline Schedule Management.</b> Done at Amadeus, in the Operation Research team led by <b>Semi Gabteni</b>. Advisors: <b>Denis Naddef</b>, <b>Olivier Briant</b>. Defended in January 2013.</p>
<b>2005-2009</b>	<p><i>MS in Computer Science in ENSIMAG (Grenoble, France).</i></p> <p>Top French school of Applied Mathematics and Computer Science with highly selective recruitment.</p>

## Activities and interests

<b>Hobbies</b>	I like travelling. I backpacked in 13 countries in Eastern Europe and South East Asia.
<b>Sports</b>	Running, Cycling, Hiking. I also played rugby union for 7 years.
<b>Activities</b>	I was the president of the <b>Grand Cercle</b> , one of the largest French campus student associations (5.000 members) during university.

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