

# Christophe-Marie Duquesne

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Software engineer, Doctor in Applied Mathematics  
Python, C++, Linux

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## Corporate Experience

- November 2013-Now** *Data Scientist for **Amadeus** | **Travel Intelligence*** (Munich, Germany).  
Hadoop-based Mining on Travel Industry Data (Max 1 PetaByte so far). Wrote Flask web services, shipped as debian package 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).  
Co-authored a C++ library for optimizing the revenue of a metal factory.
- 2007 (3 months)** *Internship at **GE Healthcare*** (Paris, France).  
Elaborated an UML spec for the refactoring of 20.000 lines of C++.

## Selected 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.
- Golang** 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.

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| <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>  | Ada, Bash, Makefile, m4, autotools, cmake... See my <b>github résumé</b> .   |
| <b>Linux</b> | My daily operating system: I <b>blog</b> about it sometimes.   |

## Education

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|------------------|---|
| <b>2009-2012</b> | <p><i>PhD in Mathematics and Computer Science at G-SCOP Laboratory (Grenoble, France).</i></p> <p>Title: Integration of Fleet Deployment and of Passenger Service in Airline Schedule Management. 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

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|-------------------|---|
| <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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