Christophe-Marie Duquesne

**Operations Research Analyst**  
  
Primarily a Software Engineer, I specialized in Operations Research, and then went to Data Science. I believe in Data Driven Decisions and love to build automated systems. I am French, living in Munich, a vim user and a [Belgium ale lover](http://blog.chmd.fr/operations-research-and-beer-drinking.html).

## Corporate Experience

Since 2013

*Data Scientist for* [*Amadeus | Travel Intelligence*](http://www.amadeus.com) (Munich, Germany).

Hadoop-based Mining on Travel Industry Data (Up to 1 Petabyte). Wrote web services (Flask, Sqlite), shipped as Debian packages, continuously integrated with Jenkins. Participated in various devops tasks: log collection, user authentication, transfer between data centers (using IBM Websphere MQ, Apache Kafka, Logstash).

2009-2013

*PhD in Operations Research with* [*Amadeus*](http://www.amadeus.com) (Sophia Antipolis, France).

Researched how to best assign aircraft on an airline network. Authored a C++ solver (using Cplex), a Python suite of 20+ command line tools (using Gurobi), 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*](http://www.riotintoalcan.com/) (Clermont Ferrand, France).

Authored a C++ library for optimizing the revenue of a metal factory (Cplex). The software was based on a Linear Programming model and outperformed the existing in-house tool.

## Open Source Contributions

Python

Author of [yaposib](http://yaposib.readthedocs.org/en/latest/index.html), a Python-C++ binding to [coin-Osi](https://projects.coin-or.org/Osi). Awarded [full membership](http://www.coin-or.org/members.html) in the coin-or foundation in return. Contributor to [pulp-or](https://pythonhosted.org/PuLP/), a Linear Programming library. Author of [flasfka](https://github.com/travel-intelligence/flasfka), an http bridge for posting/getting messages to Apache Kafka. Author of [persistentdicts](https://github.com/chmduquesne/persistentdicts), a library exposing various databases with Python dict-like interfaces.

C

Author of [lazylpsolverlibs](https://github.com/chmduquesne/lazylpsolverlibs), a set of proxy libraries targeting cplex, gurobi and xpress.

Java

Author of [talkmyphone](https://github.com/chmduquesne/talkmyphone), an android application allowing phone control via gtalk (10.000+ downloads, forked 50 times on googlecode). It was then successfully handed over to [other developers](https://github.com/Yakoo63/GTalkSMS).

Lua

Author of [lighttpd-external-auth](https://lighttpd-external-auth.chmd.fr/), a lighttpd magnet script allowing access control via mechanisms such as OpenId.

Go

Author of [github.com/chmduquesne/rollinghash/adler32](https://github.com/chmduquesne/rollinghash), a rolling version of the adler32 hash. Contributor to [jackpal/gateway](https://github.com/jackpal/gateway), a library for discovering the address of a LAN gateway used in [Tapei-Torrent](https://github.com/jackpal/Taipei-Torrent).

Misc

Experience with [Arch Linux](https://git.chmd.fr/?p=archlinux-packages.git), Ada, Bash, Makefile, m4, autotools, cmake... See my [github](http://github.com/chmduquesne) account and my [blog](http://blog.chmd.fr).

## Education

2009-2012

*PhD in Mathematics and Computer Science at* [*G-SCOP Laboratory*](http://www.g-scop.grenoble-inp.fr/) (Grenoble, France).

[Integration of Fleet Deployment and of Passenger Service in Airline Schedule Management](https://static.chmd.fr/2012_PhD_Thesis_Christophe-Marie_Duquesne.pdf). Done at Amadeus, in the Operation Research team led by [Semi Gabteni](http://www.linkedin.com/in/semigabteni). Advisors: [Denis Naddef](http://www.g-scop.inpg.fr/~naddefd/), [Olivier Briant](http://www.g-scop.inpg.fr/~brianto/). Defended in January 2013.

2005-2009

*MS in Computer Science in ENSIMAG* (Grenoble, France).

Top French school of Applied Mathematics and Computer Science with highly selective recruitment.

## Activities and interests

Hobbies

I like travelling. I backpacked in 13 countries in Eastern Europe and South East Asia.

Sports

Running, Cycling, Hiking. I also played rugby union for 7 years.

Activities

I was the president of the [Grand Cercle](http://www.grandcercle.org), one of the largest French campus student associations (5.000 members) during university.

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