

# Christophe-Marie Duquesne

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## 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**.

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## Corporate Experience

- Since 2013**     *Data Scientist for **Amadeus | Travel Intelligence** (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 (IBM WebSphere MQ, Apache Kafka, Logstash).
- 2009-2013**     *PhD in Operations Research with **Amadeus** (Sophia Antipolis, France).*
- Researched how to best assign aircraft on an airline network. Authored a C++ solver and a Python suite of 20+ command line tools (Cplex, Gurobi). Benchmark were performed against real life data (mined with Hadoop). Worked as a teaching assistant at the university and 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 (Cplex). The software was based on a Linear Programming model and consistently outperformed the existing in-house tool.

## Open Source Contributions

- Python**     Author of **yaposib**, a Python-C++ binding to **coin-Osi**. Awarded **full membership** in the coin-or foundation in return. Contributor to **pulp-or**, a Linear Programming library. Author of **flasfka**, an http bridge for posting/getting messages to Apache Kafka. Author of **persistentdicts**, a library exposing various databases with Python dict-like interfaces.
- C**     Author of **lazympsolverlibs**, a set of proxy libraries targeting cplex, gurobi and xpress.
- Java**     Author of **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**.
- Lua**     Author of **lighttpd-external-auth**, a lighttpd magnet script allowing access control via mechanisms such as OpenId.

- Go** Author of [github.com/chmdupesne/rollinghash/adler32](https://github.com/chmdupesne/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**.
- Misc** Experience with **Arch Linux**, Ada, Bash, Makefile, m4, autotools, cmake... See my [github](#) account and my [blog](#).

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## Education

- 2009-2012** *PhD in Mathematics and Computer Science at **G-SCOP Laboratory** (Grenoble, France).*
- Integration of Fleet Deployment and of Passenger Service in Airline Schedule Management.** Done at Amadeus, in the Operation Research team led by **Semi Gabteni**. Advisors: **Denis Naddef**, **Olivier Briant**. 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.

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## 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**, one of the largest French campus student associations (5.000 members) during university.

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[chmd@chmd.fr](mailto:chmd@chmd.fr) • +49 157 530 431 00 • 30 years old  
Einsteinstr. 129, 81675 Munich, Germany

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