

Bastien Mussard

Software Engineer

French national
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📍 1619 Jimson Court
Boulder, CO, U.S.A
☎ (303) 517 7801

✉ bastien.mussard@gmail.com
🌐 mussard.github.io
in in/bastien-mussard

Scientist by training, looking today for a job leaning more toward programming, which has effectively always been at the core of my work.

- Accustomed to work on cross-functional projects.
- Good dialogue with people of broad backgrounds.
- Team work to launch new features, from creation to production phase.
- Communication on results and innovations, including through the design of helpful data visualization aids.

Creativity

Global thinking

Curiosity

Adaptability

Tenacity

Team-player

EXPERIENCES

Postdoctorate 2017 - 2019

University of Colorado, Boulder, USA
Contact: Sandeep Sharma

Lead a team of 4 PhD candidates.
Handling of large operation and data flows.
Design and creation of scalable algorithms.
Set up best practices and continuous integration.

Invited researcher July 2016

University of Cornell, Ithaca, USA
Contact: Cyrus Umrigar

Unified implementations to boost performance.
Wrote user/developer docs for complex codes.

Research Engineer 2014 - 2017

Sorbonne University, Paris
Contact: Julien Toulouse

Tasked with production and maintenance of codes.
Optimized core routines in widely used algorithms.
Developed user-friendly libraries for key tasks.
Design and creation of naturally interfacing codes.



SKILLS

Linux, Bash, Unix	●	●	●	●	●	●
Python	●	●	●	●	●	●
C, C++	●	●	●	●	○	○
Git, SVN	●	●	●	●	●	○
Continuous Integration	●	●	●	○	○	○
Machine Learning	●	●	●	○	○	○

Bilingual French (native) and English (daily practical use both personally and professionally ; lived 3 years in the United States).



PRODUCTIONS

15 scientific publications and significant contributions to major scientific codes:

- **Molpro**: a comprehensive system of commercial programs for advanced calculations.
In charge of management and support.
Improved the performance of parts of the code.
- **Dice**: a modern code that takes advantage of the latest advances in the domain, written in C.
Implementation of most new features.
- **PySCF**: a theoretical chemistry program easy to use, coded in Python and C.
Handling of interfaces between languages.
- **CHAMP**: a code using stochastic processes.
Implementation of fast and efficient calculations.



EDUCATION AND DEGREES

PhD 2010 - 2013
Université de Lorraine, Nancy

MSc 2007 - 2010
École Normale Supérieure, Paris



INTERESTS

Teaching, Outreach, Swimming, Reading, Hiking