

# Romain R. Brault

## Résumé

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**TL; DR:** Dynamic and curious, I am a Machine Learning and programming enthusiast looking for a research position, in France or abroad.

## Doctoral Research

### "Large-Scale Operator-Valued Kernel Regression"

My doctoral studies have been motivated by my desire to apply mathematical knowledge to practical applications. I enjoy providing robust pieces of software along with theoretical guarantees. During this thesis I have been conducted to develop and maintain the open-source library **Operalib** which aims at implementing state of the art operator-valued kernel based algorithms and being fully compatible with **Scikit-Learn**. I also had the opportunity to be a teaching assistant at **UEVE** and **Télécom ParisTech**.

## Positions

III-V Lab, Thalès  
**Research Scientist** Current, from December 2018

L2S, Centrale-Supélec  
**Post-Doctoral Fellow** October 2018, from October 2017  
My current research is directed toward learning function-valued functions. We provide a **Tensorflow** implementation of the proposed method. This postdoc is done in collaboration with the **CMAP** laboratory at École Polytechnique.

Department of Computing, Imperial College London  
**Master Thesis** September 2013, from Mai 2013  
Worked on Finite Elements Method: modified **Fluidity**'s code to integrate bended elements to the **FEniCS** project.

CMLA, ENS Cachan  
**Research Intern** July 2012, from June 2012  
Implementation of a parallel lock-free SGD algorithm using OpenMP and SSE instructions. Also worked on a CUDA GPGPU implementation.

## Soft Skills

### Open Minded

I like listen to everyone's viewpoints, take decisions accordingly, and enjoy to keep learning through discussions.

### Passionate

I have been interested in computer science for a long time and my education and research have cemented this interest into a passion. I particularly enjoy machine learning as it is at the crossroad of a large spectrum of disciplines, and requires to always learn more about many subjects.

### Innovation with guarantees

During my postgraduate studies I took great pleasure in tackling challenging problems with rigor: studying the state of the art, proposing new solutions, studying them empirically and theoretically but also providing robust a implementation by documenting and using continuous integration tools.

## Education

2013 – 2017 **Doctor of Philosophy**  
Machine Learning  
**UEVE & Télécom ParisTech**

2012-2013 **Master of Science**  
Computer Science  
**Imperial College London**

2010 – 2013 **Diplôme d'ingénieur**  
Computer Science  
**ENSIIE, Paris-Saclay**

2010 – 2011 **Bachelor of Science**  
Mathematics  
**UEVE, Paris-Saclay**

## Publications

3 publications in peer-reviewed proceedings. See Google scholar: [citations?user=IFKrCzYAAAAJ](https://scholar.google.com/citations?user=IFKrCzYAAAAJ).

## Distinctions

2012 **Best engineering project**  
*Among the French Junior Entreprises*

2011 **Top Achiever Award**  
*Best Individual Project (out of 109)*

## Languages

**French** (native), **English** (Fluent), **German** (notions)

## Technical Skills

Pandas, Python, Tensorflow, Scikit-Learn,

C/C++, x86 Assembly, Hardware, OpenMP, MPI  
Continuous Integration, Open-source contribs

LaTeX, Machine Learning, Statistics, Func. Analysis

## References

**Pr. Florence d'Alché-Buc**  
Position Full Professor  
Employer **LTCI, Télécom ParisTech**  
Email [florence.dalche@enst.fr](mailto:florence.dalche@enst.fr)

**Dr. Zoltán Szabó**  
Position Associate Professor  
Employer **CMAP, École Polytechnique**  
Email [zoltan.szabo@polytechnique.edu](mailto:zoltan.szabo@polytechnique.edu)

## Hobbys

In my spare time I enjoy practicing photography (see [500px.com/romainbrault](https://500px.com/romainbrault)) as well as climbing and trekking. I used to practice archery.

