

# Romain R. Brault

## Résumé

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**TL;DR:** Dynamic and curious, I am a Machine Learning and programming enthusiast looking for a senior ML research position, in France (I'm currently based in Paris) or abroad.

## Positions

ThereSIS, Thales SIX  
**Research Scientist** **Current, from December 2018**

The purpose of our team is to explore, select, analyse State of the Art Machine Learning (ML) solutions, to adapt them to the businesses' goals and improve their Technology Readiness Level (TRL).

We have the double role of directly conducting original research projects for clients (TRL 1-4); but also listen to the need of the Business Units to provide them innovative and state of the art solutions tailored to their needs.

In this context I used ML domains as Time-Series forecasting, Speech-to-text, Signal processing (source separation). My current work is focused on Deep-Metric-Learning for audio, and I'm also involved in initiatives to develop MLOps at Thales.

Télécom Paris  
**Assoc. Prof.** **Current, from December 2018**

One-off replacement of lectures in ML (mainly Kernel Methods and supervised-learning).

L2S, Centrale-Supélec  
**Postdoc.** **October 2017 to October 2018**

My research were directed toward learning function-valued functions. We provided a **Tensorflow implementation** of the proposed method. Postdoc done in collaboration with the **CMAP** laboratory at École Polytechnique.

## Technical Skills

ML : **TensorFlow**, PyTorch, **Scikit-Learn**, Pandas, Dash, **kernel-methods**, Statistics, Func. Analysis.,  
HPC : C/C++, CUDA, OpenMP, MPI, Hardware knowledge,  
Dev : **Open-Source**, MLOps, Prefect, MLFlow, S3, REST (FastAPI), DevOps, containers (Docker/Podman), k8s,  
\* : **LaTeX**, VIM, Typing, Functional Programing

## Soft Skills

### Open Minded

I like listing to everyone's viewpoints, take decisions accordingly and enjoy continuous learning through discussions and teaching.

### Passionate

I have been interested in computer science and Maths for a long time. I particularly enjoy ML as it is at the crossroad of a large spectrum of disciplines, and foster learning of 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 (i.e. DevOps, MLOps, etc.).

## 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

4 publications in peer-reviewed proceedings (h-idx 3, 62 cit.) and 3 Patents submitted at Thales. See Google scholar: /citations?user=IFkrCzYAAAAJ.

## 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. I also had the opportunity to be a teaching assistant at UEVE and Télécom Paris.

## Languages

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

## References

**Pr. Florence d'Alché-Buc**  
Position Full Professor  
Employer *LTCI, Télécom ParisTech*  
Email *florence.dalche@enst.fr*

## Hobbys

In my spare time I enjoy climbing, trekking and cycling (commuter) and I am also a travel enthusiast. I used to practice archery and photography.