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## Education

- Oct 2014 – Sep 2017 **Doctor of Philosophy (PhD.), Computer Science, Université Paris-Saclay.**  
**Title:** Enhancement of functional brain connectome analysis by the use of deformable models in the estimation of spatial decompositions of the brain images.  
**Supervisors:** Bertrand THIRION, PhD; Gael VAROQUAUX, PhD.
- 2010 – 2011 **MSc. Cryptology and Information Security, University of Bordeaux 1.**  
Pentesting telecom and VoIP-like protocols like SS7, SIGTRAN, SIP, GTP.
- 2009 – 2010 **Maîtrise ès Mathématiques, University of Bordeaux 1.**  
On explicit constructions of “good” LDPC QECCs (*Low-Density Parity-Check Quantum Error-Correcting Codes*). Supervised by Gilles ZEMOR.
- 2005 – 2008 **BSc. Mathematics and Computer Science, University of Buea.**

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## Professional experience

- March 2018 – Present **Senior researcher, Criteo AI Lab, Paris, France.**  
Research in deep-learning, adversarial examples, learning theory, robust optimization, reinforcement-learning
- Oct 2017 – Dec 2017 **Post-doctoral researcher, Parietal Team – INRIA / CEA, Neurospin, Neurospin, Université Paris-Saclay, France.**  
Low-dimensional models for inter-subject variability.
- Oct 2014 – Sep 2017 **Part-time research engineer, Parietal Team – INRIA / CEA, Neurospin, Neurospin, Université Paris-Saclay, France.**  
While preparing my PhD, a 6th of my time is spent programming and consulting.
- Oct 2012 – Oct 2014 **Research engineer, Parietal Team – INRIA / CEA, Neurospin, Neurospin, Université Paris-Saclay, France.**
- Mar 2011 – Aug 2011 **Cryptology and Security intern, P1 Security, Paris, France.**  
Implementation of an event-driven pentesting framework for telecom protocols

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## Selected scientific publications

**Summary from Google scholar:** Total citations  $\geq 511$ ; h index  $\geq 10$ ; 110 index  $\geq 10$ .

Full information available at: <https://scholar.google.fr/citations?user=FDWgJY8AAAAJ&hl=fr>

- 2020
- *Learning disconnected manifolds: a no GAN's land.* International Conference in Machine Learning (ICML). <https://arxiv.org/pdf/2006.04596.pdf>
  - *Dark control: The default mode network as a reinforcement learning agent.* Human Brain Mapping (HBM). <https://onlinelibrary.wiley.com/doi/full/10.1002/hbm.25019>
- 2019
- *Generalized No Free Lunch Theorem for Adversarial Robustness.* International Conference in Machine Learning (ICML). <https://arxiv.org/pdf/1810.04065.pdf>
  - *Learning Nonsymmetric Determinantal Point Processes.* Advanced Neural Information Processing Systems – NeurIPS conference (NeurIPS). <https://arxiv.org/pdf/1905.12962.pdf>

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## Scientific reviewing

- 2016 – present NeurIPS – Neural Information Processing Systems
- 2018 – present ICML – International Conference in Machine Learning
- 2019 – present COLT – Conference on Learning Theory
- 2019 – present IJCAI – International Joint Conference on Artificial Intelligence

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## Supervision of students

- Jan. 2019 – July 2019 Morgan Goibert, Masters' internship
- Nov. 2019 – present Morgan Goibert, PhD candidate (co-supervised with Stéphan Clémanton)

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## Languages

- Bilingual English (fluent), French (fluent)

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## Contributions to open-source software projects

- Data science & AI scikit-learn <http://scikit-learn.org/stable/>
- Complete list See complete list on my github profile at <https://github.com/dohmatob>

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## IT and computing skills

- See my github profile at <https://github.com/dohmatob>
- Programming Languages Python (including Numpy/Scipy, Matplotlib, Seaborn), bash, Latex, C++, Emacs, Matlab
- Data science & AI convex optimization, scikit-learn, pandas, pytorch, keras
- Software Engineering OOP, TDD, version control (git, github), continuous integration (travis, circle-ci), parallel computing (xargs, joblib)
- Operating Systems GNU/Linux, Windows

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## Awards and scholarships

- 2014 Honourable Mention (2ND price) awarded to the paper "*Benchmarking solvers for TV- $\ell_1$  least-squares and logistic regression in brain imaging*" (<http://hal.inria.fr/hal-00991743>), presented at the 4th international workshop on Pattern Recognition in Neuro-imaging (PRNI 2014), Max-Planck Institute for Intelligent Systems, Tuebingen – Germany
- 2009 - 2011 Erasmus Mundus, ALGANT (*Algebra, Geometry, and Number Theory*), Université de Bordeaux 1

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## Interests

- Research machine learning, optimization, deep learning theory, privacy
- Hobbies programming, dancing, ping-pong, arcade games