Elvis Dohmatob, PhD.

Senior Researcher, Criteo AI Lab

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Date of birth: 27 April 1987

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*.

Professional experience

March 2018 – Present **Senior researcher**, *Criteo AI Lab, Paris, France*.
- Mostly working on: adversarial examples, deep-learning theory, robust optimization, structured prediction, reinforcement-learning
- Co-supervising Masters' and PhD students (CIFRE)

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

Selected scientific publications

Summary from Google scholar: Total citations $\geq$ 553; h index $\geq$ 10; 110 index $\geq$ 12.
Full information available at: https://scholar.google.fr/citations?user=FDWgJY8AAAAJ&hl=fr.

2020
- *On the Convergence of Smooth Regularized Approximate Value Iteration Schemes.* Neural Information Processing Systems (NeurIPS).
- *Learning disconnected manifolds: a no GAN's land.* International Conference in Machine Learning (ICML). https://arxiv.org/pdf/2006.04596.pdf
- *Distributionally Robust Counterfactual Risk Minimization.* Conference on Artificial Intelligence (AAAI). https://arxiv.org/abs/1906.06211
- *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

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	ICLR – International Conference on Learning Representation
2019 – present	IJCAI – International Joint Conference on Artificial Intelligence

Supervision of students

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

Languages

Bilingual	English (fluent), French (fluent)

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

IT and computing skills

See my github profile at	https://github.com/dohmatob
Programming Languages	Python, bash, Latex
Data science software	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

Scholarships

2009 - 2011	Erasmus Mundus, ALGANT (*Algebra, Geometry, and Number Theory*), Université de Bordeaux 1

Interests

Research	adversarial examples, deep-learning theory, robust optimization, privacy / fairness
Hobbies	programming, dancing, ping-pong, arcade games