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*. ○ Research in deep-learning, adversarial examples, deep-learning theory, robust optimization, 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 (including Numpy/Scipy, Maplotlib, 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

Awards and scholarships

| 2014 | Honourable Mention (2ND price) awarded to the paper "*Benchmarking solvers for TV-ℓ_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 |

Interests

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