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Moïse Blanchard

EDUCATION

2019 – Present — ***Cambridge, MA***
Massachusetts Institute of Technology
PhD candidate in Operations Research
Main courses: Mathematical programming, Statistical Learning, Robust Optimization, Reinforcement Learning. GPA: 5.0/5.0

2016 – 2020 — ***Palaiseau, France***
Ecole Polytechnique
MS and BS in Applied Mathematics in the top-ranking school in France.
Main courses: Mathematics, Computer Science and Physics. GPA:4.0/4.0
Valedictorian

2014 – 2016 — ***Paris, France***
Prépa at Lycée Louis-le-Grand
Two-year intensive post-secondary studies leading to nationwide exams.

RESEARCH and WORK EXPERIENCE

Aug. 2019 – Present — ***Cambridge, MA***
Massachusetts Institute of Technology, *Doctoral Research Assistant*
Advisors: Prof. Patrick Jaillet and Prof. Alexandre Jacquillat.
Optimization under uncertainty on combinatorial problems.

March. 2019 – Jul. 2019 — ***Davis, CA***
University of California, *Visiting researcher* with Prof. Jesus De Loera.
Simplex method for linear optimization and diameters of polytopes.

Sep. 2018 – March. 2019 — ***Paris, France***
INRIA, *Research Assistant* with Prof. Laurent Massoulié.
Reconstruction of graphs from local neighbourhoods.

June 2018 – Aug. 2018 — ***Lima, Peru***
BNP Paribas Cardif, *Actuarial Intern*
Pricing and technical studies intern in the Actuarial Area.

Sep. 2017 – March. 2018 — ***Palaiseau, France***
Ecole Polytechnique, *Research Assistant* with Prof. Gabriel Peyré.
Optimal Transport for Natural Language recognition and classification.

Nov 2016 – March 2017 — ***Mayotte, France***
French Foreign Legion, *Land forces officer (Lieutenant)*
Group leader, operational and tactical instructor for Malagasy soldiers.

PUBLICATIONS

Online matchings on unknown bipartite graphs with Prof. Alexandre Jacquillat and Prof. Patrick Jaillet, submitted to INFORMS Mathematics of Operations Research, September 2020.
On the Length of Monotone Paths in Polyhedra with Prof. Jesus De Loera and Prof. Quentin Louveaux, submitted to SIAM Journal of Discrete Mathematics, January 2020. ***Winner of the Rivot medal from the French Science Academia.***
Representation Power of Neural Networks: Break the Curse of Dimensionality with Amine Bennouna, working paper.
Asymptotic bounds on the k-TSP and TRP with Prof. Alexandre Jacquillat and Prof. Patrick Jaillet, working paper.
Shotgun Assembly of Graphs and Lattices with Romain Cosson and Prof. Laurent Massoulié, working paper.

TEACHING EXPERIENCE

Fall 2019 — ***Cambridge, MA***
Massachusetts Institute of Technology, *Teaching Assistant in 15.072*
Advanced Analytics Edge: core course of the Master of Business Analytics (MBAN)

Sep. 2017 – June 2019 — ***Paris, France***
Lycée Condorcet, *Teaching Assistant*
Advanced mathematics for undergraduate students in *Classes Préparatoires*

AWARDS

Feb 2020 — 2nd prize at The East Coast Data Open, Datathon organized by Citadel
Nov 2019 — Laplace medal from the French Science Academia,
Nov 2019 — Rivot medal from the French Science Academia
July 2015 — Bronze medal at 46th International Physics Olympiad (IPhO)
July 2014 — Bronze medal at 55th International Mathematics Olympiad (IMO)
June 2014 — Silver medal at 18th Junior Balkan Mathematics Olympiad (JBMO)
May 2014 — 1st prize at "Concours Général" in Mathematics

SKILLS

Programming: Python, Julia, R, C++, SQL
Languages: French (mothertongue), English (fluent), Spanish (fluent)
Interests: Cello, Piano, Swimming, Cycling (bicycle trip across the US in 2016)