








Constantin Vaillant Tenzer
Graduate student in Machine learning, Mathematics and Cognitive Sciences @ENS-PSL.

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Education		
2020-2025	Diploma of the ENS Cognitive Sciences, Mathematics, and Computer Science	École Normale Supérieure - PSL
2024-2025	MSc in Machine Learning and Applied Mathematics Master 2 Maths-Vision-Learning (MVA).	Paris-Saclay University
2021-2024	MSc in Cognitive Sciences Cogmaster. Highest honors.	ENS-UPC-EHESS
2023-2024	MSc in Mathematics Preparing the Agrégation.	Sorbonne Université
2018-2021	BSc in Mathematics Completed alongside CPGE, followed by L3 courses at ENS.	Sorbonne Université
2018-2020	Classes préparatoires aux Grandes Écoles (Mathematics-Physics) - CPGE Also attended high school (2015-2018), obtained the Scientific Baccalauréat specializing in Mathematics, with highest honors. See https://en.wikipedia.org/wiki/Classe_préparatoire_aux_grandes_Écoles .	Lycée Henri IV

Teaching Experiences		
Since 2024	Teaching Associate in Mathematics	Université PSL
2021 - 2023	Teaching Associate in Statistics	Université Paris Cité
2022	Mathematics Examiner in CPGE	Lycée Michelet, Vanves
2021	Introduction to Mathematics Courses	Cours aux Ernest, ENS-PSL
2020-2021	Private Tutor for CPGE Students in Mathematics, Physics, and Industrial Sciences	
Since 2019	Rock-swing dance teacher	Lycée Henri IV, ENS-PSL, International House of New York

Research Experiences		
Since 2021	A statistical physics approach to the exploration-exploitation paradigm in adaptive human behavior Supervised by Prof. Etienne Koechlin - M1 and M2 thesis. PDEs, dynamical systems, online experiment programming, deep learning.	LNC2 (INSERM, ENS-PSL)
2023	Applied Mathematics in Behavioral Finance Supervised by Prof. Gur Huberman. PDEs, stochastic processes, complex analysis. 2 articles in progress.	Columbia University in the City of New York
2021	How humans decide to trust someone or not Supervised by Prof. Jean-Baptiste André and Julien Lie. Honest signaling theory and game theory. Article in preparation.	Jean Nicod Institute (CNRS, ENS-PSL, EHESS)
2021	Optimal Transport and Urban Planning Supervised by Prof. Bertrand Maury, Bachelor thesis.	Université Paris Saclay
2019-2020	Modeling Sustainable and Profitable Fishing Mathematics TIPE project. Differential systems, optimization.	Lycée Henri IV

Skills	
Languages	French (native), English (C2, proficiency, Cambridge certified), Russian (B1, intermediate).
Programming	Python (includes numpy, scipy, panda, pytorch, matplotlib, seaborn, scikit-learn, psychopy), \LaTeX , SQL, Java, OCaml, HTML, CSS, Javascript (includes PsychoJS), linux shell (familiar with Archlinux, Debian servers and NixOS). Network engineering.

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Certifications

Entrepreneurship (Ministerial certificate), Cambridge advanced English, first aid (PSC1), mental health first aid, driving license.

Conferences

- March 2022 Poster at the forum of Cognitive sciences in Paris on my work on trust.
- June 2022 Poster at the forum of the Federation of European Neuroscience Societies (FENS) in Paris on Exploration-exploitation dilemma.
- May 2024 General public talk "Trust me it's easy" during the festival Pint of Science in Paris.
- May 2024 Poster presentation on Exploration-exploitation dilemma at the conference "Neuroscience and AI" organized by the French Neuroscience Society in Bordeaux.

Working Papers

See also my Google scholar page: <https://tinyurl.com/yc5f3uyj>.

- October 2020 "Mathematics of Sustainable and Profitable Management of Fisheries Resources"
- June 2021 "Optimal Transport and Urban Planning" with Leo Wang and Supervised by Bertrand Maury.
- February 2022 "Mesh denoising"
- June 2022 "Language emergence with a dislexic receiver" with Inès Ben Haj Kacem and Hugo Ninou.

Professional associations and commitments

- May 2024 Jury member of the French Young Mathematicians Tournament (TFJM2)
- Since 2022 Member of the French neuroscience society and of the Federation of European Neuroscience Societies (FENS)

Other Professional Experiences

- 2022-2023 Deputy Project Manager for Disruptive Innovation and Technological Prospects *Directorate General of Enterprises - Ministry of Economy and Finance*
- 2021-2022 Elected Member of Executive and Pedagogical Councils *Department of Cognitive Studies at ENS-PSL*
- 2017-2018 Summer Camp Counselor *Camp Olson YMCA (Minnesota, USA)*

Associative Experiences

- Since 2021 Founder and Co-President of the Writing Club at ENS
- 2021-2022 President of the Cheese Club at ENS
- 2021 Co-Chief Organizer of *la Nuit de la Rue d'Ulm* (gala event and festival)
- 2012-2018 Director of the High School Newspaper at Henri IV and Founder of the Middle School Newspaper at Victor Duruy

Non-Academic Interests

Piano, violin, trumpet (with the ENS brass band) - both classical and jazz, lyric singing. Composition. Creative writing. Horseback riding (level 5). East-coast swing (also taught this dance), west-coast swing, 6-count and 4-count rock, waltz ((also taught this dance), salsa, and Argentine tango.