CURRICULUM VITÆ

Antoine VENDEVILLE

Born on April 23rd, 1994 in Paris, France (30 years old).

Post-doctoral researcher
Médialab, Sciences Po Paris

Supervisory team
Pedro Ramaciotti Morales

Other affiliations
Institute of Complex Systems, Paris
Learning Planet Institute, Paris

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ACADEMIC POSITIONS

2023-2025

Post-doctoral researcher at Médialab Siences Po, Paris. AI-Political Machines project, supervised by Pedro Ramaciotti Morales. Research topics: mathematical modeling of political opinions, algorithmic recommendations, regulation of online social platforms. I am also affiliated with the Institute of Complex Systems of Paris and the Learning Planet Institute. I am also a research associate at the Digital Speech Lab in University College London.

2019-2023

PhD student at University College London, Department of Computer Science, Centre for Doctoral Training in Cybersecurity. The echo chamber effect in social networks: theoretical analysis and steering strategies. Supervised by Dr. Benjamin Guedj and Dr. Shi Zhou.

2019

Research assistant, Sorbonne Université. Department of Computer Science (LiP6), team NPA. Supervised by Anastasios Giovanidis, Bruno Baynat, Clémence Magnien. Duration 5 months.

2018

Research assistant, Sorbonne Université. Department of Computer Science (LiP6), team NPA. Supervised by Anastasios Giovanidis, Bruno Baynat, Clémence Magnien. Duration 5 months.

RESEARCH VISITS

2023 IFISC, University of the Balearic Islands, Palma de Mallorca (1 week).
2022 LiP6, Sorbonne Université, Paris (3 months).

PUBLICATIONS

2025

• A. Vendeville, F. Diaz-Diaz. Echo chamber effects in signed networks. Physical Review E, 111(2), 024302.

2024

• A. Vendeville. The echo chamber effect in social networks: theoretical analysis and steering strategies. PhD thesis.

2023

• A. Vendeville, S. Zhou and B. Guedj. Discord in the voter model for complex networks. Phyical Review E, 109(2), 024312.
• A. Vendeville, A. Giovanidis, E. Papanastasiou and B. Guedj. Opening up echo chambers via optimal content recommendations. Proceedings of Complex Networks and Their Applications XI, 2023.

2022

• A. Vendeville, B. Guedj and S. Zhou. Towards control of opinion diversity by introducing zealots into a polarised social group. Proceedings of Complex Networks and Their Applications X, 2022.

2021

• A. Giovanidis, B. Baynat, C. Magnien and A. Vendeville. Ranking Online Social Users by Their Influence. IEEE/ACM Transactions on Networking, 2021.
• A. Vendeville, B. Guedj and S. Zhou. Forecasting elections results via the voter model with stubborn nodes. Applied Network Science 6, 1, 2021.

2019

• A. Giovanidis, B. Baynat and A. Vendeville. Performance Analysis of Online Social Platforms. Proceedings of IEEE Conference on Computer Communications, 2019.

WORKING PAPERS

- A. Vendeville, J. Royo-Letelier, D. Cassells, J.-P. Cointet, T. Faverjon, T. Lenoir, B. Mazoyer, B. Ooghe-Tabanou, A. Pournaki, H. Yamashita et P. Ramaciotti. Population of X/Twitter users and web domains embedded in a multidimensional political opinion space. Submitted to Nature Scientific Data.
- A. Vendeville. A model for French voters. Submitted to Physical Review E. arXiv:2501.13215.
- G. Di Bona, E. Fraxanet, B. Komander, A. Lo Sasso, V. Morini, A. Vendeville, M. Falkenberg, A. Galeazzi. Sampled Datasets Risk Substantial Bias in the Identification of Political Polarization on Social Media. arXiv:2406.19867.

SUPERVISION

2021 Benjamin Guedj and I supervised Valentin Kilian for a 2 months research internship on opinion dynamics at Inria.

TEACHING

2019-2023 Teaching assistant at University College London for Complex Networks and Web (COMP0123). 30h per academic year, 120h total.
2020-2021 Teaching assistant at University College London for Introductory Programming (COMP0066). 30h.
2013-2017 Private tutor of mathematics for high school students in Paris.

ACADEMIC ENGAGEMENT

I was a co-organiser of the 2025 edition of the Winter Workshop on Complex Systems. I was a student volunteer at INFOCOM 2019. I have reviewed papers for the following journals and conferences.

- IC2S2.

- Nature Scientific Reports.

- PLOS ONE.

- Computer Communications.

- Proceedings of the Royal Society A.

FUNDING

My post-doctoral research project at Sciences Po is funded by the McCourt institute. My PhD was funded by the UK EPSRC. In 2023, I received the yrCSS Bridge Grant, which fosters collaborations between young researchers.

EDUCATION

2018-2019 Master 2 Data Science, Université Claude Bernard, Lyon.
2017-2018 Master 2 Mathematical Modelling, Sorbonne Université.
2015-2017 Master 1 Mathematics and Applications, Sorbonne Université.
2012-2015 Bachelor in Mathematics and Applications, Sorbonne Université.