

At the confluence of mathematics and data science, I model collective stochastic behaviors and information disorders.

## Education

- Sep.19-Dec.22 **MIT - Statistics and Data Science Center, PhD in Social & Engineering Systems and Statistics (GPA: 5/5)**  
*Relevant coursework: Statistical Reinforcement Learning and Decision-Making, Discrete Probabilities and Stochastic Processes, Fundamentals of Statistics, Mathematical Models in the Social Sciences, Doctoral Seminar in Statistics, Data-Driven Decision Making and Society, Optimized Democracy*
- Sep.17-Jun.19 **MIT - Institute for Data, Systems and Society, MSc in Technology & Policy (GPA: 4.8/5)**  
*Relevant coursework: Statistics Computation & Application, Network Science & Models, Causal Inference, Fundamentals of Probability, Political Economy, Science Technology & Public Policy, Law Technology & Policy*
- Sep.15-Jun.17 **ÉCOLE CENTRALE PARIS, BSc of Engineering & MSc in Applied Mathematics**  
*Relevant coursework: Advanced Probability, Statistics, Partial Differential Equations, Algebra and Cryptology, Algorithms & Programming, Machine Learning, Software Development, Information Systems, Embedded Control Systems, Quantum & Statistical Physics, Digital & Collaborative Engineering, Economy, Sociology, Epistemology*

## Work Experience

- Sep.17-Now **MIT - Institute for Data, Systems, and Society (MA)** Research Assistant in Applied Mathematics
  - Lead and designed research program on representative decision-making, finding insights from applied mathematics, computer science and political theory (see below) for democratic and corporate applications
  - Partnered with companies to deploy research in the real-world and built related interdisciplinary scholarship
  - Studied causality of information disorders on public opinion and media credibility (see below details)

**Stochastic and networked behaviors**

  - Theorized and experimented the performance of a novel networked governance model: liquid democracy; studied theory of stochastic delegation dynamics and ran 10+ experiments that validated the theory
  - Discovered regimes that maximize accuracy of binary *expert classifiers* (first order statistics of a sample)
  - Studied NBA players' key performance drivers through dimension reduction of plays (terabyte-size dataset)

**Causality of information disorders**

  - Studied resonance of narratives with the citizenry and its interplay on social movements in France through statistical analyses of a corpus of 10k+ public opinion surveys and scraped media output
  - Leveraged 100k Reddit posts on tinnitus with NLP and network's dynamics to understand peer-support online
  - Measured the impact of online marketing on journalism credibility since the 2016 US election. Conducted NLP and Bayesian analyses of 1M headlines, and randomized experiments (n=10,000) testing ads' causal effects
- May.-Aug.22 **PALANTIR TECHNOLOGIES (NY)** Deployment Strategist Intern
  - Conceived and developed analytical workflows to augment data-driven decisions in the Utility space
  - Supported deployment of software features through high level vision and hands-on coding
- Jul.-Sep.19 **AEROSPACE LAB (Belgium)** Machine Learning (ML) Consultant
  - Coded modules to monitor information virality on social media implementing natural language models, network dynamics analyses and time series analyses
  - Wrote scripts to automatize data collection and scraping on Twitter, YouTube and Reddit
- May.-Aug.18 **CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES (DC)** Research Intern in Technology and Policy
  - Studied the impact of the Internet ecosystem and regulation on people's relation to information
  - Collaborate with lawyers, industry partners and state officials to inform policy makers about GDPR
- Jun.-Aug.17 **NOKIA BELL LABS - Network, Algorithms, Analytics, Control and System Lab (NJ)** Research Intern in ML
  - Optimized slice allocation with forecasting methods and time series analysis to lower communication latency
  - Won intern R&D talk contest; and worked on side project with CEO, Marcus Weldon about news credibility

## Skills

Python, R, SQL, HTML (JAVA, Matlab, CSS)

French, English, Italian (Spanish)

**Journalism:** Created a newspaper (The Fool on the Hill) and worked for two radios (Radio Parentheses and Soleil de Re) writing editorials and hosting live shows between 2010 and 2018. Conducted monthly interviews.

**Basketball:** Practice in competition, national level. Coach in summer camp (TBA) and of university men's B team

**Windsurfer, runner, books lover**

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## Teaching

- Feb.21-Now* **MIT - Institute for Data, Systems and Society Masters: *Quant Review*** [Instructor for Masters Students](#)
- Created content for, and teach a 15h-seminar in Algebra, Probability and Statistics, Micro-Economy, Game Theory and Data science for 30+ Masters Students. See class material [here](#). (Feedback available upon request)
- Jul.-Aug.20-21* **MIT - Sloan School: *Data, Model and Decisions*** [Teaching Assistant for Executive MBAs](#)
- Taught 120 MBA Students in Probability, Statistics and Optimization, created recitations, wrote and graded problem sets (Teaching Evaluation: 6.7/7, details available upon request)

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## Service & Leadership

- Aug.22-Now* **Mechanism Design for Social Good** - Co-lead the civic participation research group ([link](#))
- Jan.22-Now* **Worldwide Consortium on Liquid Democracy** - Co-organize a 2-day conference to connect 50 scholars researching liquid democracy from various fields to spark inter-disciplinary discoveries
- Jun.19-Now* **Reviewer for Academic Conferences** - Review papers for Association for the Advancement of Artificial Intelligence (AAAI), Conference on Decision and Control (CDC) and American Control Conference (ACC)
- Dec.21-Jun.22* **New England Graduate Women in Science and Engineering** - Coordinator for the MIT council
- Sep.21-Apr.22* **CYN.AI** - Advised R&D team in building an algorithm to detect bias in readers' content, and flag missing context.
- Jan.-Jun.21* **International Conference of the Web and Social Media (ICWSM)** - Co-organized 1-day archival workshop *Alternative Realities in Troubled Democracies* ([link](#)). Created content, advertised event, reviewed papers.
- Sep.-Dec.21* **LIDS Student Conference** - Co-organized a 1-day online conference ([link](#)) featuring the work of 28 MIT students. Lead the *machine learning & statistics Session*.
- Apr-Jul.20* **MIT IDSS - Covid-19 COLLABORATION** - Designed opting-out and class schedules for MIT back-to-campus strategy following COVID-19 lockdown
- Sep.15-Jun.18* **BeeGames Association** - Launched a cross-functional collaboration between companies, universities, and basketball professionals. Lead of a 25-person team creating a network of investors and organising networking events. Worked with basketball professional athletes and federations (BeeGames' official sponsor was Boris Diaw)

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## Awards

- 2022 **Harvard Kennedy School Ash Democracy Fellowship** - Reward students leading democratic innovations
- 2021 **Best Research Pitch** - Selected best video at the Virtual Conference on Computational Audiology
- 2019 **Hammer Fellowship** - Award that empowers first-year IDSS PhD students
- 2019 **Best Masters Thesis Nominee** - One of four finalists for the best thesis award in Technology & Policy
- 2017 **Centrale Talent** - Reward outstanding initiatives and achievements of a student at École Centrale Paris
- 2017 **Coordination Jeunes Promotions** - Best project for the BeeGames Association
- 2016 **Central Paris Laboratory of computer science and advanced systems** - First Prize of R&D Contest
- 2012 **Education Award** - Reward exceptional academics, leadership and civic life engagement in Ile-de-France

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## Publications

### Peer-reviewed

- *Liquid Democracy in Practice: An Empirical Analysis of its Performance*, M Revel, D Haleprn, A Berinsky, A Jadbabaie - **Equity and Access in Algorithms, Mechanisms, and Optimization**, 2022 (non-arkival)
- *Online discussions about tinnitus: What can we learn from natural language processing of Reddit posts*, V Manchiaiah, A Londero, D Deshpande, M Revel, G Palacios, L Boyd, & S Ratinaud - **American Journal of Audiology**, 2022
- *How Many Representatives Do We Need? The Optimal Size of an Epistemic Congress*, M Revel, T Lin, D Haleprn - *Proceedings of 36th AAAI Conference on Artificial Intelligence*, 2022
- *Varieties of Resonance: The Subjective Interpretations and Utilizations of Media Output in France*, BY Park, A Abecassis, M Revel - **Poetics**, 2021

### Working Papers

- *In Defense of Liquid Democracy* (Under Review, [link](#)) with D Halpern, J Halpern, E Mossel, A Procaccia, A Jadbabaie
- *Native advertisement and the credibility of online publishers* (Under Review, [link](#)) with A Tohidi, D Eckles, A Berinsky, Jadbabaie

- Delegative Democracy
- *What can we learn about tinnitus from social media posts?* with V Manchaia, A Londero

## Media Articles

- *Rules of Thumb: Adjusting Class Schedules in Fall Term '20* ([link](#)) with A Haupt - **MIT ISOLAT**, Aug.2020
- *A privacy-preserving opt-out mechanism for returning to campus* ([link](#)) with A Haupt - **MIT ISOLAT**, July.2020
- *Internet, you lie! (in French)* ([link](#)) — **L'Hémicycle**, Aug. 2019

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## Research Conferences

- **INFORMS 2022 (IN)**, Talk: *Democracy Mechanisms for emerging forms of democratic participation*
- **Algorithmic Technology for Democracy Workshop 2022 (Netherlands)**, Workshop Participant: Representative Democracy
- **EAAMO 2022 (DC)**, Oral Presentation: *Liquid Democracy in Practice*
- **SDSConference 2022 (MA)**, Lightening Talk & Poster Session: *Collective Decision-Making in Representative Democracy*
- **WiDS 2022 (MA)**, Lightening Talk: *Collective Decision-Making in Democracy*
- **36th AAI Conference on Artificial Intelligence 2022 (remote)**, Selected Oral Presentation & Poster: *Optimal Congress Size*
- **LIDS Student Conference 2022 (Remote)**, Talk: *Collective Decision-Making on Binary Issues*
- **IDSS Visiting Committee 2022 (MA)**, Poster: *Collective Decision-Making in Representative Democracy*
- **LIDS Tea Talk 2021 (MA)**, Talk: *In defense of fluid democracy*
- **VCCA21 2021 (remote)**, Talk: *What can we learn about tinnitus from social media posts?*
- **LIDS Tea Talk 2021 (MA)**, Talk: *Fluid Democracy: An Alternative Approach to Decision-Making in Democracy*
- **IC2S2 2020 (remote)**, Talk: *The effect of native advertising on the U.S. News Industry*
- **College of Computing Launch 2018 (MA)**, Poster: *Online Ads: Failure of Quick-Fix Solution to Journalism Crisis*
- **IDSS Advisory Board 2018 (MA)**, Poster: *Online Ads: Failure of Quick-Fix Solution to Journalism Crisis*
- **TMP Consortium 2018 (Netherlands)**, Talk: *The role of the CRNs in online misinformation*

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## Invited Speaker

- **Congrès des Professeurs de Classe Préparatoires (remote)**, Invited Speaker: TBD - June.23
- **Computational Social Choice Seminar (remote)**, Invited Speaker: *Democratic Innovations and Social Choice* - Nov.22
- **Google Alphabet Modeling Seminar (remote)**, Invited Speaker: *Modeling Democratic Innovations* - Nov.22
- **Amsterdam University (Netherlands)**, Guest Lecturer: *Liquid Democracy in Theory & Practice, or Innovating with Democratic Representation* - Oct.22
- **Datascientest (remote)**, Guest Lecturer: *Data and Models to Study Alternative Voting Systems* - Sept.22 ([link](#))
- **HEC Paris (France)**, Guest Lecturer: *Innovating with Democratic Representation* - Sept.22
- **HARVARD Innovating Democracy (MA)**, Invited Speaker: *Liquid Democracy as a Democratic Innovation* - Apr.22
- **MIT Brain & Cognitive Science Speaker Series (MA)**, Invited Speaker: *Liquid Democracy* - Apr.22
- **bluenove (remote)**, Industry Talk: *Démocratie Liquide et Intelligence Collective* - Apr.22
- **Hypermind (remote)**, Invited Speaker: *Liquid Democracy and Collective Intelligence* - Apr.22
- **University of Groningen (Netherlands)**, Guest Lecturer: *In Defense of Liquid Democracy* - Mar.22
- **Debating Europe (Belgium)**, Invited Panelist: *What should democracy look like in the 21st century?* - Feb.22
- **Sloan Fellows Speaker Series (MA)**, Guest Lecturer: *Collective Intelligence: Applications to Democracy* - Dec.21
- **WiDS 2020, Panel**: *Data weaponized, data scrutinized: a war on information*, May20
- **French ENT annual congress (Portugal)**, Invited speaker: *Will expert systems displace clinical intuition?* - May.17

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## News Coverage

- **CentraleSupélec Social Media**, *Les maths à la rescousse de la démocratie (Maths rescuing democracy)* +90,000 views on LinkedIn and +2,000 on YouTube ([link](#)) - Feb.22
- **MIT News**, *Understanding how people make sense of information in the information age* ([link](#)) - Nov.20
- **LIDS/AII**, *Understanding how people make sense of information in the information age* ([link](#)) - Oct.20
- **MIT News**, *Combining artificial intelligence with their passions* ([link](#)) - Aug.19
- **Alter Ago Le Mag** *Manon Revel: En deça et au-delà des algorithmes (Under and beyond algorithms)* ([link](#)) - Sept. 18