CV
Maria Dimakopoulou

maria.n.dimakopoulou@gmail.com • LinkedIn

EDUCATION

STANFORD UNIVERSITY
Ph.D. in Artificial Intelligence & Causal Inference
Advisors: Benjamin Van Roy & Susan Athey
GPA 4.26/4.30
- Recipient of Stanford's "Outstanding Academic Achievement at the Doctoral Level" Award.
- Recipient of the "Arvanitidis in Memory of William K. Linvill" Stanford Graduate Fellowship.

STANFORD UNIVERSITY
M.Sc. in Operations Research & Optimization
GPA 4.23/4.30
- Recipient of Stanford's "Outstanding Academic Achievement at the Masters Level" Award.
- Graduated 1st of the class.

NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA)
M.Sc. and B.Sc. in Electrical Engineering & Computer Science
GPA 10.00/10.00
- Highest GPA in 200-year history of National Technical University of Athens.
- Ranked nationwide 1st in the university entry exams with a score 19920/20000.

PROFESSIONAL EXPERIENCE

SPOTIFY
Personalization Mission

- **Strategy Lead of Company Bet (10/2024 – present)**
  Serving as the Strategy Lead of a company-wide Bet focused on enhancing content discovery on Spotify and involving 120+ FTEs across Engineering, Product Management, Data Science & Design. Responsible for defining the Bet strategy, overseeing planning & execution, ensuring strategic alignment between the Bet and the Spotify business verticals, and representing the Bet in executive reviews.

- **Director of Machine Learning Engineering – Head of Homepage Personalization (11/2022 – present)**
  Heading Homepage Personalization at Spotify, which is the majority-engagement surface of Spotify. Leading an organization of 60+ Engineers & Engineering Managers and 10 teams, responsible for the personalized recommendations across music, podcasts and audiobooks on the Homepage of 640+ million Spotify users. Driving strategy & execution in a range of Machine Learning disciplines, as well as Machine Learning infrastructure, Data and Systems at scale, with the goal to serve recommendations that maximize user satisfaction, while enabling all of Spotify's strategic & business needs.

- **Senior Manager of ML Engineering (1/2022 – 11/2022)**
  Led 2 teams within the Homepage Personalization organization at Spotify. One team was responsible for developing a unified ranker for all content on its way to Spotify's Homepage and the other team was responsible for

optimizing the personalized placement of organic and promotional content on Spotify's Homepage, in a way that is conducive to user satisfaction and Spotify business needs.

NETFLIX RESEARCH
Product ML Research, Data Science & Engineering

- **Adaptive Experimentation Tech Lead (1/2020 – 1/2022)**
  Built a cross-functional team of Research Scientists, Data Scientists and Engineers to deliver new experimentation capabilities for Netflix as an alternative to A/B testing that increased experimentation velocity & rollout decisions. (1) automated ML-based A/B test cell selection, (2) adaptive cell allocation rates during-test, (3) valid inference from adaptively collected data post-test, (4) ML-based short-term proxy metrics of long-term A/B test metrics.

- **Causal Machine Learning Research Area Lead (8/2019 – 1/2022)**
  Pioneered the causal ML investment at Netflix and established its usage across Messaging personalization, Netflix Billboard personalization and UI personalization. Drove Netflix Research's initiatives in the intersection of Causal Inference & Machine Learning, designing algorithms and driving their adoption in production. Authored internal methodology guide, co-authored several papers accepted in top-tier ML conferences and served as co-organizer or invited speaker in multiple internal forums and external venues.

- **Senior Research Scientist of Messaging Personalization (12/2018 – 8/2019)**
  Designed the algorithm behind the first personalized message selection system at Netflix, which resulted in one of the highest A/B test wins of the year and was deployed in production. The bandit-style algorithm was optimized towards learning the causal effect of each message to each member's satisfaction.

MICROSOFT RESEARCH
NYC Machine Learning Lab

- **Visiting Research Scientist (6/2018 – 9/2018):** Designed a reinforcement learning value-function decomposition allowing the breakdown of complex RL tasks into simpler ones that can be learned faster by multiple RL agents (in partnership with Miro Dudik, Rob Schapire). Designed a range of new off-policy estimators that exhibit better bias-variance properties than existing ones in slate contextual bandit settings (in partnership with Miro Dudik)**.**

SALESFORCE
Data Science Team

- **Visiting Research Scientist (6/2016 – 9/2016):** Designed and implemented end-to-end the Salesforce DMP (f.k.a. Krux) Multi-Touch Attribution algorithm, involving game theory, causal estimation & budget constraint optimization. Launched it to a group of high-profile clients. Featured in Mobile Marketing Association's review for its 800 member-companies.

GOOGLE
Google Research

- **Ad Exchange Optimization Team (11/2014 – 4/2015)**: Developed a dynamic pricing algorithm that yielded annual revenue lift for Google's Real-Time Bidding in the scale of hundreds of millions of dollars. Launched it in the production Ad Exchange Dynamic Pricing Pipeline, with praise from the VP of Google Ad Exchange.

- **Operations Research & Optimization (8/2012 – 11/2014):** Led collaboration of the Operations Research team with the Google Linux Production Kernel team & Intel to solve the 3-year unsolved measurement corruption erratum on Intel processors impacting 1000s of Intel machines. Improved scheduling of hardware events on the

processors' counters in the Google production kernel that increased measurement accuracy and hardware utilization by 18%.

HONORS & AWARDS

- **Spotify 20/20 R&D Senior Leadership Program (2022)**
  selected in Spotify's R&D senior leadership 2022 cohort aiming to "create readiness for Director+ role within Spotify R&D" (20 managers selected annually from the 3k+ people R&D division of Spotify).
- **Forbes 30 Under 30 Greece (2019)**
  presented to "the brightest young entrepreneurs, leaders, and stars of Greek nationality worldwide".
- **Stanford University Outstanding Academic Achievement at the Doctoral Level Award (2019)**
  presented annually to the top graduating Ph.D. student of Stanford, MS&E.
- **Stanford University "Arvanitidis in Memory of William K. Linvill" Graduate Fellowship (2015 – 2018)**
  awarded for excellence in research and study.
- **Onassis Foundation Graduate Fellowship (2015 – 2018)**
  awarded annually to the best performing Ph.D. students of Greek nationality worldwide.
- **Stanford University Outstanding Academic Achievement at the Masters Level Award (2016)**
  presented annually to the top graduating M.Sc. student of Stanford, MS&E.
- **National Technical University of Athens Dean's Council "Papakyriakopoulos" Honorary Award (2015)**
  presented annually to the best performing student in Mathematics coursework across all NTUA.
- **Limmat Stiftung Foundation Academic Excellence Award (2015)**
- **Intel Honorary Award (2014)**
  presented "in recognition for the creativity and drive in modifying the Linux Performance Monitoring Subsystem to improve the PMU accuracy in 1000s of Intel machines".
- **Google Women Techmakers – Anita Borg Memorial Fellowship (2014)**
  presented "for excellence in computer science and technology, outstanding academic achievement, leadership and community involvement".
- **Google Spot Bonus Excellence Award (2013)**
  presented for "multiple accomplishments and outstanding achievements in the Operations Research team".
- **Google Peer Bonus Volunteering Award (2013)**
  for "promoting careers in engineering to high-school girls and assisting Google's diversity efforts".
- **National Technical University of Athens Dean's Council "Thomaidion" Honorary Award (2011 – 2015)**
  for excellence in academic performance across all NTUA departments.
- **State Scholarship Foundation of Greece Fellowship (2011 – 2015)**
  for excellence in academic performance in NTUA's Electrical Engineering & Computer Science department.
- **NTUA Dean's Council "Agoniston Polytechniou" Honorary Award (2011)**
  for ranking nationwide 1st in the entry exams of NTUA's Electrical Engineering & Computer Science.
- **Triantafyllidis Foundation, Greek Finance Ministry & Greek Education Ministry Fellowship (2011)**
- **Eurobank EFG & Greek Education Ministry "Great Moment for Education" Honorary Award (2010)**
  for ranking nationwide 1st in the entry exams of NTUA's Electrical Engineering & Computer Science.
- **26th National Mathematics Olympiad Silver Medal (2009)**
- **Hellenic Mathematical Society Silver Medal at the "Euclid" Contest (2008)**
- **6th European Union Science Olympiad Bronze Medal (2008)**
- **Hellenic Mathematical Society Bronze Medal at the "Euclid" Contest (2005 – 2007)**

PUBLICATIONS & PREPRINTS

- **Calibrated Recommendations as a Maximum Flow Problem**
  Abdollahpouri, Nazari, Gain, Gibson, Anderton, Dimakopoulou, Carterette, Lalmas, Jebara – *WSDM 2023*

- **Evaluating the Surrogate Index as a Decision-Making Tool Using 200 A/B Tests at Netflix**
  Zhang, Zhao, Le, Dimakopoulou, Kallus – *arXiv:2311.11922; MIT CODE 2023*

- **Society of Agents: Regrets Bounds of Concurrent Reinforcement Learning**
  Chen, Dong, Bai, Dimakopoulou, Xu, Zhou – *NeurIPS 2022*

- **Online Multi-Armed Bandits with Adaptive Inference**
  Dimakopoulou, Ren, Zhou – *NeurIPS 2021*

- **Post-Contextual-Bandit Inference**
  Bibaut, Dimakopoulou, Kallus, Chambaz, van der Laan – *NeurIPS 2021*

- **Risk Minimization from Adaptively Collected Data: Guarantees for Supervised and Policy Learning**
  Bibaut, Kallus, Dimakopoulou, Chambaz, van der Laan – *NeurIPS 2021*

- **Sequential Causal Inference in a Single World of Connected Units**
  Bibaut, Petersen, Vlassis, Dimakopoulou, van der Laan – *arXiv:2101.07380*

- **Doubly Robust Off-Policy Evaluation with Shrinkage**
  Su, Dimakopoulou, Krishnamurthy, Dudik – *ICML 2020; US Patent 16/657,533*

- **ADMM SLIM: Sparse Recommendations for Many Users**
  Steck, Dimakopoulou, Riabov, Jebara – *WSDM 2020*

- **Marginal Posterior Sampling for Slate Bandits**
  Dimakopoulou, Vlassis, Jebara – *IJCAI 2019*

- **On the Design of Estimators for Bandit Off-Policy Evaluation**
  Vlassis, Bibaut, Dimakopoulou, Jebara – *ICML 2019*

- **Balanced Linear Contextual Bandits**
  Dimakopoulou, Zhou, Athey, Imbens – *AAAI 2019*

- **Scalable Coordinated Exploration in Concurrent Reinforcement Learning**
  Dimakopoulou, Osband, Van Roy – *NeurIPS 2018*

- **Coordinated Exploration in Concurrent Reinforcement Learning**
  Dimakopoulou, Van Roy – *ICML 2018*

- **Estimation Considerations in Contextual Bandits**
  Dimakopoulou, Zhou, Athey, Imbens – *arXiv:1711.07077; NeurIPS 2017 ML & Causal Inference workshop*

- **Market-Based Dynamic Service Mode Switching in Virtualized Wireless Networks**
  Dimakopoulou, Bambos, Valdez-Vivas, Apostolopoulos – *IEEE PIMRC 2017*

- **Reliable and Efficient Performance Monitoring in Linux**
  Dimakopoulou, Eranian, Koziris, Bambos – *ACM/IEEE Supercomputing 2016*