Mimie (Dimitra) Liotsiou

Address	*Oxford Internet Institute, University of Oxford,*	*Nationality*	*Greek (EU)*
	1 St Giles, Oxford, OX1 3JS, UK	*Gender*	*Female*
Telephone	*+44 (0)1865 287209*	*Date of birth*	*24 May 1991*
Email	*mimie.liotsiou@oii.ox.ac.uk*		
Website	*mimieliotsiou.com*		
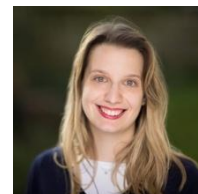
EDUCATION

University of Southampton, <u>PhD Computer Science</u>, on full scholarship, 2014-2018
- *Awards*: **Full scholarship**; **Best Poster award** (& full-length paper) at the Social Informatics conference 2016.
- *Thesis title:* "Measuring the Social Influence of Online Communications at the Individual and Collective Level: A Causal Framework". Fully-funded PhD on causal inference for measuring social influence on the Web, using techniques like graphical causal models, social network analysis, graph theory, natural language processing, data mining, applied to real-world online communications data. Supervised by Prof Luc Moreau, Prof Susan Halford.
- *Publications:* Liotsiou, D., Moreau, L., & Halford, S. (2016, November). Social Influence: From Contagion to a Richer Causal Understanding. In International Conference on Social Informatics (pp. 116-132). [*Link*] Springer International Publishing. (**17-page full length paper in proceedings**, poster: **Best Poster Award**, short talk.)
- *Working Papers:*
  - Liotsiou, D., Moreau, L., & Halford, S. A causal methodological framework for observational studies of social influence in online communications.
  - Liotsiou, D., Moreau, L., & Halford, S. Key limitations of the contagion paradigm for online social influence, and how to address them.
- *Other Activities:* Teaching; member of the ACM, and member of the London Computational Social Science Initiative; presented at UK Causal Inference Meeting 2017, and at Data Natives London, 2017.

University of Southampton, <u>MSc Operational Research, Distinction</u>, on full scholarship, 2013-14
- **Awards**: **Full scholarship**; dissertation **prize.**
- *Dissertation*: Projecting dental care need in England (collaboration with the Department of Health, London).
- *Modules included:* Optimisation, Game Theory, Multivariate Statistics, Data Mining, Forecasting and Time Series Modelling, Heuristics and Search algorithms, Stochastic and Deterministic Mathematics, Simulation.

University of Cambridge, St John's College, <u>BA Hons Computer Science, 2.1 (67.2%)</u>, 2009-12
- **Awards**: **Highly commended** final-year dissertation; **first prize** in group project competition.
- *Modules included:* Artificial Intelligence, Algorithms, Software Engineering, Object-Oriented Programming, Concurrent & Distributed Systems, Mathematics, Computer Systems Modelling, Natural Language Processing.

International Baccalaureate Diploma, score: <u>45/45</u>, Anatolia American College, Thessaloniki, Greece, 2007-09
- Only 0.19% of students globally achieved 45 out of 45, i.e. this score placed me above the **99.81st percentile**.
- *Subjects:* Mathematics, Physics, Economics, Business Management, Greek, English.

WORK EXPERIENCE

- **Oxford Internet Institute, University of Oxford, Postdoctoral Researcher (Computational Propaganda Project), Jan 2018 –**
- *Publications:*
  - Howard, P. N., Ganesh, B., Liotsiou, D., Kelly, J., & François, C. The IRA, Social Media and Political Polarization in the United States, 2012-2018. Working Paper 2018.2. Oxford, UK: Project on Computational Propaganda.comprop.oii.ox.ac.uk. 46 pp. [*Link*] (Author order: Oxford P.I., then Oxford postdocs alphabetically, then collaborators from Graphika).
    Selected Press: *The Washington Post* [<u>1</u>, **front page above the fold;** <u>2</u>, <u>3</u>, <u>4</u> *], The New York Times [*<u>1</u>, **front page above the fold;** <u>2</u>; <u>3</u>], <u>BBC</u>, <u>AP News</u>, <u>Ars Technica</u> (with interview quotes), <u>Al Jazeera</u>, <u>CNBC</u>, The Guardian [<u>1</u>, <u>2</u>, <u>3</u>], <u>The Independent</u>, <u>PBS News Hour</u>, <u>BBC World Service</u>, <u>NBC News</u>, <u>ABC News</u>, <u>TechCrunch</u>, <u>Politico</u>, <u>Yahoo! Finance</u> (with interview quotes), <u>Bloomberg</u>, <u>CNN</u>, <u>NPR</u>
  - The *Junk News Aggregator:* three interactive web tools for aggregating, filtering and analysing misinformation on Facebook, in near real-time, ahead of the 2018 US midterm elections. Its goal is to help with transparency and media literacy around junk news online.
    Press: *<u>TechCrunch</u>, <u>Newsweek</u>*, the *<u>Bulletin of the Atomic Scientists</u>* (video interview)

- *Working papers*:
  - Liotsiou, D., Kollanyi, B. & Howard, P. The Junk News Aggregator: Analysing engagement with junk news on Facebook in the context of the 2018 US midterm elections.
  - Liotsiou, D., Kollanyi, B. & Howard, P. Comparing social media engagement among traditional news,

online-only newd, and junk news, in the context of the 2018 US midterm elections.

  ○ Liotsiou, D., Chaslot, G. & Howard, P. Algorithmic transparency on YouTube: assessing bias of YouTube's algorithmic video recommendations through network analysis
- *Other activities:* Reviewer for EPJ Data Science (2018)

University of Southampton, Teaching Assistant, Oct 2014 – Dec 2016
- *PhD level:* Machine Learning for Text Data in Python, short seminar
- *Masters level:* Social Network Analysis, group projects mentor
- *Undergraduate level:* Java Programming Labs, demonstrating for and marking; Functional Programming in Scheme, coursework marking; Software Engineering, group projects mentor
- *Other:* Introduction to Data Science in Python for secondary-education teachers, seminar demonstrator.

Department of Health UK, Operational Research Intern, June - Sept 2014
Award-winning MSc dissertation project at the dentistry division of the Department of Health in London, on projecting dental care need in England over the next 20-30 years. Statistically analysed nation-wide dental health survey data (hundreds of variables for thousands of participants), using age-period-cohort modelling (self-taught on the job). Acquired knowledge on dentistry, liaised with domain experts.

Morgan Stanley London, Software Engineering Intern, June - Sept 2011
- Built scheduling algorithms that achieved a **30% improvement** in the delivery rates of risk calculations to the traders' desks, and built a fully extensible computer grid simulator.
- Learned Scala from scratch. Mathematical and analytical work. Daily Scrum meetings with manager and team.
- Presented to team (Interest Rate Derivatives team) in London and Budapest, everyone was interested and impressed. My team's MD informed me in 2012 that my work was still being used and very valuable to them.
- Gained financial insight - online courses on derivatives and bonds, financial training sessions.

Physics Department, Aristotle University of Thessaloniki, Programming Intern, July 2010
I used Monte Carlo simulation to solve computational physics problems (solid-state physics) in Java.

PRIZES & AWARDS

Best poster award at the 8th International Conference on Social Informatics, Seattle, WA, 2016
Received the Best Poster Award for the paper "Social Influence: From Contagion to a Richer Causal Understanding," reflecting my PhD work on proposing a novel causal framework for social influence on the Web. This work is also in the conference proceedings (published by Springer) as a full-length paper.

Sponsor prize for MSc dissertation, Department of Health UK & University of Southampton, 2014
Was awarded the sponsor prize for my MSc dissertation with the Department of Health in London, on projecting dental care need in England over the next 20-30 years.

Highly Commended BA dissertation at Cambridge, 2011-12. Score: First Class (82%).
My final-year dissertation at Cambridge was one of the best in my year. It was titled "Parallelizing Ant Colony Optimization-Based Solutions to the Vehicle Routing Problem in Scala." I wrote multi-agent biologically-inspired reinforcement learning Artificial Intelligence algorithms, to solve one of the hardest Computer Science problems (strongly NP-hard combinatorial optimization problem). Wrote extensive and detailed parallel code from scratch and ran it on a 32-core machine. Was very successful; my results were comparable to those in current scientific research.

First prize in Cambridge Group Project Competition - project manager, 6 weeks, 2010-11
- Project manager in a team of six, plus contributing as a regular member. We built a Twitter analysis web application for the tech company Red Gate. First Prize, for "Most Impressive Professional Achievement."
- Coordinated and prioritized the team's efforts under strict deadlines, wrote extensive documents and presentations, negotiated with the client, presented and demonstrated to Lab staff and professional guests.

TECHNICAL SKILLS
Languages: Python (scientific stack: pandas, numpy, scipy, matplotlib, networkx, scikit-learn, keras), Java, Scala, Unix shell, MySQL; some experience in: R, HTML, CSS, C++ and C, ML, Prolog.
Frameworks and practices: Git, Spring, Perforce, JIRA, Scrum, Agile.
APIs: Facebook Graph API.
Operating Systems: Experienced in Mac OS X, Linux, MS Windows.
Software Packages: MS Office (incl. VBA), SPSS, SAS, Minitab.

LANGUAGES Modern Greek (native), French (intermediate/fluent), English (very fluent).

EXTRACURRICULAR ACTIVITIES & STUDIES

- **Music critic for the Southampton University culture magazine** (award nomination), 2013-2015
- **Startup Weekend**, Thessaloniki, Greece, April 2013, 3 days
- **Model United Nations, 2007-2008:** Participated in several international Model United Nations conferences (Dublin, Paris, Athens, Thessaloniki), as a chairperson, ambassador and delegate, in the Economic & Social Council and the Climate Change Committee.
- **Music studies, at music school (conservatoire), 1998-2007.** Certificate in Theory of Music (Advanced Harmony, Figured Bass, Solfège, Dictée, Counterpoint, History and Morphology of Music, Choir, Piano), equivalent to ABRSM 7. Classical guitar studies (advanced, level 6/9).
- **Other interests:** Playing guitar, ukulele and piano; drawing, painting, analog and digital photography; art criticism; reading books and independent magazines, particularly on art and creativity; going to art exhibitions; swimming, squash; travelling.