

# DIONYSIOS T. MANOUSAKAS

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## EDUCATION

- **PhD in Computer Science, Department of Computer Science and Technology, Darwin College, University of Cambridge, Oct. 2016 - present.**  
Research Topic: *Privacy-aware Learning on Users Data Summarizations*  
Supervisor: Prof. Cecilia Mascolo  
Internal Examiners: Dr Pietro Liò and Dr Thomas Sauerwald  
First year report successfully defended in September 2017
- **MSc in Machine Learning, University College London, Distinction, Nov. 2015.**  
Modules: Programming & Mathematical Methods for Machine Learning, Supervised Learning, Probabilistic & Unsupervised Learning (Gatsby Unit), Applied Machine Learning, Bioinformatics, Advanced Topics in Machine Learning (Reinforcement Learning and Kernel Methods), Information Retrieval and Data Mining, Affective Computing and Human-Robot Interaction  
Dissertation: *Longitudinal Analysis of International Trade Data based on Network Theory and Machine Learning*  
Supervisors: Dr Michael T. Schaub (Imperial College London) and Prof. Shi Zhou
- **Diploma in Electrical & Computer Engineering, National Technical University of Athens (5-years degree), GPA: 8.66/10.0 - Top 8%, Sept. 2014.**  
Final year dissertation: *Decentralized Reconfigurable Multi-Robot Coordination from Local Connectivity and Collision Avoidance Specifications*  
Supervisor: Prof. Kostas J. Kyriakopoulos
- **Agios Stefanos High School, Greece, June 2007 (GPA: 19.9/20.0)**

## INTERNSHIPS & EMPLOYMENT

- **Research Intern at the Max Planck Institute for Software Systems, Kaiserslautern & Saarbrücken, Germany, May 2018 - Aug. 2018**  
Research on privacy loss of information diffusion over networks, using multidimensional temporal point processes.  
Stipend awarded by MPI.  
Advisor: Dr. Manuel Gomez-Rodriguez
- **Research Intern at Nokia Bell Labs, Cambridge, UK, Aug. 2017 - Oct. 2017**  
Research project on spatiotemporal modeling of population's activity, as member of the Internet of Things group. Patent submitted, paper under preparation
- **Quantitative Analyst Intern at Smartodds, London, UK, Apr. 2016 - Oct. 2016**  
Statistical analysis and development of machine learning methodologies, probabilistic modeling, ensembling techniques and software for predictions and betting in football and tennis.
- **Data Scientist at Mentat Innovations, Athens, Greece, Sept. 2015 - Jan. 2016**  
Development of machine learning algorithms and software for on-the-fly analysis of stream-

ing data. Real data domains include cybersecurity, financial forecasting, energy demand forecasting, fraud detection, recommender systems, and network traffic monitoring.

## RESEARCH INTERESTS

Machine Learning, Network Analysis & Complex Systems, Data Mining, Recommendation Systems, Privacy, Control Theory, Reinforcement Learning, Information Theory, Adaptive and Intelligent Systems, Stochastic Systems, Robotics

## PUBLICATIONS

- Dionysis Manousakas, Cecilia Mascolo, Alastair R. Beresford, Dennis Chan, Nikhil Sharma *Quantifying Privacy Loss of Human Mobility Graph Topology*, Proceedings on Privacy Enhancing Technologies, Volume 2018(3): 5-21 (2018)
- Students of the course Parallel Processing Systems School of Electrical & Computer Engineering National Technical University of Athens, *Parallelizing the Floyd-Warshall Algorithm on Modern Multicore Platforms Lessons Learned*, 5th National Conference of Electrical and Computer Engineering Students, Xanthi, Greece, 2012

## TEACHING EXPERIENCE

- Supervisor in *Machine Learning and Bayesian Inference* (Peterhouse, St. John's, Christ's, Robinson, Queen's and Wolfson College), Part II Computer Science Tripos, Lent term 2018
- Supervisor in *Machine Learning and Real-world Data* (Gonville & Caius, Trinity Hall and Robinson College), Part IA Computer Science Tripos, Lent term 2017
- 2 hours Tutorial on Network Analysis Software, taught in *Social and Technological Network Data Analytics*, Advanced Computer Science MPhil, Lent term 2017

## HONORS & AWARDS

- 2018 **Ford Foundation Travel Stipend**, 18<sup>th</sup> Symposium on Privacy Enhancing Technologies, Barcelona, Spain
- 2016 **Dean's List for Outstanding Academic Performance 2014/15**, Faculty of Engineering, University College London
- 2007 **EFG-Eurobank Honorary Plaque 'The Great Moment for Education'** awarded by the President of Democracy for achieving the highest score in Greece's National Higher Education Entrance Examination amongst examinees in Attica (19,809/20,000), Ranked among top-5 highest scores nationwide among  $\approx 93,000$  candidates.
- 2007 **Georgios K. Kontaxis Award** for ranking 4th in Qualifying Examination for the School of Electrical & Computer Engineering, National Technical University of Athens
- 2001-2007 **6 Honorary Diplomas from the Greek Ministry of Education** for excellence in my studies during the years of secondary education

## COMPUTER SKILLS

- Programming – Python, R, MATLAB, Mathematica, C/C++, Java, Julia, ML, Prolog, Hadoop, Apache Spark, Keras, TensorFlow, Torch
- IT Literacy –  $\text{\LaTeX}$ , Linux, PGF/TikZ, git, SQL, Excel

## EXPERIENCE IN DATA PROBLEMS

- Participation in Kaggle challenges: Leaf Classification, Click-Through Rate Prediction, Driver Telematics Analysis, Sentiment Analysis on Movie Reviews, Bike Sharing Demand
- Projects on Machine Learning problems, including: Political Opinion Detection on Twitter, Automatic Recognition System for Bimodal Detection of Guarding/Stiffness used for Chronic Low Back Pain Rehabilitation, Prediction of Subcellular Location of Eukaryotic Proteins, Monte-Carlo Control and Temporal Difference Learning in Card Games, Anomaly Detection on Streaming Data, Models Stacking and Averaging for Predictions in Sports

- Coursework on state-of-the-art Machine Learning techniques, including: HMMs, Mixture Models, Latent Variable Models, Graphical Models, Gaussian Processes, Kernel Methods, Deep Neural Networks

**LINGUISTIC SKILLS**

Greek (native), English (fluent - IELTS 8.0/9.0, TOEFL 104/120, ECPE), Spanish (conversant - DELE B2), German (basic - Mittelstufe/C1)

**CONFERENCES ATTENDED**

- 1<sup>st</sup> UK Mobile, Wearable and Ubiquitous Systems Research Symposium, Computer Laboratory, Cambridge, UK, September, 2018
- 18<sup>th</sup> Symposium on Privacy Enhancing Technologies, Barcelona, Spain, July 2018
- Course on Complex Networks and 2nd Symposium on Spatially Embedded Networks, Oriol College, Oxford, UK, September 2017
- 10th ACM International Conference on Web Search and Data Mining, Cambridge, UK, February 2017
- 3rd National Conference of Electrical and Computer Engineering Students, Thessaloniki, Greece, May 2010
- 2nd National Conference of Electrical and Computer Engineering Students, Athens, Greece, May 2009

**REFERENCES**

Available upon request

**MILITARY SERVICE**

11/2012 - 08/2013 : Fulfilled mandatory 9 month service as soldier and office assistant at the Hellenic National Guard Artillery

**LEISURE INTERESTS**

Cinema, Literature, Hiking, Tango

President of CU Darwin College Film Club, Member of CU Algorithmic Trading Society

**FURTHER EDUCATION**

**COURSERA** Game Theory (with Distinction), Bioinformatics Algorithms - Part I (with Distinction), Computational Investing - Part I, Machine Learning, Control of Mobile Robots (with Distinction), Computational Neuroscience, Unpredictable? Randomness, Chance and Free Will

**edX** Introduction to Probability - The Science of Uncertainty, Big Data and Social Physics