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Yanni (John) Papandreou

Education and Research

Imperial College London

PhD Mathematics Research   2019-Present

Section: Statistics, Supervisor: Dr Andrew Duncan

Research interests: Kernel-based methods for inference of complex models, Gaussian Processes, Machine Learning, Bayesian Modelling of Differential Equations

Imperial College London

MSc Statistics   2018-2019

Grade: **Distinction** (85.7%)

- **Winton Capital Prize** awarded for best MSc Statistics student (top of class)

Thesis: Kernel-Based Inference Methods for Ordinary Differential Equations (awarded a **distinction**: 84.5%):

University of Cambridge

BA Mathematics   2015-2018

Grade: **High 1st Class Honours** (76%)

- **Georges Lemaître Prize** awarded for achieving the highest mark in the Maths Tripos at St Edmund's College

Research and Coursework

MSc Thesis: Kernel-based Inference Methods for Ordinary Differential Equations

- Investigated the use of Maximum Mean Discrepancy for parameter inference in generative models based on ODEs.
- In particular, studied an adjoint method for gradient descent in high-dimensional parameter spaces.

MSc Coursework

- Sampling methods such as inverse transform, rejection sampling, and MCMC methods including Metropolis-Hastings and Gibbs samplers (achieved a distinction grade of 82.9% on Computational Statistics coursework)
- Advanced simulation methods including particle filtering methods (achieved a distinction grade of 80.5% on Advanced Simulation Methods coursework)
- Machine Learning algorithms including: fitting models using Gaussian Processes, binary classification using methods such as logistic regression and generative linear classifiers and PCA (achieved a distinction grade of 83.5% on Machine Learning Coursework)
- Time series modelling

BA coursework - 8 computational projects using MATLAB. Attained a 1st class grade. Projects included:

- Fisher's Equation For Population Dispersal Problems (grade: 36/40)
- Permutation Groups (grade: 34/40)
- Bound State Energies for One-Dimensional Potentials (grade: 33/40)

Awards

- **MSc Stats Challenge**: First place winning team in the annual Imperial College MSc Stats challenge where we had to fit a model to noisy financial time-series data in order to optimize the Residual Sum of Squares. Our algorithm later went on to be in the top bracket of Auquan's spring challenge competition.
- **Highest International Subject Mark** (2013): A Level Maths
- **Highest Subject Mark in Cyprus** (2013): A Level Further Maths and Physics
- **Highest International Subject Mark** (2011): IGCSE Maths, Chemistry and Geography
- Consistently received scholarships throughout highschool for being in top 3 of year (came joint first in final year)

Work Experience and Skills

Computing: Julia (proficient), Python (proficient), MATLAB (proficient), R (proficient), LaTeX (proficient), C++ (novice), Excel (novice)

GTA: Graduate Teaching Assistant helping out at tutorials for Maths undergrads and MSc Stats students (since October 2019)

Tutoring: Online maths tutor with MyTutor UK and Keystone Tutors (since September 2018)

Cypriot National Guard: 18 months conscription; Last 3 months of my service I worked in my Captain's office where I was in charge of making schedules for my guard post (2013-2015)