

Chung Hang Edwin Fong

663B Holloway Road, N19 5SE – London – UK

☎ (+44) 7707039188 • ✉ edwin.fong@wolfson.ox.ac.uk • 🌐 edfong

Education

Department of Statistics, University of Oxford

Oxford

PhD in Statistics

Expected 2018–2022

Thesis title: 'The Predictive View of Bayesian Inference and Model Selection'

Supervisor: Professor Chris Holmes

Churchill College, University of Cambridge

Cambridge

MEng in Information Engineering

2014–2018

- Distinction (Top of the year)
- Courses included computer vision, control theory, deep learning, information theory, optimization, probabilistic machine learning, signal processing

Awards/Scholarships

International Conference on Machine Learning 2019 Travel Award

Long Beach, California

Funding to support travel to ICML 2019

2019

Wolfson College Travel Grant

Oxford

Funding to support travel to ICML 2019

2019

The Alan Turing Institute Doctoral Studentship

London

Funding for international tuition fees and stipend for PhD studies for 3.5 years

2018–2022

Charles Lamb Prize

Cambridge

Awarded to the top engineer in electrical or information engineering in Part IIB of MEng

2018

3rd Year Prize for Bioengineering

Cambridge

Awarded to the top bioengineer in Part IIA of MEng

2017

3rd Year Prize for Computer-based Project

Cambridge

Awarded to a top computer-based project in Part IIA of MEng

2017

Bill Brown Prize

Cambridge

Awarded to the top engineer in Churchill College each year

2016–2018

Research/Work Experience

Roche

Welwyn Garden City

Biostatistics PhD intern

September 2020–November 2020

Supervisor: Chris Harbron

- Developed R packages for generating synthetic clinical trial data and benchmarking machine learning algorithms in healthcare settings.

Department of Statistics and Data Sciences, UT Austin

Austin

Visiting researcher

October 2019–November 2019

Collaborated with Professor Stephen G. Walker

- Investigated the foundations of Bayesian uncertainty and prediction, leading to work titled "Martingale posterior distributions".

Department of Engineering, University of Cambridge*Research student***Cambridge***October 2017–May 2018*

Master's thesis title: 'Reinforcement Learning for Automation'

Supervisor: Dr Sumeetpal Singh

- Compared model-based vs model-free reinforcement learning (RL) algorithms, and investigated the performance of a parallel RL agent architecture implemented on Amazon EC2 for classic control tasks on OpenAI Gym.

Revenue Collection System, Thales Transport and Security HK Ltd.*Software engineer***Hong Kong***July–August 2015*

Summer internship for 6 weeks

- Built an automatic integration test harness for Ticket Vending Machines in Hong Kong's Mass Transit Railway, programmed in C++ and Python.

Presentations

ABC in Svalbard 2021*Invited speaker***Online***2021*

Title: 'Martingale Posteriors: Bayesian Uncertainty via Imputation'

The Alan Turing Institute, DCE reading group*Invited speaker***London***2020*

Title: 'A General Framework for Updating Belief Distributions'

International Conference on Machine Learning 2019**Long Beach, California***20 minute oral presentation, awarded to top 20% of papers**2019*

Title: 'Scalable Nonparametric Sampling from Multimodal Posteriors with the Posterior Bootstrap'

Teaching

Department of Statistics, University of Oxford*Tutor***Oxford***January 2020–March 2021*

Bayes Methods (Master's course)

Department of Statistics, University of Oxford*Teaching assistant***Oxford***January 2019–March 2021*

Bayes Methods (Master's course)

Computing Skills

Proficient in Python, R and Matlab.

Languages

English: Fluent**French:** Intermediate**Cantonese:** Fluent**German:** Intermediate

Publications

E. Fong, C. Holmes, and S. G. Walker, "Martingale posterior distributions," *arXiv preprint arXiv:2103.15671*, 2021.

E. Fong and C. Holmes, "On the marginal likelihood and cross-validation," *Biometrika*, vol. 107, no. 2, pp. 489–496, 2020.

E. Fong, S. Lyddon, and C. Holmes, "Scalable Nonparametric Sampling from Multimodal Posteriors with the Posterior Bootstrap," in *International Conference on Machine Learning 2019*. Oral (long).