

EDUCATION

UNIVERSITY COLLEGE LONDON

PHD BIOINFORMATICS

Dec 2015 | London, England

Thesis: A multi-omic analysis of the photosynthetic endosymbioses of *Paramecium bursaria*

Defended: March 2016

OXFORD UNIVERSITY

BA (HONS) NATURAL SCIENCE (BIOLOGICAL SCIENCES)

May 2011 | Oxford, England

Dissertation: Evolution of the eukaryotic folate biosynthesis pathway

COURSES

TAUGHT

Data Management

Bioinformatics Algorithms

Python and Advanced Python

Machine Learning for Life Sciences

Genomics and Transcriptomics

Unix and Perl

Image Processing with Python

Software Carpentry Bootcamp

Supervision of Doctoral, Masters and

Undergraduate Researchers

ATTENDED

International Course on Antibiotic Resistance 2017

Gaussian Processes for Global

Optimisation 2015

Gaussian Process Summer School 2015

EMBO YIP PhD Course 2013

Woods Hole Molecular Evolution

Workshop 2012

MOOCs in Machine Learning, Linear Algebra, Logic, Statistics, Data Analysis, Automata Theory

SKILLS

PROGRAMMING

Expert:

Python • Bash • \LaTeX • Unix

Intermediate:

C++ • R • perl • SQL • HPC Systems

Familiarity:

Octave/Matlab • JS (inc. D3.js) • Go

MOLECULAR BIOLOGY

{transcript,gen,metabol}-omics •

phylogenetics • microscopy •

standard microbiology lab techniques

EXPERIENCE

DALHOUSIE UNIVERSITY | DONALD HILL FAMILY FELLOW

January 2019 – Present | Halifax, Nova Scotia

- Independent fellowship with paired fellows in Medicine and Sociology all working on societal impacts of technology.
- Expanding previous public health work in genomic epidemiology and antimicrobial resistance.
- Engaging local non-profits and assisting them with exploratory data analysis methods.

DALHOUSIE UNIVERSITY | POSTDOCTORAL FELLOW

February 2017 - January 2019 | Halifax, Nova Scotia

- Lead project developing prediction tools for antimicrobial resistance from metagenomes with the Public Health Agency of Canada and Agriculture and Agri-Food Canada.
- Assisted procurement and testing of an IBM machine learning HPC environment.
- Lectured and mentored graduate computer science students.

NEUROGLYCERIN | COMPETITIVE MACHINE LEARNING TEAM

Aug 2014 – Present | Edinburgh, Scotland

- Top 5% finishes in two major international competitions.
- Submissions include deep convolutional neural networks, model combining strategies, classical methods, computer vision, feature engineering approaches all used extensively in various competitions.

NASA | PLANETARY BIOLOGY FELLOW

July 2013 – Aug 2013 | Kennedy Space Center, Florida

- Acted as NASA representative and scientific adviser to BBC "Cloud Lab" Documentary.
- Researched bacterial adaptations to extreme near-space conditions.
- Designed and implemented trials for a stratospheric balloon flight.
- Work resulted in a publication and journal front cover image.

CONFERENCES

ORAL

American Society of Microbiology NGS 2018 • International Course on Antibiotic Resistance 2017 • Canadian Institute for Advanced Research IMB Meeting 2016 • Introduction to Machine Learning for Life Sciences Workshop 2015 • EMBO YIP Meeting 2013

POSTERS

Canadian Society of Microbiology 2018 • School of Informatics Jamboree 2015 • EMBO: Comparative Genomics of Eukaryotic Microorganisms 2011 & 2013 • National Association for Research in Science Teaching 2012 • Young Systematists Forum 2011 • SGM Summer Conference 2011

AWARDS

2018	Global	Donald Hill Family Fellowship
2017	University	Department Conference Prize
2015	University	Informatics Jamboree Prize
2015	57 th /1049	National Data Science Bowl
2014	16 th /527	American Epilepsy Society Seizure Prediction Challenge
2013	Global	NASA Planetary Biology Fellowship
2013	Global	Earth and Space Foundation Exploration Award
2010	National	SGM Harry Smith Vacation Studentship
2009	University	Dukinfield Exhibition in Biological Sciences

PUBLICATIONS

9 publications including Proceedings of the National Academy of Sciences, Royal Society B, and Current Biology. See [goo.gl/04fiwt](https://doi.org/10.1093/bioinformatics/btt001) for full citation list.