Oliver Sheridan-Methven

Personal Details

Date of Birth: 19th May 1993
Mobile: 07793 054 704
Email: oliver.sheridan-methven@maths.ox.ac.uk

Computer Skills

Web Development
Node.js[2], JavaScript[3], HTML[3], CSS[1], AWS[2] (EC2), Git[3].

Computation
Python[3], C[3], C++[3], OpenMP[2], R[2], CUDA[2], ROOT[2], Matlab[2], Mathematica[1], MongoDB[2], SQL[1], LabView[1].

Presentations
LaTeX[3], Gnuplot[3], IPE[3], Microsoft Office[3].

Operating Systems
Windows[3], Unix[3] (OSX), Linux[3].

Ability: [3]Proficient, [2]Intermediate, [1]Beginner.

Academic Qualifications

Present, InFoMM, DPhil. (PhD), Oxford University
Doctorate of philosophy in industrially focused mathematical modelling (InFoMM), specialising in high-performance low-precision vectorised arithmetic.

2016, MScMCF, Postgraduate Degree, Oxford University
Master of science in mathematical and computational finance, specialising in financial modelling, with a research dissertation on mortgage-backed securities.

2015, MPhys, Undergraduate Degree, Oxford University
Master of physics, 1st class honours degree, specialising in theoretical physics and condensed matter physics, with a research project in computational astrophysics.

Scholarships
EPSRC InFoMM CDT scholarship (2016), Oxford University Scholarship (2012), Man-Group Scholarship (2012), Senior Foundation Scholarship (2010), Southampton University Physics Scholarship (2010), Art Scholarship (2006).

Academic Research

2017, InFoMM Mini-Project, Vodafone **Reference:** Dr Uwe Bombosch.
This mini-project investigated different machine learning procedures and data-processing techniques to improve Vodafone's customer satisfaction models.

2017, InFoMM Mini-Project, NAG **Reference:** Prof. Coralia Cartis.
This mini-project explored Bayesian optimisation algorithms, benchmarking their performances against other global optimisation routines for applications using expensive black-box functions.

2016, MScMCF Dissertation **Reference:** Prof. Ben Hambly.
The dissertation investigated stochastic partial differential equation modelling of agency mortgage-backed securities, comparing Monte Carlo and finite difference implementations of personal wealth models for analysing mortgage pools.

2015, MPhys Research Project **Reference:** Prof. Garret Cotter.

The project explored characterising impact parameters for very high energy photons, using ROOT and C to analyse radiation showers. We investigated fast data-fitting templates for producing event selection criteria for the Cherenkov Telescope Array.

Teaching

I have been either a teaching assistant or tutor for the following courses: statistics and financial data analysis, financial computing with C++, exotic derivatives, Fourier series and partial differential equations, special relativity, and introduction to Python.

Previous Employment

2016, Man Group AHL (Summer Internship) **Reference:** Dr. Yoav Git.

At AHL I investigated novel data sources for constructing trading strategies for equity markets. After considerable data handling, we simulated and assessed the performance of multiple strategies using AHL's in-house testing frameworks.

2015, Man Group AHL (Winter Internship) **Reference:** Dr. Yoav Git.

I researched potential trading strategies for TBA markets. This required extensive data munging, and building modules to construct MongoDB databases from pdf documents. Additional statistical analysis was done using AHL's in-house libraries.

2015, Sporting Advantage (Summer Internship) **Reference:** Dr. Robert Johnson.

Producing, cleaning, and analysing a catalogue of data from online resources, generating a bespoke website for tennis traders. This was built using Node.js on AWS, employing security and authorisation procedures.

2011-2015, Oxford Physics Department

2009-2014, NATTA