Philip Winchester

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Personal Details

24 years old
Swedish and British citizen

Contact Details

(+44) 07922 4022 15

winchester@maths.ox.ac.uk

The H B Allen Centre,
25 Banbury Road,
Oxford, OX2 6NN,
United Kingdom

Languages

English - Native or bilingual
Swedish - Native or bilingual

Programming

♥ Python, R, Tableau, MATLAB, Fortran

Markup

♥ LaTeX

Curriculum Vitae

Highly motivated student currently studying for a DPhil in Mathematics with the Industrial and Applied Research Group at the University of Oxford. Once completed, I will be considering interesting opportunities both in academia and industry. My primary interests are in fluid dynamics, theoretical physics, mathematical modeling, scientific computing, data science, sports betting and quantitative finance. My blog, philipwinchester.github.io, is where I gather some of my ideas on these subjects. I am eager to learn, calm, adventurous and have a demonstrated ability of working well in a team.

Education

2019–Present **DPhil in Mathematics** University of Oxford, UK

Oxford Centre for Industrial and Applied Mathematics

My research is on fully non-linear and turbulent fluid mechanics with applications to geoscience. At the moment, I am working on instabilities in 2d Rayleigh–Bénard convection which will eventually lead to studies of the dynamo instability of the Earth's core. My approach to study these systems spans from theoretical methods to statistical analysis of large data sets from state-of-the-art numerical simulations performed on supercomputers.

2014–2018 **M.Sci. Mathematics and Physics** Durham University, UK

Grade: First Class

Final Year Project: Theoretical Formulation of the Magnetic Monopole. Analysing the theoretical formulation of the magnetic monopole. I studied the Yang-Mills equation extensively and learnt about soliton solutions and their topological nature in (1+3)d. 88%.

Modules included:

- Partial Differential Equations, 85%
- Dynamical Systems, 86%
- Continuum Mechanics, 84%
- Solitons, 85%

2012–2014 **High School** Eastbourne College, UK

A-levels:

- Mathematics, A*
- Further Mathematics, A*
- Physics, A*
- Chemistry, A*

Work Experience

2018–2019 **Barnett Waddingham** London, UK

Trainee Consultant

Following a successful internship with Barnett Waddingham during the summer of 2017, I spent a whole year working as a Trainee Consultant with the firm. I worked across trustee and investment consulting teams valuing pensions and providing advice to clients on how to fund their pension scheme.

2014–2016 **Rydeback School** Helsingborg, Sweden

Science and Mathematics Teacher

During holidays from my university studies, I worked as a teacher and tutor at Rydeback School in Helsingborg, Sweden - writing lesson plans and conducting lessons in mathematics and the sciences to classes of up to 30 students.

Courses Taken

2018 **Data Science**
Harvardx on edX
Worked my way through a family of online Data Science courses offered by Harvardx. Course topics included wrangling and machine learning in R.

2016 **Introduction to Computer Science and Programming Using Python**
MITx on edX
Successfully completed a 10 week online course in Python offered by MITx, 98%.

Interests

Blogging I write a programming blog on topics that interest me. In particular, sports betting and quantitative finance. philipwinchester.github.io.

Sports At Oxford, I play football at a high level and basketball, running and calisthenics at a lower level. I work as a qualified football referee in my spare time and whilst at Eastbourne College, I captained the schools 1^{st} football XI.

Fitness Run over 15 miles every week along with a regular gym schedule. Training for my first marathon in September.

References

Prof. P Howell **DPhil Supervisor at Oxford**
Mathematical Institute, Andrew Wiles Building
Woodstock Road, Oxford, OX2 6GG
howell@maths.ox.ac.uk

Dr D Dorigoni **Project Supervisor at Durham**
Durham University Department of Mathematical Sciences
Mountjoy Centre, Stockton Road, Durham, DH1 3LE
daniele.dorigoni@durham.ac.uk

Mr M Lawson **Team Leader at Barnett Waddingham**
Barnett Waddingham
London Wall Place, 2, 123 London Wall, London EC2Y
michael.lawson@barnett-waddingham.co.uk