

# Matthew Hickford

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## Education

### Trinity College, Cambridge University (2007 to 2011)

- Mathematical Tripos Part III, MMath (2011)
- Mathematical Tripos Part II, class 2:1. Senior Scholar (2010)
- Mathematical Tripos Part IB, 1st class. Senior Scholar (2009)
- Mathematical Tripos Part IA, 1st class. Junior Scholar (2008)

### John Mason School, Abingdon (2000 to 2007)

- Four A-levels grade A in Maths, Further Maths, Physics and Chemistry (2007), and AS-level French grade C (2006)
- Two S (outstanding) grades in STEP (Sixth-Term Examination Paper) Mathematics II and III (2007)
- 12 GCSEs achieving 8 grade A\* and 4 grade A (2005)
- 11 gold certificates in UKMT (United Kingdom Mathematical Trust) Maths Challenges (2000–2007), competed in British Mathematical Olympiad
- Attended by invitation the UKMT National Mathematics Summer School at Queen's College, Edgbaston (2005)

## Employment

### Featurespace Ltd (October 2011 to date)

- Analyst Developer at behavioural analytics startup
- Consulting work developing churn and cross-sell models for retailers
- Learnt machine learning theory and implemented algorithms in code
- Scrum master for team of seven

### **Winton Capital Management (4 weeks in 2009 and 6 weeks in 2010)**

- Internship and summer work at an algorithmic hedge fund.
- Analysed historical time series of financial data, learning Winton's software.
- Investigation based on reading of macroeconomic theory, using statistics.
- Tested potential trading systems on past data.
- Described and evaluated each system for review by management.

### **IBM Extreme Blue internship (12 weeks in 2009)**

- Team of four students given project by two IBM mentors.
- Managed ourselves—set testable targets at weekly meetings to maintain accountability and review long and short-term progress.
- Met with clients to elicit their needs.
- Collaboratively wrote software in Java and documentation under version control.
- Negotiated with groups within IBM interesting in taking over our work after internship.
- Presented and demonstrated project at international exposition in Rotterdam.
- Recorded innovations in the design. In September 2010, IBM ultimately submitted a patent application to the United States.

### **Health Protection Agency (11 weeks in 2008 and 6 weeks in 2007)**

- Joined a small team during the design and prototype development of a probabilistic risk assessment tool.
- Developed components of the tool itself including GUI input and error checking, learning Visual Basic.
- Wrote a report reviewing the previous tools released by the department and advocating the new tool.

## **Additional skills**

### **Programming**

- Competed in Google Code Jam—an international programming competition focusing on algorithms—in 2009, 2010 and 2011, this year finishing in the top 10%.
- Contributed solutions to the mathematical puzzle websites IBM Ponder This and Project Euler.
- Computational mathematics projects in second and third year of degree in Python.
- Experience developing in Java and Visual Basic at IBM and Health Projection Agency.
- Created desktop and web applications in Python and Ruby.

### **Teaching**

- Teaching assistant at a Cambridge secondary school (one afternoon per week, Lent term 2011) through Cambridge University's STIMULUS programme.
- Volunteered at Cambridge Maths Circle in January 2011, a hands-on maths event for children of all ages.
- Wrote lecture on combinatorial game theory and delivered it twice in 2011—once as a midnight seminar and once as a Part III seminar.

### **Duke of Edinburgh's awards**

- Gold (2008), Silver and Bronze. Expeditions in the Lake District and the Isle of Arran.

### **Activities and interests**

- Ballroom dancing since 2010, represented Cambridge University Beginners' Dancesport Team at competitions in Nottingham and Blackpool.
- Member of Trinity Mathematical Society—represented undergraduates against teaching staff in games of 'Call My Bluff' (2007 & 2009).
- Pianist and guitarist.

## Referees

1. Professor Grae Worster, my tutor at Trinity College, Cambridge.  
`side.e@trin.cam.ac.uk`
2. Dr Yoav Git, my supervisor at Winton Capital Management. Contact details on request.