

▶ Harry Thomas Mason

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About Me

I have completed a D.Phil at the University of Oxford with Prof. Karla Miller and Dr. Mark Chiew as a (fully EPSRC funded) student of the Oxford Nottingham Doctoral Training Centre in Biomedical Imaging. My thesis was titled “Exploring subspace-constrained approaches to low-rank fMRI acceleration”, and involved helping to develop a novel way to accelerate FMRI data, given low-rank and prior constraints. During this time I was part of the Physics Group in the FMRI/WIN Centre, part of the Nuffield Department of Clinical Neuroscience.

I achieved a MEng in Engineering Science also at the University of Oxford, with a dissertation titled “Quantitative analysis of ultrahigh field chemical exchange saturation transfer (CEST) MRI data”. My primary focus at undergraduate was on Biomedical Engineering/clinical applications, with a secondary focus on information engineering.

I worked two consecutive summers with the Clinical Health Informatics group at Oxford under David Clifton, with additional supervision by David Wong. I am particularly proud of my work there on the SEND project, which is being rolled out in Oxford hospitals.

My focus is on the application of optimization and Bayesian inference to solving clinical problems, although I have broader experience of linear algebra, machine learning, fMRI, and software engineering. My main coding expertise is MATLAB, with some experience using bash, python, and R.

Outside of research, I have a passion for outreach and charity, working with Oxfam, Living Wage campaigns, Oxford City Council, Oxford Mutual Aid, Mansfield College access, various schools, and multiple other organisations. I worked at the National Science Learning Centre under Gemma Taylor, seeing firsthand how scientific ideas are translated into education and teaching. I played Ultimate (Frisbee) for Oxford University and compete at international levels. I have undertaken many leadership and administrative roles while managing clubs. I am one of the UK's top Ultimate media figures, having experience with writing, editing and commentating. Additionally, I write poetry regularly, co-founded Mansfield Poetry Society, was Wadham MCR Poetry officer for three years, and enjoy performing in front of large audiences.

Education

1997 to 2003	Acomb Primary School, York
2003 to 2009	Manor CE School, York
2009 to 2011	Fulford School, York (VI form)
2011 to 2015	Mansfield College, Oxford University, Oxford (Engineering Science)
2015 to 2020	Wadham College, Oxford University, Oxford (ONBI CDT/DPhil)

GCSE (Summer 2009)

- ▶ 10 A*s (Biology, Chemistry, English Language, English Literature, French, Geography, Mathematics, Physical Education, Physics, Religious Studies)

AS levels (Summer 2011)

- ▶ Further Mathematics A

A levels (Summer 2011)

- ▶ Mathematics A*
- ▶ Physics A*
- ▶ Chemistry A*
- ▶ Biology A

Masters in Engineering (Summer 2015)

- ▶ Class 2.i

D.Phil in Biomedical Imaging (Easter 2020)

Experience

EPSRC/MRC funded D.Phil in Biomedical Imaging, through Oxford-Nottingham Biomedical Imaging Centre for Doctoral Training (October 2015 – April 2020)

One year of structured learning, followed by a four year D.Phil with Prof. Karla Miller and Dr. Mark Chiew, working to use low rank constraints and priors to accelerate fMRI data. Wadham College, Oxford, OX1 3PN.

Internship for National Science Learning Centre (July-Sept 2015)

Worked in Design and Technology, specializing as creative consultant and researcher in fields of 3D printing and biodesign, especially with application to teaching. University of York, YO10 5DD

EPSRC funded internship for Computational Health Informatics group (June-Sept 2014)

Performed multivariate time-series analysis to predict instances of hypotension in at-risk haemodialysis patients. Old Road Campus Building, Oxford, OX3 7DQ

Internship for Computational Health Informatics research group (July-Aug 2013)

Analysed the signal quality of post-treatment dialysis data. Performed validation of a novel system for recording track-and-trigger scores for the NHS. Old Road Campus Building, Oxford, OX3 7DQ

Science Tutor (2015)

Oxford Individual Tuition, Oxford, OX3 7BH

Access Worker/Admissions Runner (2011-2014)

Mansfield College, Mansfield Road, Oxford, OX1 3TF

Youth Worker (October 2008)

St. Michael Le Belfrey, 11/12 Minster Yard, York, YO1 7HH

Bike Mechanic (October-December 2007)

Halfords, 9 Feasegate, York, YO1 8SH

Paper boy (2005 – 2007)

Ward News, 45 York Road, York YO24 4LN

Papers

[Subspace-constrained approaches to low-rank fMRI acceleration](#) (pre-print)

Harry T. Mason, Nadine N. Graedel, Karla L. Miller, Mark Chiew

Conferences

Posters:

Organization for Human Brain Mapping 2017, Vancouver
British Chapter of the Institute for Magnetic Resonance in Medicine Postgraduates, 2018, London
 → Silver medal award
Investigating BOLD, 2018, Oxford
Organization for Human Brain Mapping 2018, Singapore
International Society for Magnetic Resonance in Medicine 2019, Montreal

Power Pitches:

British Chapter of the Institute for Magnetic Resonance in Medicine Postgraduates, 2018, London
 → Gold medal award
Institute for Magnetic Resonance in Medicine, 2019, Montreal

Presentations:

Organization for Human Brain Mapping 2018, Singapore

Skills

- Qualified Level 1 Ultimate Coach (recognized by Sport England) October 2013
- First Aid Certified by St. John's Ambulance 2010-2013, 2017 – 2020
- Full Driving License, June 2010; Pass Plus positive driving (DSA), August 2010
- Competent with MATLAB, LaTeX, Word, Excel, PowerPoint.
- Experience with Python, C, R, html, Linux command line, bash scripts.
- SEDA level 1 teaching award, 2017

Awards

- Duke of Edinburgh's Award (Bronze), 2009
- Academic distinction Award (A levels) (Fulford School), January 2012
- Subject Award (highest achievement, Mathematics) (Fulford School), January 2012
- Collection prize, Mansfield College, February 2012 & November 2012
- Sarah and Peter Harkness Academic Prize, November 2012
- Exhibition, Mansfield College, October 2014
- EPSRC summer internship funding winner, 2014
- Ultimate Frisbee Half Blue (Oxford Sport Award), 2012, 2013, 2015, 2016, 2017
- Outstanding Contribution to Sport – Oxford University Sport Awards, 2020
- Bronze Medal, European Championship Club Finals, 2017 (Reading Ultimate, Mixed Division)

Other

- Senior Prefect, Manor CE School, 2008-2009
- York Christian Youth Holidays (Taskforce team member x2, Leader), Whithaugh, 2010/11/12
- Co-Founder/Head Mansfield Poetry Society, February 2012-2015
- Wadham MCR Poetry Officer, 2017-2020
- Founder/Co-Head Mansfield Living Wage Campaign, 2012-2014
- Standing Committee Member Mansfield Human Rights Forum 2014-2015

- ▶ Oxford University Ultimate (Frisbee) Club, President 2012-13, Women's Coach 2012-2014, Outreach Officer 2014-2015, Alumni Rep 2012-19, Spirit Captain 2016-19
- ▶ Writer for The Show Game, 2013-present, Head University Editor 2016-2019
- ▶ Writer/Editor/Founder at The Cutting Lane Floor, 2017 – present
- ▶ Represented Great Britain Mixed at U23 Ultimate World Championships 2015, London (5th/12)
- ▶ Played for Reading Ultimate at the World Ultimate Club Championships in Ohio, USA (17th/48)