

# Dr Harry T. Mason

Data Scientist/Engineer



[harry.mason@outlook.com](mailto:harry.mason@outlook.com)



+44 7971741925



York, UK



0000-0002-3464-7254

## Education

### D.Phil in Biomedical Imaging

*University of Oxford, Wadham College, 2015-2020*

*Supervisors: Prof Mark Chiew and Prof. Karla L. Miller*

Part of the ESRC/MRC-funded Oxford-Nottingham Biomedical Imaging Centre for Doctoral Training.

One year of Medical Imaging training, before undertaking a D.Phil in the Physics Group at NDCN.

Thesis: *Exploring subspace-constrained approaches to low-rank fMRI acceleration*

### M.Eng in Engineering Science - Class 2.1

*University of Oxford, Mansfield College, 2011-2015*

*Thesis supervisor: Prof Michael A. Chappell*

Specialized in Information and Biomedical Engineering, with general engineering background.

Thesis: *Quantitative analysis of ultrahigh field chemical exchange saturation transfer (CEST) MRI data*

## Work Experience

**Post Doc: FIRST LEAP project with University of York** (Sept 2021-Oct 2023)

Developed novel pipeline for child ECG, performed quality and characterization analysis for signals.

*Supervisors: Prof Stephen Smith, Dr Elena Geangu, Dr Quoc Vuong, Prof Marina Knight*

**Freelance Project: MIRA Rehab** (Feb 2021-Jan 2024)

Developed adherence metrics for exergame physiotherapy data.

*Supervisors: Prof David C Wong, Dr Emma Stanmore*

**Internship: National Science Learning Centre in Design and Technology group** (July-Sept 2015)

Worked as creative consultant and researcher in fields of 3D printing and biodesign, with application to teaching.

*Supervisor: Gemma Taylor*

**Internship: Computational Health Informatics research group in University of Oxford** (June-Sept 2014)

Performed multivariate time-series analysis to predict hypotension instances in at-risk haemodialysis patients.

*Supervisor: Prof David Clifton*

**Internship: Computational Health Informatics research group in University of Oxford** (July-Aug 2013)

Analyzed signal quality of post-treatment dialysis data. Performed validation of a novel system for recording track-and-trigger scores for the NHS.

*Supervisors: Prof David Clifton, Prof David C Wong*

## Papers

Subspace-constrained approaches to low-rank fMRI acceleration

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

EgoActive: Integrated wireless wearable sensors for capturing infant egocentric auditory-visual statistics and autonomic nervous system function 'in the wild'

*Elena Geangu, William Smith, Harry T Mason, A Priscilla Martinez-Cedillo, et al.*

Development and exploratory analysis of a multi-dimensional metric of adherence for physiotherapy e-Health interventions (Under Review)

*Harry T Mason, Siobhán O'Connor, Emma Stanmore, David C Wong*

A complete pipeline for Heart Rate extraction from Infant ECG (Revise and Resubmit)

*Harry T Mason, Stephen Smith, Marina Knight, Elena Geangu, et al.*

## Skills

Highly competent with MATLAB, Python, LaTeX, Word, Excel, PowerPoint ([Github link for code examples](#))

Experience with Linux, bash scripts, R, C, html

SEDA level 1 teaching award, 2017

OSAB Level 2 Adult Safeguarding

UK Coaching Safeguarding and Protecting Children

## Conferences

*ISMRM - Institute for Magnetic Resonance in Medicine*

*OHBM – Organisation for Human Brain Mapping*

### Posters:

OHBM 2017 (Vancouver), 2018 (Singapore)

British Chapter of ISMRM Postgraduates, 2018, London

*Won a Silver medal award*

Investigating BOLD, 2018, Oxford

ISMRM 2019, Montreal

### Power Pitches:

British Chapter of ISMRM Postgraduates, 2018, London

*Won a Gold medal award*

ISMRM, 2019, Montreal

### Presentations:

OHBM 2018, Singapore

## Additional Tutoring Experience

Maths/Science Tutor: Hilltop Tuition (2021)

Science Tutor: Oxford Individual Tuition (2015)

## Small Bio

I am interested in data science and optimisation.

Professionally, I practise application of those skills to health science and other consciously-minded fields.

I play/coach/commentate Ultimate (Frisbee) at elite level and write/edit Ultimate articles. I also write and perform poetry.