

# Dr. Samuel Relton

## PROFESSIONAL EXPERIENCE

---

JULY 2017 – PRESENT

The Univ. of Leeds  
*Research Fellow*

Application of machine learning, statistics, and HPC techniques to routinely collected healthcare data. Requires understanding of relevant legal and ethical restrictions on patient data. Interactions with both clinicians and various researchers in a multi-disciplinary environment.

MARCH 2016 – JUNE 2017

The Univ. of Manchester  
*Postdoctoral Researcher*

Design and implementation of high-performance linear algebra software. Involves use of OpenMP, MPI, GPU programming, and runtime systems for distributed memory computation.

DEC 2014 – DEC 2015

Prozone Sports  
*Statistical Modelling Consultant*

Developing models and metrics to analyse football player performance together with Prof. Ian McHale (Univ. of Liverpool). Combined statistical modelling with network analysis and machine learning to produce a model that determines a players passing ability. Involved handling of large datasets using Python, designing effective features from data, and presenting results to a nontechnical audience.

OCT 2014 – MARCH 2016

The Univ. of Manchester  
*Postdoctoral Researcher*

Developing theory and algorithms relating to functions of matrices. Numerous projects with the Cheminformatics and Statistics groups in Machine Learning, Data Analysis, and Epidemiology.

OCT 2014 – DEC 2014

MathWorks  
*Software Development Consultant*

Replaced a number of MATLAB functions with state-of-the-art implementations based upon my research. The resulting software was incorporated into MATLAB 2015b onwards.

SUMMER 2010 AND 2011

British Government  
*Prototype Software Designer*

Took part in a summer placement programme to prototype novel data analysis tools for further development. Involved stream data mining, geographical data visualization, high-performance computer code, and rigorous testing. Required setup and optimization of a SQL server to store, clean, and analyze data before passing to a browser-based GUI.

📍 72 Holts Crest Way, Leeds, LS12 2AG, UK  
☎ +44 7814374008  
✉ [sdrelton@gmail.com](mailto:sdrelton@gmail.com)  
🌐 [www.samrelton.com](http://www.samrelton.com)

## EDUCATION

---

2011 – 2014 **Ph.D. Numerical Analysis & Scientific Computing**

THE UNIV. OF MANCHESTER  
*Matrix theory, algorithm design, and software implementation.*

2008 – 2011 **B.Sc. Mathematics 1:1**

THE UNIV. OF MANCHESTER  
*Graduated top of year group.*

## SOFTWARE SKILLS

---

Familiar with MATLAB and Python for scientific computing, data analysis, and machine learning. Have also used C and CUDA to produce high-performance computer code.

Developer of the PLASMA linear algebra project and the reference implementation of the batched BLAS standard. Coded a number of functions incorporated in recent versions of MATLAB and have a number of functions freely available on Github.

Experience using Java, C++, SQL, Perl, and Javascript during my work with the British government.

Confident using HTML and CSS to produce websites from scratch.

## PROFESSIONAL ACTIVITIES

---

PUBLICATIONS Book chapter on a model for football players passing ability. Numerous articles on linear algebra and high-performance computing in prestigious journals.

TEACHING Delivered lectures to over 300 engineering students on foundational linear algebra.

CONFERENCES Organized and presented at various conferences, minisymposia, and seminar series globally.