

James G. Wright

Employment

June 2020 – Jan 2021 **Norwegian University of Science and Technology**
Researcher

- Developed a taxonomy of attack vectors and disruptions in grid level energy storage systems, within a modified IEC27005 and FAIR risk frameworks.
- Developed a research and development plan of technical countermeasures.
- Communicated a development plan to academic and industrial stakeholders.

April 2013 – Sept 2013 **Science & Technology Facilities Council, Cockcroft Institute**
Accelerator Physicist

- Built software that interfaced the Versatile Electron Linear Accelerator's control with a particle physics simulation package in python.
- Deployed a MYSQL database to backup and restore experiment data.

Education

Sept 2015 - June 2020 **Royal Holloway, University of London**
PhD Information Security

- Developed and implemented a probabilistic formal method for verifying security protocols against DoS and De-synchronisation attacks in Matlab.
- Deployed the implementation against the Smart Grid protocols IEC61850 and IEC60870. Discovered flaws in the multicast messaging services that allow low packet frequency denial of service attacks, and a de-synchronisation attack against the protocol's control systems.
- Created an abstract model to calculate the probability of success of injection attacks against a device.

Sept 2010 - July 2015 **The University of Manchester** **Result 2:1**
MPhys Physics with Theoretical Physics

- Specialised in Plasma wakefield accelerator theory.

Sept 2012- Oct 2013 **University of California Education Abroad Program**
UC San Diego

Positions of Responsibility

March 2016 - Sept 2017 **Royal Holloway University of London**
Security Ethics Discussion Group Founder and Organiser

- Lead a weekly discussion group on the implications on cyber-security technologies.

Dec 2015 - Sept 2019 **Royal Holloway University of London**
ISG and Maths Staff Student Committee member

- Mediated conflicts between staff and students within the department
- Lead a survey on desk usage within the department

Sept 2014 – July 2015 **University of Manchester**
Physics Department Staff Student Committee Fourth Year Representative

- Lobbied to overturn the department's policy to ban calculators in exams.

June 2014 - Sept 2014 **University of Manchester's Mathematical Physics group**
Intern

- Created a software package, using python and the mayavi graphing library, to model and visualise the motion of groups of vortices on different.

**July 2012 –
Sept 2012**

**University of Manchester’s Popelier group
Intern**

- Analysed a simulation package, written in Fortran 90, to document the underlying mathematics.
- Improved the simulation by implementing more physically realistic a algorithm.

**May 2011 –
May 2012**

**Manchester University Gilbert and Sullivan Society
Treasurer**

- Created a budget that allowed the society to perform at the Royal Northern College of Music opera house, and tour to Buxton international Gilbert & Sullivan festival.
- Liaised with Student Union grant us access to the University’s screensaver system to advertise our production.

Skills

Programming

Proficient in C++, MySQL, Python, and Fortran 90. I have some experience coding OpenMP, and MPI.

IT

Proficient with Microsoft Office, Microsoft Visual Studio, Mathematica and Matlab.

OS

Experience in setting up and securing Linux distributions for file storage.