

# Adam R. Symington

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## Education

### University of Bath

PHD IN CHEMISTRY

BATH, UK

SEPT. 2016 - DEC. 2019

- Thesis submitted - Viva is scheduled for the 13th Feb.
- Collaborative project funded by AWE and the University of Bath
- Research collaboration with the University of Huddersfield, University of Kent and the University of Central Florida
- Highly successful project - 9 peer reviewed publications to date and 5 awards.

### University of Bath

MCHEM IN CHEMISTRY FOR DRUG DISCOVERY

Bath, UK

SEPT. 2012 - JUN. 2016

- Degree Classification: **II:I**
- Masters project - Cerium Oxide Nanozymes - A computational study

## Work Experience

### Postdoctoral Research Associate

FARADAY INSTITUTION / UNIVERSITY OF BATH

Bath UK

JAN. 2020 - PRESENT

- Postdoctoral research position at the University of Bath, funded by the Faraday institution.
- Developing computational simulation and analysis techniques to aid in the prediction and discovery of new Li-ion battery cathode materials.

### Postgraduate Research, Computational Chemistry

UNIVERSITY OF BATH

Bath UK

OCT. 2016 - DEC. 2019

- Computational chemistry project - **Applications** - Nuclear Waste Remediation, Energy Materials, Environmental Chemistry.
- During this project I ran large scale simulations on currently used and new materials in order to generate data that I used to make predictions about the behaviour and properties of these materials.
- This has required the development of bespoke software designed for the specific needs of the project. Full details can be found on my github account (symmy596).

### Postgraduate Teaching Assistant

UNIVERSITY OF BATH

Bath UK

OCT. 2016 - PRESENT

- Throughout the duration of my PhD I have taught undergraduate chemists how to program, specifically focusing on high level programming in **Python** and low level programming in **fortran**.
- I developed a new masters level course focusing on using **Python** programming to better understand and make predictions about the behaviour of materials.
- Part of an ongoing project to develop a new masters course focusing on teaching students how to use **Python** in data analysis.
- Contributed a series of practical workshops designed to introduce PhD students from throughout the university to Unix and programming

### Mathematics for Chemistry Lecturer

UNIVERSITY OF BATH

Bath UK

SEPT. 2016 - MAR. 2017

- Delivery of workshops in fundamental mathematical concepts for chemists, ensuring that all chemistry first year students had consistent mathematical background

### Senior Golf Caddy

ROYAL COUNTRY DOWN GOLF CLUB

Newcastle, N.I

June 2009 - October 2016

- Annual summer job during my high school and university career.
- This job involved quickly building a strong working relationship with a international clients in order to provide advice and knowledge on the course.

## Computational Skills

### PROGRAMMING FLUENCY & SOFTWARE FAMILIARITY

**Expert** Python, Git

**Experienced** FORTRAN90, HTML, CSS, Shell, Jupyter-Framework

**Beginner** Julia

### SOFTWARE DEVELOPMENT

**surfinpy** surfinpy is an open-source Python library to facilitate the analysis and visualisation of large scale ab initio calculation data. surfinpy has been published in the Journal of Open Source Software (Symington et al., J. Open. Source Soft. 4, 1210, 2019).

**polypy** polypy is an open-source Python library to designed to analyse molecular dynamics simulation data. polypy is built to read large datasets associated with molecular dynamics trajectories and from these produce insightful statistical information. polypy has been used in two pieces of published material science to data.

## Awards

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### INTERNATIONAL

2018      **Winner**, Materials Science and Metallurgy Award - Plutonium Futures the Sciences 2018      *San Diego, USA*

### DOMESTIC

2019      **Winner**, Computational Chemistry Prize - Bolland Symposium      *Bath, UK*

2019      **Winner**, Best Presentation - High Performance Computing Symposium      *Bath, UK*

2018      **Winner**, Computational Chemistry Prize - Bolland Symposium      *Bath, UK*

2017      **Winner**, Material Horizons Award - SSCG      *Reading, UK*

2017      **Runner Up**, Presentation Award - Computational Collaborative Project 5 AGM      *Glasgow, UK*

## Extracurricular Activity

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### Player / Coach / Captain

*Newcastle / Bath*

DUNDRUM CC | UNIVERSITY OF BATH CC | ROYAL OAK CC | SOUTHSTOKE CC

*2000 - PRESENT*

- I have played cricket as a member of several clubs since the age of 8.
- I played at Dundrum CC between the ages of 12 -24 and captained the first XI during the 2014-2016 seasons.
- I coached the U15/U13/U11 teams at Dundrum for 6 years.

### Cycling

I am a keen cyclist in my spare time and in 2018 I participated in a charity cycle between Lands end and Bristol, raising £4000 for the MS society.