

Lucy Whalley

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Employment History

Northumbria University Vice-Chancellor's Research Fellow	Newcastle upon Tyne, UK Oct. 2020–present
Imperial College London Research Assistant in Solar Cells	London, UK Oct. 2019–March 2020
Arden Primary School Mathematics Teacher	Birmingham, UK Jan. 2013–Aug. 2015
Anawim Women's Centre Research Assistant	Birmingham, UK April 2014–April 2015

Academic History

Imperial College London PhD in Materials Science	London, UK Oct. 2015–Sep. 2019
Birmingham City University PGCE in Post-Compulsory Education	Birmingham, UK Oct. 2011–Jul. 2012
University of Birmingham MSci in Theoretical Physics, First Class Honours	Birmingham, UK Oct. 2007–Jul. 2011

Funding

Software Sustainability Institute Fellowship Programme	£3,000 March 2019
Defect Functionalized Sustainable Energy Materials Hub Bilateral Exchange Bursary	£3,000 Jan. 2019
Institute of Physics Computational Physics Group Travel Bursary	£300 March 2018

Research Activities

- Modelling the structural, optical and transport properties of photovoltaic materials
- Simulating atoms and electrons using quantum chemistry methods and solid-state physics
- Developing open-source software to analyse simulation data
- Using national and international High Performance Computing resources
- Publishing in peer-reviewed journal (10 articles with >400 citations)
- Presenting my work at conferences, symposia and seminars (including oral presentations in the UK, US, Korea and France)

Achievements

- Awarded the Thomas Young Centre at Imperial College London PhD Thesis Award (Jan. 2020)
- Awarded Software Sustainability Institute Fellowship (March 2019)
- Awarded poster prize at the ICL Department of Materials postgraduate research day (March 2018)
- Certified as a Software Carpentry instructor (Dec. 2017)
- Teaching judged as Outstanding by Ofsted (July 2013)
- Qualified Teacher Learning and Skills Status awarded from the Institute for Learning (Jan. 2013)
- SWJ Smith prize for graduating with the highest mark in the MSci programme (July 2011)

Teaching Experience

- Teaching programming (shell scripting) and version control (Git) to postgraduate students and staff at Imperial College London, Northumbria University and the University of Bath
- Developing a ‘programming in Python’ workshop for PhD students in the Centre for Doctoral Training in New and Sustainable Photovoltaics and the Centre for Doctoral Training Renewable Energy Northeast Universities
- Tutoring mathematics to undergraduate students on the Materials Science programme at Imperial College London
- Teaching national curriculum mathematics at Arden Primary School in Birmingham
- Designing and delivering workshops for trainee teachers in the Greet Teaching School Alliance

Supervision [Northumbria University]

- Supervising graduate students on the Electrical Engineering Advanced Practice programme
- Supervising undergraduate project students on the Electrical Engineering programme
- Co-supervising a PhD student in the Physics department

Memberships and Activities

- Member of the Materials Chemistry Consortium, Institute of Physics, Royal Society of Chemistry, Society of Research Software Engineers and Society for Education and Training
- Peer-reviewer for The Journal of the American Chemical Society, The Journal of Chemical Physics, Nature Communications and The Journal of Open Source Software
- Past committee member of the Imperial College London Research Software Community
- Local co-organiser of the *Thomas Young Centre 5th Energy Workshop: From Atoms to Applications*

Selected Talks and Outreach

- [Invited talk] *The impact of nonparabolic bandstructure on the properties of photovoltaic materials*, Centre for Quantum Research and Technology seminar series, University of Oklahoma (Nov. 2020)
- [Invited panel member] *Research software engineering best practices: why aren't we implementing them?*, Fourth Conference of Research Software Engineering, University of Birmingham (Sept. 2019)
- [Outreach talk] *My life as a Materials Scientist*, The Girls in Physics Series, Highgate School London (April 2019)
- [Academic talk] *Breaking periodicity: vibrations of defects in photovoltaic materials*, CECAM Anharmonicity and Thermal Properties of Solids, Paris (Jan. 2018)
- [Public talk] *Saving the world with quantum mechanics*, The Gunmaker's Arms, Birmingham (July 2017)