Alexander Punter

DOB: 20/05/1991 | ajpunter@gmail.com

EDUCATION

AIX-MARSEILLES UNIVERSITY
PhD in Chemical Sciences
Oct 2019 | Aix-Marseilles University, France

DURHAM UNIVERSITY
MPhys in Theoretical Physics
Aug 2013 | Durham, UK

KING EDWARD'S SCHOOL
Aug 2009 | Bath, UK

LINKS

Github:// cvzj57
LinkedIn:// alexander-punter

ACADEMIC FOCUSES

DOCTORAL
Quantum Chemistry
Computational Chemistry
Hartree-Fock Theory
Density Functional Theory
Computational Modelling
Numerical Methods

UNDERGRADUATE
Quantum & Classical Physics
Condensed Matter Physics
Astrophysics
Theoretical Physics
Functional Programming

SKILLS

PROGRAMMING
Python • Shell • Django • Git • Latex • Selenium • Sikuli • Javascript

QUANTUM CHEMISTRY SOFTWARE
Turbomole • GAMESS • Molden • VMD

OTHER
French (approximately B2 level) • Full UK Driving License • RCM Keyboard Grade 6

INTERESTS

Playing music (violin) • Reading (fiction & non-fiction) • Language-learning (French & Mandarin) • Motorcycling

RELEVANT ACADEMIC EXPERIENCE

AIX-MARSEILLES UNIVERSITY | Doctoral Student
Sep 2016 – Nov 2019 | Marseilles, France

- PhD Title: 'Molecular Pseudopotentials for the study of Molecular Properties'
- Supervisors: Dr Yannick Carissan & Dr Paola Nava, CTOM group
- Developed a pseudopotential method for the replacement of small carbon fragments in molecular calculations.
- Analysed the performance of this method across a wide variety of molecules and properties.
- Wrote the MOO program to facilitate the easy use of these pseudopotentials, as well as the optimisation of new ones.
- Also worked on establishing reaction mechanisms for Cobalt complexes.
- Conference Presentations: Annual Northern Universities Meeting on Chemical Physics 2019, Francophone Theoretical Chemists' Conference 2018
- Conference Posters: International Conference on Quantum Chemistry 2018, Winter School in Theoretical Chemistry 2018, CECAM DFT School 2017

PUBLICATIONS

2019	Int. J. Quantum Chem.	Atomic pseudopotentials for reproducing π-orbital electron behavior in sp^2 carbon atoms
2019	Dalton Transactions	When Cobalt-Mediated [2+2+2] Cycloaddition Reaction Dares Go Astray: Synthesis of Unprecedented Cobalt(III)-Complexes
Submitted for review	-	Pseudopotential-Fragment Spectroscopy for Organic Molecules and Carbon Allotropes

OTHER EXPERIENCE

TURNITIN UK | QA Associate
Jan 2016 – Jul 2016 | Newcastle, UK

- Tested various parts of the Turnitin software on multiple platforms (Blackboard, Moodle) both manually and through automated teste suites.
- Involved work primarily in Python (via Selenium) with some Java.
- Worked in an Agile development team.

JOINERYSOFT | Junior Developer
Oct 2013 – Dec 2015 | Shepton Mallet, UK

- Developed an automated test framework for the Joinerysoft package, as well as a web interface.
- Involved working extensively with Python (Django, Sikuli).

DURHAM UNIVERSITY | Undergraduate
Sep 2009 – Aug 2013 | Durham, UK

- Master's Project: 'The Modelling of Active Galaxies' A mathematical and computational project to derive a velocity law describing the mass outflow from Active Galactic Nuclei, with a simulated spectrographic datacube to compare with real data.

VOLUNTEER WORK

Project VOICE	Finance & Technical Support 2016-current	Proofreader, typesetter, graphic designer, website maintenance, accounting.
St John Ambulance	Volunteer 2009-2016	Covered events around the country, both as a first aider and an ambulance attendant.
St John Ambulance	Unit Finance Officer 2011-2013	Managed finances for budgeting, equipment and training.
St John Ambulance	Heartstart Co-ordinator 2010-2011	Organised and ran charity and commercial first aid courses.