Christopher Everett

cn.everett@outlook.com | +44 7413717710

EDUCATION

DPHIL IN ASTROPHYSICS
University of Oxford,
St Anne's College
Oct 2022 - Present | Oxford, UK

MSC IN SPACE SYSTEMS ENGINEERING
University of Southampton
Sep 2021 - Sep 2022 | Southampton, UK
Modules: CFD, Space Propulsion, Space Systems Engineering, Spacecraft Structural Design, Instrumentation and Orbital Mechanics, Concurrent Engineering Design, Advanced Astronautics, Space Plasma Physics
Classification: Distinction

MPHYS IN PHYSICS
University of Oxford,
Keble College
Oct 2017 - June 2021 | Oxford, UK
Modules: Mathematics Methods, Classical Mechanics, Thermal Physics, Electromagnetism, Optics, Quantum Physics, Fluid Mechanics, Nuclear and Particle Physics, Special & General Relativity, Condensed Matter Physics, MHD, Theoretical Physics
Classification: First-Class

A LEVELS
The Judd School
Sep 2015 - Jun 2017 | Tonbridge, UK
Subjects: Maths, Further Maths, Physics and Chemistry
Results: 3 A*'s and a Distinction 3

GCSES
The Judd School
Sep 2012 - Jun 2015 | Tonbridge, UK
Results 7 A*'s, 2 A's & a B

SKILLS

COMPUTING
Matlab • Inventor • Solidworks
Ansys • Autodesk CFD • Excel • LaTeX
Mathematica • PLUTO

COMPETENCIES
Teaching • Analysis
Independent research • Innovation

RESEARCH

UNIVERSITY OF OXFORD | DPhil Project
Oct 2022 - Present | Oxford, UK
Working under the supervision of Prof. Garret Cotter to simulate gamma ray emission spectrum of active galactic nuclei by developing a time-dependent, non-thermal, anisotropic, kinetic model of particle interactions.

UNIVERSITY OF SOUTHAMPTON | Masters Project
Dec 2021 - Sept 2022 | Southampton, UK
Worked under the supervision of Dr. Charlie Ryan to model and experimentally assess the validity of a novel plasma thruster concept for spacecraft propulsion, using magnetic reconnection as the plasma acceleration mechanism. This work was presented at the AIAA SciTech 2023 Conference and improved simulations are ongoing.

UNIVERSITY OF OXFORD | Masters Project
Oct 2020 - July 2021 | Oxford, UK
Worked under the supervision of Prof. John Gregg to develop a new performance envelope for oxygen-ethanol bipropellant micro-rocket engines based on advancements in micro-scale metal additive manufacturing technology. This work received the Johnson Memorial Prize from the University of Oxford for best MPhys project in Atmospheric, Oceanic and Planetary Physics

EXPERIENCE

MAGDALEN COLLEGE OXFORD | Non-Stipendary Lecturer
Jan 2021 - Present | Oxford, UK
- Tutoring undergraduate 2nd and 3rd year physics courses in mathematical methods, nuclear and particle physics and fluid dynamics. In addition to conducting undergraduate admissions interviews for the 2023 cohort.

OXFORD PHYSICS TEACHING LABORATORY | Practical Designer
Aug 2021 - Sept 2021 | Oxford, UK
- Designed a new practical for the 3rd year undergraduate physics course involving analysis of a shear-layer instability generated in a differentially rotating water tank.

OXFORD UNIVERSITY ROCKETRY SOCIETY | Member
Oct 2018 - Oct 2019 | Oxford, UK
- Designed and simulated structure and aerodynamics of a rocket entered into UKSEDS National Rocketry Competition.

DELTA MOTORSPORT | Week-long work experience
Summer 2016 | Silverstone, UK | www.delta-motorsport.com
- Modelling electronic components in Solidworks, producing cables for electric cars, coding systems using MATLAB, and welding experience.

OXBOTICA | Week-long work experience
Summer 2016 | Oxford, UK | www.oxbotica.com
- Designed components in Solidworks, manufactured supports for their autonomous car, coded on Arduinos, and learnt how an autonomous car interprets sensor data to detect and avoid objects.

AWARDS AND ACHIEVEMENTS

2021	Johnson Memorial Prize from the University of Oxford Physics Department for best MPhys project in Atmospheric, Oceanic and Planetary Physics
2011 - 2021	Athletics success, represented Kent, during my A Levels, and the University of Oxford in the High Jump, being placed 27th nationally (in 2019) with a PB of 1.89m. Coaching the Oxford high jump squad during the period of 2020-2021
2018	Prize from Keble College for my paper titled *'Beamed Antimatter Propulsion'*
2016 & 2018	Completed two half marathons with a PB of 1:27.55
2016	Received the joint Physics and Mathematics prize at the Judd School
2015	Received the joint Physics and Mathematics prize at the Judd School
2014 & 2015	Competed in the National Team Maths Challenge, placing 1st and 2nd nationally in the respective years

PUBLICATIONS

Everett, Christopher N. and Charles N. Ryan (2023). "A linear magnetic reconnection based plasma thruster for spacecraft propulsion". In: *AIAA SCITECH 2023 Forum*. doi: 10.2514/6.2023-0448.