

Orson Hart

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Qualifications

GCSEs: 11 Grade 9 GCSEs. (2018)
A Levels: 4 A*s in Maths, Further Maths, Physics, and Computer Science. (2020)
Degree: First Class BA in Mathematics from University of Oxford. (2023)
MMath in Mathematics from University of Oxford. (To be completed 2024)

Achievements

- Ranked 4th out of a cohort of 196 in the Oxford Prelims Maths exams. (2021)
- Ranked 8th out of a cohort of 161 in the Oxford Part A Maths exams. (2022)
- Ranked 10th out of a cohort of 149 in the Oxford Mathematics BA qualification. (2023)
- Received Ronald Bartlett Prize award. (2021)
- Awarded Undergraduate Research Bursary by the London Mathematical Society. (2022)
- Awarded Rokos Award Internship by Pembroke College (2022, 2023)

Experience

- Summer research project under the supervision of Chris Breward and Peter Howell. (2023)
- Summer research project under the supervision of Peter Howell. (2022)
- Familiar with using Python, Mathematica, and \LaTeX .
- Completed individual and group academic projects and delivered public presentations.
- Provided data analysis for the UK Met Office.
- Maths Rep. at Pembroke College, Oxford. (2021-2022)
- Member of the Oxford Maths Ambassadors team. (2021)

Projects

2023: Summer Research Project

Worked with Prof. Chris Breward and Prof. Peter Howell to develop understanding of the mathematical modelling of overflow fusion, an industrial process used in glass manufacturing by companies such as Corning Inc. This project developed skills in mathematical modelling, fluid dynamics, asymptotic analysis, and computational mathematics.

2022: Summer Research Project

Worked with Prof. Peter Howell to complete active research on the effects of pressure-dependent contact resistance on a physical system of metal pins in frictional thermoelastic contact with a moving surface. This project developed skills in mathematical modelling, differential equations, stability analysis, and computational mathematics.

2018-2020: Exeter Maths Certificate

As part of the EMC program I completed 3 academic projects on a range of topics.

Graph Theory: Explored the field of graph theory and its applications and presented the results to a large audience.

Met Office: Worked with the UK Met Office to analyse weather station data in order to account for anomalous results, and presented our findings to a team of experts.

Machine Learning: An independent project which broadened my understanding of machine learning and developed skills in implementing neural networks.

2020: Pycross

A picross puzzle suite developed using Python and pygame. This project developed skills in programming, algorithm design, software development and documentation.