WILLIAM FORD

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RESEARCH INTERESTS

PDE, optimal transport, optimal control, stochastic control, mean-field games.

EDUCATION

École Polytechnique/Paris-Saclay M2 Optimisation: In Progress *Sept 2024 – Aug 2025*

Second year master program covering theoretical aspects of optimisation, taking modules focusing on optimal transport, optimal control and PDEs, game theory and Stochastic control, as well as mean field games.

Durham University MSc Mathematics: First Class Honours – 89% *Sept 2023 – Aug 2024*

Focus on topics at the intersection of analysis and probability, taking modules Functional analysis, PDEs, Stochastic Analysis, Ergodic Theory, Probability and Percolation theory, Combinatorics.

Thesis: "*Partial regularity for optimal transport maps between uniform measures*" Supervisor: *Dr Alpár Mészáros*

Durham University BSc Mathematics: First Class Honours – 82% *Oct 2020 – Jul 2023*

I studied a broad range of topics covering analysis, algebra, probability and statistics, attaining first class marks in every module taken. In my final year I specialized in analysis and topology.

Thesis title: *"Normal Families in Complex Analysis"* Supervisor: *Dr Wilhelm Klingenberg*

Queen Elizabeth Grammar School Penrith *2013 – 2020*

AWARDS AND HONOURS

2024 €11000 Sophie Germain M2 Scholarship, Fondation Mathématique Jacques Hadamard.

2021 Norton Prize for outstanding performance in science, Durham University.

TEACHING EXPERIENCE

Undergraduate Tutorial Leader and Assessment Marker | Durham University *Sept 2023 – Present*

- lead weekly undergraduate tutorials for two classes of 13 Calculus I students
- mark biweekly assignments for 7 Linear Algebra/Calculus tutorial groups
- provide students with a platform to ask questions and further their understanding

Mathematics Tutor | MyTutor.co.uk *Mar 2021 – Sept 2021*

- tutored struggling GCSE and A-level maths students in both 3 to 1 and 1 to 1 settings
- helped develop students problem solving skills and confidence approaching unseen material
- focused on building intuition for difficult topics rather than memorisation of techniques

WORK EXPERIENCE

COVID-19 Support Staff | Durham University *Sept 2021 – Feb 2022*

- worked with a diverse team of students and university staff to run lateral flow test centres
- high-pressure environment demanded strong communication and teamwork among staff

IEUK Technology Internship | Bright Network *Jun 2020 – Jul 2020*

- virtual internship working with companies including Amazon, Bloomberg and Google
- learned skills of problem solving and project management in software development

Languages: English (Native), French (Level B2 CEFR), German (Level A2 CEFR).

REFERENCES

Available on request