

WILLIAM HARWOOD

PROFILE

A highly accomplished mathematician currently studying **Mathematics at Trinity College, University of Cambridge**, serving as a **Trinity College Choral Scholar** and recognised as a **Global Talent Fund BIG Scholar**.

Awarded a **Bronze Medal at the International Physics Olympiad 2025**, demonstrating exceptional analytical skill and high-level problem-solving ability on the global stage. Selected as **First Reserve for the International Mathematical Olympiad UK Team 2025**, and a member of the **UK Team at the Balkan Mathematical Olympiad 2024**, earning an Honourable Mention.

Accepted into **British Mensa** at age 10 and consistently ranked among the UK's top young mathematicians, with an extensive record of national excellence across multiple Olympiad-level competitions. A self-taught Python and C++ programmer, twice invited to the **IOI UK Team Selection Camp** for placing in the **Top 15 UK programmers** in the British Informatics Olympiad.

Combines rigorous academic capability with significant creative and performance strengths, holding **ABRSM Grade 8** in both voice and piano and contributing extensively to choral music and leadership.

A disciplined, intellectually curious, and reliable team member who thrives in high-performance environments and seeks continuous achievement.

A keen rower for **Trinity College First and Third Boat Club**, building on years of junior rowing experience and valuing the importance of physical fitness. Recognised for leadership, mentoring, and a positive, collaborative approach—supporting and inspiring others through Olympiad mentoring, tutoring, and wide school representation. Calm, articulate, and confident under pressure, combining analytical precision with creativity and resilience.

CONTACT

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EDUCATION

Trinity College, University of Cambridge
October 2025 – June 2028
BA Mathematics (Mathematical Tripos)
Choral Scholarship - Trinity College Chapel Choir

Nottingham High School
September 2014 – July 2025
A Level – 4 x A* Further Maths, Maths, Computer Science, Physics
GCSE – 8 x Grade 9, 1 x Grade A*, 1 x Grade 8
FSMQ Additional Maths – Grade A (highest grade)

ACADEMIC HONOURS AND AWARDS

Global Talent Fund BIG Scholar 2025

International Physics Olympiad Team (IPhO) Paris 2025 – Bronze Medal

International Mathematical Olympiad Team (IMO) Australia 2025 – First Reserve

Balkan Mathematical Olympiad Team Bulgaria 2024 – Honourable Mention

UK Mathematics Trust
BMO2 – Distinction 2022, Merit 2023, Distinction 2024, Distinction 2025
BMO1 – Merit 2020, Merit 2021, Distinction 2022, Distinction 2023, Gold Medal 2024
Maclaurin Olympiad – Silver Medal 2023
Hamilton Olympiad – Gold Medal 2022
Cayley Olympiad – Medal (no colours due to Covid) 2021
JMO – Distinction 2019

British Physics Olympiad (BPhO)
Round 1 – Top Gold Award 2024 and Top Gold Award 2025
Round 2 – Silver Award 2024 and Gold Award 2025

British Astronomy and Astrophysics Olympiad (BAAO)
Round 2 - Gold Award 2025

British Informatics Olympiad (BIO)
Top 15 UK 2024 and 2025 – UK Team Selection for the IOI Invitee

British Algorithmic Olympiad (BAO)
4th Place UK 2024 and 6th Place UK 2025

Oxford University Computing Challenge (OUCC)
National placings: 2nd, 2nd, 1st, 17th, 9th, 4th (2019 – 2024 respectively)

ADDITIONAL CO-CURRICULAR AWARDS

Royal Society of Chemistry
Regional Finalists in Top of the Bench Team Competition 2023
Immerse Education
Mathematics Essay Scholarship Winner 2023
Computer Science Essay Scholarship Winner 2022
Pioneer Creative Maths Challenge
National Winner 2021
Channel 4 Child Genius
Second Place in Series 6 hosted by Richard Osman. A contest to find Britain's brightest eight to twelve-year-old 2019
UK Schools Animation Competition
National Winner of Best Educational Film 2018
UTalk Junior Language Challenge
Second Place nationally and Winner of the Laetitia Collender Award 2017

HOBBIES

Singing – Trinity College Chapel Choir Bass Scholar; ABRSM Grade 8 Distinction (2024); former Nottingham High School Chamber Choir Bass, Founder and Leader of Boys' Barbershop Quartet, and Director of Maples' House Choir

Piano – ABRSM Grade 8 Merit (2022)

Rowing – Competitive rower for Trinity College First and Third Boat Club; former competitive rower for Nottingham & Union Rowing Club

Hockey – Former Nottingham High School 1st XI Goalkeeper (2023-2025)

Athletics – U15 Nottinghamshire County High Jump Champion (2022)

Drama – Dancer in school production of Chicago (2023)

Reading – Kurt Gödel, Alan Turing, Wittgenstein, John Nash, and The Feynman Lectures on Physics

REFERENCES

Mr Paul Spedding
Tutor and Deputy Head (Academic)
Nottingham High School

spedding.jp@nottinghamhigh.co.uk

EXPERIENCE

Susquehanna International Group Discovery Event
April 2026
Competitively selected to attend an event on Quantitative Trading, Equity Research, and Trading Operations.

International Physics Olympiad (IPhO)
UK Team Training Camp 2025.
Oxford Training and Selection Camp 2025.

International Mathematical Olympiad (IMO)
UK Squad Training and Selection Camp 2024 and 2025.
Trinity Training and Selection Camp 2024 and 2025.
Hungary Training Camp 2024.
Oxford Training Camp 2022.

Vehicle Routing Optimisation Project
September 2024 – March 2025
Designed and implemented a vehicle-routing optimisation system using Python, HTML, and JavaScript, achieving a score of 69/70.
- Developed a full-stack solution combining a Python optimisation engine with a web-based user interface.
- Implemented heuristic algorithms to generate efficient routing and scheduling solutions for complex, real-world logistics scenarios.

Internship - Walgreens Boots Alliance
August 2024
Short internship in the International Technology & Advanced Analytics Team.

Immerse Education Academic Insights Summer School Programme – Mathematics
Cambridge Camp 2023.
Project on 'Group Representations and Cayley's Theorem'.

GCSE and A Level Mathematics Tutor
December 2023 – June 2025

ADDITIONAL SKILLS

Python Programming Language
C++ Programming Language
LaTeX Software

VOLUNTEERING

UK Mathematics Trust Volunteer
March 2026 – Present
Assist with pastoral support for training camp attendees and share insights from elite mathematics training and international competitions.

Membership Officer – Trinity College Music Society
March 2026 – Present
Manage inbox communications and process membership payments.

Olympiad Mathematics Mentor
September 2023 – June 2025
Mentored younger students in school for UKMT competitions.

SCHOOL AWARDS

- Muriel Petty Prize for Leadership 2025
- Chris Rossiter Cup for Excellence in UKMT Competitions 2020 – 2025
- Lovell Order for Services to the School 2024
- Awarded Sixth Form Music Scholar 2023
- Sir Thomas White's Entrance Scholar 2018 and Exam Scholar 2023
- Headmaster's Prize for Academic Excellence 2019 – 2022
- Duke of Edinburgh Bronze Award 2021 and Silver Award 2022
- Tamplin Cup for Highest Number of Distinctions 2019 and 2020
- Awarded Founder's Day Representative Scholar 2019
- Awarded Academic Scholarship 2019