

# Oisín Davey

Student of theoretical physics and international competitive programmer

## Skills

### Highly proficient in C++

Competed in hundreds of online contests in C++; represented Ireland internationally in the IOI using the language.

### Programming language acquisition

Comfortable and practised adapting to languages to suit the needs of a project; incorporated C, C++, Python, Go, Typescript, C#, and CSS in major projects; used Java, HTML and Haskell recreationally.

### Tutoring experience

Very familiar teaching small groups/individuals in mathematics, having been involved in leaving cert tuition and having worked with UCC twice to train our international competitive programming Olympiad team.

## Other info

### Academic grade average

91.4% in first year, 93.0% in second year.

### College positions

Chairperson and co-founder of PhysChem society, first year rep for computer science society, committee member of maths society, first year rep in experimental physics department.

Microsoft office specialist master certificate.

625 points in leaving cert.

## Personal website

Used HUGO and JavaScript to create a personal blog site and online CV.

Available here: [blog.oisín.ie](https://blog.oisín.ie)

Also used python, angular and typescript to create an alternative to the archive provided by the state exams commission to enable my students to access the scripts easily.

Available here: [papers.oisín.ie](https://papers.oisín.ie)

## Contact

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## Experience

### Tyndall, Cork — *Optoelectronics research fellow*

June 2023 - September 2023

Photonics research. Implementing simulation of quantum-confined-stark-effect based electro-absorption-modulators in C++. Using finite difference methods with dynamic spacing in combination with Krylov-subspace eigenvector solvers to solve wavefunctions for electrons and holes in semiconductor materials.

### FarmEye, Athlone — *Software engineer*

June 2022 - September 2022

Research & Development. Making GNSS kits using raspberry pis running RTKLIB. Prototype creation for digital soil penetrometer. Meteorological data acquisition & visualisation with ECMWF python API & QGIS.

### Educandi, Sligo — *Maths tutor & Department head*

June 2021 - September 2021

Tutored 4 hours per week; managed a team of 6 for a content project, totalling 500 pages of notes and questions; handled the assignment of tutoring hours; worked IT for the company. Thereafter I quit to work independently, where all my students achieved H1s and H2s in their leaving cert maths exam.

## Education

### Maynooth University, Kildare — *BSc in Theoretical physics & Pure maths*

August 2021 - Present

Undergraduate degree in pure maths & theoretical physics, having also taken classes in chemistry & experimental physics.

## Awards

### International Olympiad in Informatics

Represented Ireland in 2019, 2020 and 2021, winning a bronze medal in 2021 in Singapore, thereby earning scholarships to the university of Waterloo and the national university of Singapore.

### Monsignor Spelman Prize (Maynooth)

Best performance in second year Mathematics and Mathematical Physics.

### Huxley Prize (Maynooth)

Highest mark and First-class honours mark in the module "Foundations of Euclidean Geometry".

### Delort Prize (Maynooth)

Outstanding performance in Pure Mathematics exams.

### Boole Award (Maynooth)

Highest mark in first year mathematics.

### Stokes Award (Maynooth)

Highest mark in first year mathematical physics.

### Molloy Award (Maynooth)

Highest mark in first year experimental physics.

### All-Ireland Collegiate Programming contest

Placed 1<sup>st</sup> in 2023.

### All-Ireland Programming Olympiad

Placed 2<sup>nd</sup>, 1<sup>st</sup> and 4<sup>th</sup> place in 2021, 2020 and 2019, respectively.

### UK-IE Collegiate Programming competition

Placed 2<sup>nd</sup> & 4<sup>th</sup> place in 2018 & 2019.