

# Welcome to IOP Ireland Physics Hub

**We will be starting at 19:00**

Please turn off your webcam and microphone

This will help reduce background sound and help with bandwidth issues

# ZOOM controls

If you have questions, please post them in the Chatbox



**Chat**

# Introductions

David Keenahan

IOP Physics Coach

Paul Nugent

IOP Physics Coach

# IOP Physics Hub - - evaluation form

Many thanks to the 30 teachers who completed the Hub evaluation survey last May.

Feedback was very positive

Thanks also for the many helpful suggestions

**IOP Physics Hub**

<https://spark.iop.org/events>

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# Themes of the Hubs

Transition Year	5 <sup>th</sup> Year	6 <sup>th</sup> Year	Mandatory	Experiments	Demonstrations	Simulations
Favourites	Bridging	Science Week	Jocelyn video	MCQ	TY	Remote Teaching
Blended Learning	Teaching Tools	Assessment	Inclusion	Choice	Class of 2021	Modern Physics
Nuclear Physics	Particle Physics	Electricity	Electromagnetism	Maths in Physics	Mechanics	The Future
Foundation	Careers in Physics	TY Showcase	Experimenting	Clean Energy	Nuclear Energy	Brecon 2021
Film	Quizzes	Climate Action	Stories	Diagrams	Projects	Numeracy
Graphs	PhET	Tinkercad	Waves	Women in Physics	Medical Physics	Weather forecast
MatrixLS	Scienceonstage	Heat	Light	Physics Formulae	Transition Year	Time
Energy needs	SOPHia project	Brecon 2022	Fusion	Success	Science Week	Physics Help
Isaac Physics	Forensics	Diagram editing	Science Fiction	Physics Olympiad	Astrophysics	Padlet
Dyslexia	X-rays	Inclusive Physics	Force	Force calculations	Revising Physics	CanSAT & SciFest
Communicating	ChatGPT	Classroom Physics	Electricity	Physics World	Oscillation	Popular Physics
oPhysics	Khan Physics	EIRSAT-1	Draft Speification	Instant Physics	Friction	Photons
Particle Detectors	Semiconductors	Spectra	Engineering	Circuits	Make-it-Yourself	Physics Heritage
Biophysics	Physics Miscellany					

# Hub resources on Padlet

**IOP Physics Hub padlet**  
Resource area

**Hub 91 to 99**

- Hub-99\_Biophysics
  - [Hub-99 Notes and Resources](#)
  - [Hub-99 Presentation](#)
  - [Jennifer Gaughran presentation](#)
  - [Jennifer Gaughran solutions](#)
- Hub-98\_Ireland's Physics Heritage
  - [Hub-98 Notes and Resources](#)
  - [Hub-98 Presentation](#)
  - [Eoin Gill's talk on Robert Boyle](#)
- Hub-97\_Make-it-yourself Physics
  - [Hub-97 Notes and Resources](#)
  - [Hub-97 Presentation](#)

**Hubs 81 to 90**

- Hub-81\_Electricity
  - [Hub-81 Notes and Resources](#)
  - [Hub-81 Presentation](#)
  - [Rory - Electric Potential](#)
  - [Rory - Current and Voltage](#)
- Hub-82\_Brecon-2023
  - [Hub-82 Notes and Resource](#)
  - [Hub-82 Chatlog Physics World](#)
  - [Rory using Archimedes for Density](#)
- Hub-83\_Oscillations
  - [Hub-83 Notes and Resources](#)
  - [Rory presentation: Waves & radio](#)
  - [Hub-83 presentation](#)

**Hubs 71 to 80**

- Hub-71\_Dyscalculia
  - [Notes and Resources](#)
  - [Hub-71 Presentation](#)
  - [Anne O'Shea - Dyscalculia](#)
- Hub-72\_X-rays
  - [Notes and Resources](#)
  - [Hub-72 Presentation](#)
- Hub-73\_Inclusive Physics
  - [Notes and Resources](#)
  - [Hub-73 Presentation](#)
  - [Will Stark vision impaired physics](#)
- Hub-74\_Force
  - [Notes and Resource](#)

**Hubs 61 to 70**

- Hub 61\_Success & Success
  - [Notes and Resources](#)
  - [Success - Richard Moynihan](#)
  - [Structure strips - R Moynihan](#)
  - [Solar Eclipse 1 - R Geoghegan](#)
  - [Solar Eclipse 2 - R Geoghegan](#)
- Hub 62\_\_Science Week 2022
  - [Notes and Resources](#)
  - [Hub-62 Presentation](#)
  - [Science--Tullamore - Noreen Flynn](#)
  - [Paper Poppers - Mary Gorey](#)
  - [Sample Science Week Programme](#)
- Hub-63\_Physics Help

Hub resources are available at: [IOP Physics Hub padlet](#)

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# Big news this week



The image shows the cover of a document titled 'Curriculum Specification for Leaving Certificate Physics'. The cover has a dark orange background with a lighter orange geometric pattern. In the top left corner, there is a harp icon and the text 'An Roinn Oideachais Department of Education'. The main title is in large white font. Below the title, it says 'For introduction to schools in September 2025.' and 'Prepared by the National Council for Curriculum and Assessment (NCCA)'.

An Roinn Oideachais  
Department of Education

## Curriculum Specification for Leaving Certificate Physics

For introduction to schools in September 2025.  
Prepared by the National Council for Curriculum and Assessment (NCCA)

The new  
Curriculum Specification  
for Leaving Certificate  
Physics

was published on 2 Sept

and will be the theme of  
our next IOP Physics Hub  
on 19 Sept.

<https://www.curriculumonline.ie/>

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We meet to share ideas and support each other in the teaching of Physics

Theme

## **Frontiers of Physics**

upcoming events



# Overview

## Frontiers of Physics

IOP's annual conference for teachers of physics

It began over 20 years ago and has been a phenomenal success due in large measure to Paul Nugent.

This annual gathering of the clan takes place on 3<sup>rd</sup> Saturday in September

Frontiers offers a blend of lectures, workshops, exhibitors, and networking opportunities.

Close to 100 teachers attend Frontiers from all parts of Ireland

This year Frontiers will be on Sat 21 Sept in Dublin.

Paul Nugent

**Frontiers of Physics**  
**2001-present**  
**A personal selection of highlights**

**Physics Hub Sept 5<sup>th</sup> 2024**

**Paul Nugent**

**Iop Education Coach**

**[paul.nugent@gmail.com](mailto:paul.nugent@gmail.com)**

**@PhysicsIreland**

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# Past to Present Frontiers of Physics

Year	Venue	Year	Venue	Year	Venue	Year	Venue
2001	TCD	2008	UCD	2015	NUIG(V)	2022	NUIM
2002	UCC	2009	WIT (V)	2016	DIT(V)	2023	Cancelled
2003	NUIG	2010	NUIM (V)	2017	UL (V)	2024	IOP Dublin
2004	DCU	2011	GMIT (V)	2018	UCD (V)		
2005	UL	2012	TCD (V)	2019	WIT (V)		
2006	DIT	2013	UCC (V)	2020	Online		
2007	CIT	2014	DCU (V)	2021	Online		

**11 Conferences**

**70+ Videos**

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# @PhysicsIreland youtube channel



<https://www.youtube.com/@PhysicsIreland>



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physics promo 1 video  
IOPI Frontiers Of Physics 2009 WIT 5 videos  
IOPI Frontiers Of Physics 2010 NUIM 1 video  
IOPI Frontiers Of Physics 2011 NUIG 4 videos  
IOPI Frontiers Of Physics 2012 TCD 8 videos  
IOPI Frontiers Of Physics 2013 UCC 8 videos

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IOP Frontiers Of Physics 2014 DCU 6 videos  
IOP Frontiers Of Physics 2015 NUIG 8 videos  
IOP Frontiers Of Physics 2016 DIT 6 videos  
IOPI Frontiers Of Physics 2017 UL 5 videos  
IOPI Frontiers Of Physics 2018 UCD 3 videos  
IOPI Frontiers Of Physics 2019 WIT 5

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## Frontiers of Physics 2024

# Frontiers of Physics

**21 September 2024**

Institute of Physics, Dublin, Ireland



# Frontiers Programme 2024

## Frontiers Programme 2024

09:00-09:30 Registration

09:30-10:00 Fiona Longmuir, IOP **Welcome & Surviving the Physics Ecosystem**

10:00-10:45 Prof Kate Maguire, Trinity College Dublin **Extreme explosions and catastrophic collisions**

10:45-11:15 Coffee, Exhibition & networking

11:15-12:00 **Workshops 1 & 2**  
(Break)

1215 – 1300 **Workshops 3 & 4**

1300 – 1400 Lunch

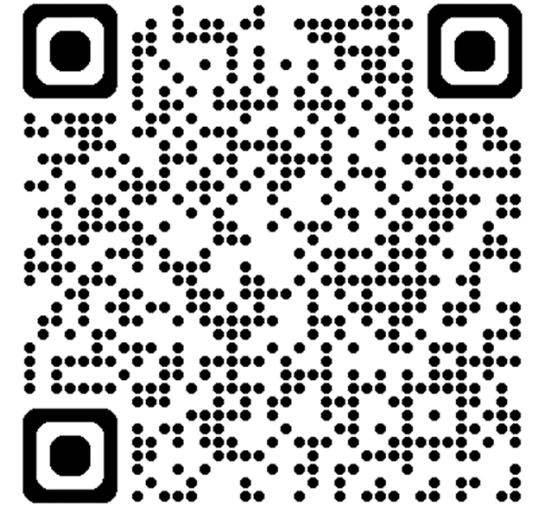
1400 – 1430 Helen van Eesbeck, Oide **Introducing Oide - the new support service for teachers**

1430 Close



# Workshops at Frontiers 2024

Workshop 1	Workshop 1
Digital Learning in Physics Education: Pedagogy and Assessment of Scientific Inquiry (EPI•STEM) Professor Geraldine Mooney-Simmie & Dr Vo Van De , University of Limerick	A hands-on, minds-on optics workshop with Micro:Bits  Atlantic Technological University
Workshop 3	Workshop 4
Strategies for Physics Teachers to Help Demystify Physics for Students  Agata Lynch, University of Limerick	5*s, Space, Surveyors, and Students  Helen Cullen, Maynooth University



Registration:

<https://iop.eventsair.com/fop2024/registration>

# Frontiers 2024 will take place in the new IOP building

Frontiers 2024 will take place in the new IOP building

## Venue

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### Institute of Physics

35 Westland Row  
Dublin 2  
D02 XY04  
Ireland



# Frontiers online 2024

Frontiers online 2024

Tues 17 September

1800 – 1845     **Beans!**     Sue Woolhouse & Eleanor Wylie

1900 – 1945     **A taste of Wales**     IOP Wales Coaches

Wed 18 September

1800 – 1845     **SENSE\_STEAM project**     Sasha Brown  
Western Norway University of Applied Sciences

Thurs 19 September

1800 – 1845     **Maths Anxiety**     Dr Flavia Santos UCD

1900 – 1945     **IOP Physics Hub**     Theme:     New LC Physics Specification

Registration:     <https://iop.eventsair.com/fop2024/registration>

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# Other up-coming events

Other up-coming events

# The next IOP Physics Hub

Next IOP Physics Hub  
will be on 19 September 2024

Theme:

Curriculum Specification  
for Leaving Certificate  
Physics

Booking at: <https://spark.iop.org/events>

Resources including Notes, Weblinks & Presentations  
will be emailed to attendees and  
will be available at the following link:

[IOP Physics Hub padlet](#)

**IOP Physics Hub**

<https://spark.iop.org/events>

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# IOP LC 2024 Webinar

## *Identifying student misconceptions Made evident in the marking of the 2024 LC Physics Higher Paper*

**7pm Thurs Sept 12<sup>th</sup> 2024 online**

*Join us online as we discuss the marking schemes for this year's paper.*

*Common student mistakes and misconceptions will be emphasised.*

*Teachers are advised to download paper and marking scheme from [www.examinations.ie](http://www.examinations.ie)*



**Booking** <https://bit.ly/IOPlc2024>

IOP Physics Hub Wed 2 October at 1800

For our Hub in October, we link up again with the IOP Brecon conference for a special session on Wed 2 Oct at 6pm:

"Physics around the World"

Around the World in 90 minutes – join colleagues from **America, Ireland, Scotland, Spain, New Zealand and England** to share some of the wonders of Physics. We will share demonstrations, resources and ideas highlighting the very best of Physics education wherever you are in the world.

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Cymru | Wales

Welsh Physics Teachers  
Conference - Brecon

**30th Sep - 4th Oct 2024**

<https://www.eventbrite.com/cc/iop-wales-welsh-physics-teachers-conference-2024-934219>

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