

NOV  
24  
2021

## Physics in Action

For A level and IB students

Five sessions of phenomenal physics will be brought to you by the brightest lights in the field at Physics in Action this autumn! Join us for a day full of inspiration, challenge and experimentation across the breadth of physics. A special session on examination success will provide students with the tools to excel, and there will be plenty of interactivity throughout the day - prepare for polls, quizzes and putting your questions to the scientists at Physics in Action!

- Resistance is futile: the science of superconductors
- Do have what it takes to be an astronaut?
- What we don't know about the Universe
- Lighting the way to a healthy brain
- Using sound to prevent disasters



University of Warwick,  
Coventry,  
CV4 7AL



**Venue: £22 +VAT \***

Plus one COMPLIMENTARY staff ticket per 10 students.

\*VAT may be reclaimable please check with your finance department

ttp is the leading provider of inspirational, informative, Education in Action study days for A-level, IB, BTEC and GCSE students.

Award-winning, world-class speakers

Cutting-edge content

Thought-provoking demos and presentations

Examination hints, tips and guidance

Modestly priced to offer access to all

Complimentary staff ticket for every 10 students booked

**Bookings can be amended up to 45 days before the event day**



Education  
in ACTION

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# Physics in ACTION

## Resistance is futile: the science of superconductors / Andrew Steele Scientist, author and presenter



From super-fast, levitating trains to super-powerful magnets which allow us to see inside the body, Andrew will take us on a tour of the cutting edge of superconductor physics.

Andrew is a scientist, presenter, and author of *Ageless: The new science of getting older without getting old*. He has a PhD in physics, worked as a computational biologist, and talks about science on TV, radio and YouTube.



## Do have what it takes to be an astronaut? / Suzie Imber University of Leicester



Join Suzie to hear about what it takes to become a scientist and an astronaut, discuss the commercialisation of the space industry and the future of space travel.

Suzie Imber is an Associate Professor of planetary science, and the winner of the BBC series *Astronauts: Do You Have what it Takes?*



## What we don't know about the Universe / Chris Lintott University of Oxford



Modern astronomy has made spectacular progress in understanding the physics of the Universe. In this talk, Professor Chris Lintott, astrophysicist and presenter on BBC's *Sky at Night*, will focus on the big questions that these discoveries raise - and the instruments and space probes that will resolve them in the decades to come.

Chris Lintott is a professor of astrophysics at the University of Oxford, and is Principal Investigator of the Zooniverse citizen science project. He is best known as co-presenter of the BBC's long running *Sky at Night* program and author of *'The Crowd and the Cosmos'*.



## Lighting the way to a healthy brain / Gemma Bale University of Cambridge



How could an old-fashioned light bulb revolutionise hospital brain monitoring? Gemma will show you how build a machine to measure brain activity and why this technology should be in the hospitals of the future - using live demos and lots of audience participation!

Gemma is a medical physicist. She develops optical instruments to monitor the brain, both its activity and health, in spaces where conventional brain monitors won't fit.



## Using sound to prevent disasters / Rachel Edwards University of Warwick



Sound isn't just for speech and music - it can be useful in lots of different areas. This talk will look at how sound travels through different materials, and how we can use that to listen for far-off trains, make better drinks cans, and find problems in theme park rides. We'll see how to make a drum-kit out of semiconductors, and how to use liquid crystals to see sound.

Rachel Edwards is Associate Professor in Physics at the University of Warwick, where she researches the applications of ultrasound and lectures in Condensed Matter Physics. In 2017 she won the Public Engagement University Award for her work in communicating Physics to the public.



## The Training Partnership

Gilmoora House | 57-61 Mortimer Street | London W1W 8HS  
020 3008 6441 | [office@thetrainingpartnership.org.uk](mailto:office@thetrainingpartnership.org.uk)  
[www.thetrainingpartnership.org.uk](http://www.thetrainingpartnership.org.uk)