

Science talks and events

Free museum

Family activities

1.4m YouTube subscribers

# Welcome to the Royal Institution

Since 1799 the Royal Institution has played host to some of the world's greatest thinkers. From Michael Faraday to Kathleen Lonsdale to David Attenborough, we've announced scientific firsts, introduced the process of exploration to curious young minds and have been bringing science to life for everyone since day one. Experience this first-hand through our spring programme of events and discover the ways science impacts our everyday lives.

**Watch** a talk from a leading scientist or cultural commentator in our historic theatre.

**Visit** our internationally renowned museum, open weekdays, to everyone, for free.

**Experience** hands-on exploration together with our family events.

**Join** our community of like-minded people and engage with the science you love more regularly.

You can book tickets to any event online or by contacting our events team on +44 (0)20 7409 2992 between 9.30am and 5.00pm Monday to Friday.

Standard events: £16; £10 concessions; £7 Ri Members and Ri Patrons Discourses: £20; £15 concessions; free for Ri Members and Ri Patrons

Concessionary ticket prices apply to over 65s, under 16s, anyone registered as a student, unemployed or disabled. Free tickets are offered to carers attending with the person receiving care. Special concessionary rates are offered to educators attending with school groups.

Book online at rigb.org/whats-on

## Summer

## May

Planet hunting in the cosmos

Wednesday 1 May, 7.00pm - 8.30pm

The future of fusion

Friday 3 May, 7.00pm - 8.30pm

The chemistry of Star Wars

Saturday 4 May, 7.00pm - 8.30pm

Wormholes and Hollywood

Friday 10 May, 7.00pm - 8.30pm

The global origins of science

Monday 13 May, 7.00pm - 8.30pm

**Batteries for emerging economies** 

Tuesday 14 May, 7.00pm - 8.30pm

The science of fairytales

Saturday 18 May, 2.00pm – 3.15pm

Discourse: Beyond the perception envelope

Friday 24 May, 7.20pm - 8.45pm

Exploring ancient ecosystems through time

Saturday 25 May, 7.00pm - 8.00pm

The CMS experiment at CERN

Tuesday 28 May, 7.00pm - 8.00pm

For your inspiration: AI and me

Friday 7 June, 6.oopm - 9.oopm

How women drove evolution

Saturday 8 June, 7.00pm - 8.30pm

Saving the world's botany

Monday 10 June, 7.00pm – 8.30pm

Short course: An intro to particle physics

Starts Monday 10 June, 7.00pm - 8.30pm

The first human womb transplant

Friday 14 June, 7.00pm - 8.30pm

How games shape our reality

Saturday 15 June, 7.00pm - 8.30pm

Is maths real?

Monday 17 June, 7.00pm - 8.30pm

Wifi Wars 9.0

Saturday 22 June, 7.00pm - 9.30pm

Dark energy: Einstein's biggest "blunder"?

Monday 24 June, 7.00pm - 8.30pm

Discourse: The science of happiness

Monday 26 June, 7.20pm - 8.45pm

July

**ExpeRience: sensational senses** 

Tuesday 2 July, 7.00pm - 8.30pm

Family Fun Day: Taste, touch, feel

Saturday 6 July, 11.00am - 4.00pm

Galileo's gaze: secrets of cosmic discovery

Saturday 6 July, 7.00pm - 8.30pm

It's a gas

Thursday 11 July, 7.00pm - 8.30pm

**Science and Sorcery** 

Saturday 27 July, matinee and evening

Our accidental Universe

Thursday 21 March, 7.00pm - 8.30pm

## May



## Planet hunting in the cosmos

### Wednesday 1 May, 7.00pm - 8.30pm

Delve into the intriguing possibility of detecting life beyond our home planet. Lisa Kaltenegger, founding director of Cornell University's Carl Sagan Institute has assembled a multidisciplinary team of experts to craft a specialised toolkit for extraterrestial exploration. Join us as Lisa takes us on an enthralling journey across the Universe.



## Unleashing the power of satellites for climate action

### Friday 3 May, 7.00pm - 7.30pm

Join us for a riveting discussion led by **Sir Ian Chapman** on the future of fusion energy. This event will feature leading experts in the field, each presenting unique perspectives on the opportunities, challenges, and breakthroughs in fusion technology. This event is in collaboration with the UK Atomic Energy Authority.



## The chemistry of Star Wars

#### Saturday 4 May, 7.00pm - 8.30pm

In a galaxy far, far away, there is a Star Wars universe packed with captivating science, from the biology of alien species to the astrophysics of hyperspace. But what about Chemistry? Join Alex Baker, as he explores the freezing of Han Solo, the colours of lightsabers, the reactions that power star ships and much more.



### **Wormholes and Hollywood**

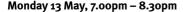
#### Friday 10 May, 7.00pm - 8.30pm

Quantum physicist, best-selling author, and broadcaster Jim Al-Khalili is joined by fellow physicist and Nobel Prize winner Kip Thorne. This talk is a chance to peek behind the curtain and get to know one of the best-known names in physics with plenty of enlightening anecdotes along the way.

## May



## The global origins of science



By retracing the forgotten links between thinkers and tinkerers worldwide, science historians are beginning to revolutionise our understanding of the origins of science. Freer Fellow **Gianamar Giovannetti-Singh** will share some of his discoveries that will reshape our understanding of science's past.



## **Batteries for emerging economies**

#### Tuesday 14 May, 7.00pm - 8.30pm

In the latest public engagement event in partnership with Faraday Institution, we take a deep dive into the research, systems engineering, and logistical challenges (and their solutions) of accelerating the deployment of batteries in emerging economies for micro-mobility and static energy storage.



Family

### The science of fairytales

#### Saturday 18 May, 2.00pm - 3.15pm

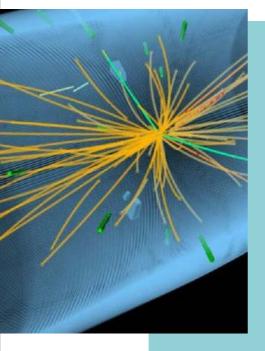
Do you have a favourite fairytale? Have you ever read it and thought, could that actually happen? Join **Catherine Cawthorne** as she discusses the Big Bad Wolf's investigations into the science behind lots of fantastical fairytales. This event will combine your love of stories, science and of course the odd demonstration or two.



With a small group of like-minded peers you can really get to the heart of a subject under the guidance of our expert course leaders.

Ri Members and Ri Patrons receive a 15% discount on short courses

# June short course An introduction to particle physics





## June 10 - July 15

Particle physics is the study of nature at the highest energies and shortest distances that we can probe in a laboratory, an ambitious attempt to construct a fundamental picture of what the universe is made from and how it works.

A repeat of his successful short course, Cambridge physicist Dr Harry Cliff we will discuss the current state of particle physics and the key experiments and insights that led to the development of the Standard Model. As the Large Hadron Collider prepares to restart at even higher energy we will also explore some of the unsolved problems in particle physics and how theorists and experimentalists are trying to solve them.

### **Course content**

How the Standard Model describes matter and forces in terms of quarks, leptons and gauge bosons.

How a century of experiments and theoretical insights led to the Standard Model.

A simple introduction to quantum mechanics and special relativity, the two revolutionary ideas that led to modern 'quantum field theory'.

What the Large Hadron Collider is, how it works and why it was built.

What the Higgs boson is, why it matters and how it was discovered.

What questions remain to be answered and how experiments in both particle physics and astronomy are helping us to attack them.

### **Course leader: Harry Cliff**

Harry Cliff is a particle physicist at the University of Cambridge working on the LHCb experiment, a huge particle detector buried 100 metres underground at CERN near Geneva. He is a member of an international team of around 1400 physicists, engineers and computer scientists using LHCb to study the basic building blocks of our universe in search of answers to some of the biggest questions.

## May



## Discourse: Beyond the perception envelope

#### Friday 24 May, 7.20pm - 8.45pm

An evening of exploration of the interconnectivity between art and science, as both process and practice – and how humanity's insatiable curiosity fuels the development of both fields. British artist **Conrad Shawcross** has dedicated himself to delving into the depths of human perception, fusing geometry, philosophy, and optics.



## **Exploring ancient ecosystems** through time

#### Saturday 25 May, 7.00pm - 8.30pm

Step into ancient landscapes with award-winning palaeobiologist **Thomas Halliday** as he guides us through a series of immersive explorations. Find yourself in a series of ancient landscapes, from the mammoth steppe of Ice Age Alaska to the lush rainforests of Eocene Antarctica adorned with colonies of giant penguins.



## The CMS experiment at CERN

### Tuesday 28 May, 7.oopm - 8.3opm

Physicist Kathryn Coldham will help us explore the contemporary applications of the Compact Muon Solenoid (CMS) experiment, a key component of the Large Hadron Collider at CERN. More than 5000 researchers worldwide utilise this leading-edge detector to unravel the hidden mysteries of our Universe at its finiest scale.



## For your inspiration: Al and me



#### Friday 7 June, 6.oopm - 9.oopm

Artificial Intelligence is already being used to help us create content, write essays and even produce artwork. Join us for an evening of exploration, with a panel chat and Q&A and activities, into how we can expect AI to develop in the future, what type of jobs might exist. With thanks to CGI for supporting the CHRISTMAS LECTURES.



### How women drove evolution

### Saturday 8 June, 7.00pm - 8.30pm

Join **Cat Bohannon** as she tackles long-overlooked questions concerning the evolutionary purpose of sexism. From the role of wet nurses in driving civilisation to challenging stereotypes about women as the weaker sex, Cat will take us back 200 million years to unravel the scientific framework behind this challenging rhetoric.



## Saving the world's botany

#### Monday 10 June, 7.00pm - 9.30pm

Join **Chris Thorogood**, a botanist at the University of Oxford's Botanic Garden, and discover the biggest flower on Earth – the Rafflesia. Chris has enjoyed a lifelong infatuation with these extraordinary blooms, from crafting life-size replicas in an abandoned cemetery to dedicating his life to the study and protection of these enigmatic plants.



### The first human womb transplant

#### Friday 14 June, 7.00pm - 8.30pm

Join surgeons and co-leaders of the effort **Richard Smith** and **Isobel Quiroga** as they share the remarkable 25-year journey of research and collaboration, and the hope to extend this lifechanging opportunity to more people in the future, marking a significant milestone in medical history.

See more for free at rigb.org/join







## How games shape our reality



### Wifi wars 9.0

#### Saturday 15 June, 7.00pm - 8.30pm

Join neuroscientist and physicist **Kelly Clancy** as she delves into our fascination with games. Beyond mere entertainment, games serve as dynamic tools for learning about the world, understanding the intricacies of our minds, and even forecasting the future. But what happens when games blur the line between fiction and reality?



### Is maths real?

### Monday 17 June, 7.00pm - 8.30pm

Join Ri favourite **Eugenia Cheng** as she transforms our traditional understanding of maths, presenting it not as a succession of rigid rules, but as a vibrant, living discipline. Maybe. Will it be fun? Definitely. Uncover connections between mathematical principles and our reality and gain a deeper appreciation for the subject.

#### Wednesday 13 March, 4.oopm - 5.3opm

Due to popular demand, WiFi Wars will be back at the Ri for the ninth time! Join the team to hear what they've been up to over the last couple of years and for a sneak peak of their latest tech. **Steve McNeil** and **Rob Sedgebeer** most recently featured in our 2022 CHRISTMAS LECTURES with Dame Sue Black, but first appeared at the Ri back in 2014.



Members and Patrons get more. Join today for better than halfprice tickets to Ri talks, FREE tickets to Discourses, invitations to special events, priority booking on select events and exclusive access to the CHRISTMAS LECTURES ticket ballot.

For more information visit rigb.org/join or call +44 (0)20 7491 6588.



## Dark energy: Einstein's biggest blunder

#### Monday 24 June, 7.00pm - 8.30pm

Join world-leading scientist **Ofer Lahav** as he revels the extraordinary narrative of the Dark Energy Survey (DES), an ambitious experiment designed to unravel the mysteries of the force shaping our universe. Discover what the 3D map spanning 300 million galaxies and extensive supernovae has so far revealed.



## Discourse: The science of happiness

#### Wednesday 26 June, 7.20pm - 8.45pm

In this Discourse, renowned psychologist and former Christmas Lecturer Bruce Hood shifts focus from self-care to connection. Through seven transformative lessons grounded in neuroscience and psychology, Bruce unveils a new narrative on well-being. From altering your ego to connecting with others, each lesson provides practical takeaways.



## Can't make it to a talk?

For explosive short films, full length talks from the world's leading scientists and writers and videos to challenge the way you look at the world visit our YouTube channel. If you can't make it to a talk this is the next best thing and over 60 million video views say it's science worth watching.



Friday Evening Discourses started in the Royal Institution in 1825 as an informal discussion evening, but soon because so popular that the format moved to a more formal lecture in the theare. Most major scientific figures have given a Discourse, communicating their latest discovery or idea. Our archives of these talks open a unique window on the world of Victorian science.

Take your place in history as these renowned lectures continue to inspire and expand your mind.

Discourses: £20; £15 concessions; free for Ri Members and Ri Patrons

# Meet our Summer Discourse speakers



#### **Conrad Shawcross**

#### Beyond the perception envelope

Friday 24 May

Conrad Shawcross's sculptures explore subjects that lie on the borders of geometry and philosophy, physics and metaphysics. At the time of his appointment Conrad was the youngest living Royal Academician, he has exhibited internationally at leading arts institutions including The Hayward Gllery, ArtScience Museum Singapore, Tate Britain and Musée d'art Contemporain, Lyon. He was an artist in Residence at the Science Museum, London.



#### **Bruce Hood**

#### The science of happiness

Wednesday 26 June

Bruce Hood is an award-winning Professor of Developmental Psychology at Bristol University and the author of several books, including SuperSense, The Self Illusion, The Domesticated Brain and Possessed. He has appeared extensively on TV and radio, including co-hosting the BBC podcast The Happiness Half Hour in 2021. He is a Fellow of the American Psychological Society and the British Psychological Society.





## **ExpeRience: Sensational senses**

### Tuesday 2 July, 7.00pm - 9.30pm

Discover the multitude of senses that we can experience, how they can lead to us believing in the paranormal and whether we can train or improve our sensations and senses. The evening will start with a demo-filled talk in the Theatre, followed by activities throughout the building. There'll also be the odd sensory den for ultimate relaxation.



## Family Fun Day: Taste, touch, feel

### Saturday 6 July, 11.00am - 4.00pm

Join our volunteers, scientists and researchers from across the STEM subjects as they find ways to measure, test, and sometimes trick, your senses. We'll also dive into the rest of the animal kingdom to see how our senses can be vary from animals around us.



## Galileo's gaze: The secrets of cosmic discovery

#### Saturday 6 July, 7.oopm - 8.3opm

David Jamieson delves into the revolutionary discoveries made by Galileo in the early 17th century. Galileo unearthed Jupiter's moons, Venus's phases, and lunar landscapes using his groundbreaking telescope. However, hidden within his logbooks lie tantalising clues: the sighting of a mysterious "fixed star".





## It's a gas

#### Tuesday 11 July, 7.00pm - 8.30pm

Join former Christmas Lecturer **Mark Miodownik** as he unravels the mysteries of invisible, odourless gases through captivating scientific storytelling. He takes us back to the exhilarating and often perilous moments in history when scientists deciphered these substances, often, like the Ri's Humphry Davy, through experimenting on themselves.



## **Science and sorcery**

#### Saturday 27 July, matinee and evening

Join comedians and chaos goblins Science & Sorcery as they bring the chaos of a live Dungeons & Dragons show to the Royal Institution. This live and interactive storytelling experience will involve tabletop roleplaying, audience suggestions and lots of silly humour as we explore a fantasy story and use scientific phenomena to save the day.





## Holiday workshops

Our holiday workshops give young people the chance to get hands on with mathematics, computer science, engineering and laboratory science. They get to have fun and make new friends, all while learning something new.

Discover more on our what's on pages: rigb.org/whats-on

## Find us

Visit the home of science in the heart of London, just a stone's throw from Green Park and Piccadilly Circus.

### By tube

Green Park, Piccadilly Circus, Oxford Circus

### By bus

9, 14, 19, 22 and 38

For more information on how to get here as well as opening times and public holidays visit **rigb.org/find-us** 

## Join the conversation

Our doors close at the end of each day, but our social media channels are open 24/7.

Challenge the way you look at the world with explosive short films and full-length talks from the world's leading scientists and writers. Subscribe to us on YouTube and follow @Ri Science on social media.

Sign-up to our newsletter to be the first to hear about additions to our events programme at rigb.org/sign-up.

## **Supporters**

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