

Year in review 2017



Contents

- 3 — Welcome
- 4 — CHRISTMAS LECTURES
- 9 — Schools
- 15 — Family learning
- 18 — Public events
- 20 — Digital engagement
- 24 — Our heritage
- 26 — Venue hire
- 27 — Science abroad
- 30 — Our community: members
- 32 — Our community: supporters
- 36 — Our finances
- 37 — Our governance

A welcome from Sir Richard Sykes Royal Institution Chairman

I am pleased to report on another year of growth and success for the Royal Institution. Throughout the year we have increased opportunities for people of all ages to discover, discuss and critically examine science and the way in which it shapes the world around us.

Nearly 50,000 budding young scientists have been electrified by our family days, school shows, workshops and Masterclasses. They've witnessed exploding pumpkins, extracted their own DNA, and experimented with mathematics, engineering and chemistry. More people than ever before have attended exciting, stimulating, mind-blowing public events in our historic lecture theatre. Our L'Oréal Young Scientist Centre has been operating at full capacity. And we have increased our reach beyond the confines of our wonderful building, through our award-winning videos, shows and digital content, both here in the UK and as far afield as Singapore, Japan and the USA.

At the same time, we have maintained our financial stability, posting a surplus for the second year in succession, and have continued to plan for the future.

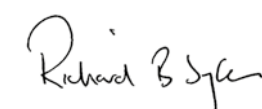
Our exciting new strategy, which sets out our vision, mission and strategic priorities for the next five years, was approved by Trustees in December. Developed by Ri staff, and informed by our members, supporters and other stakeholders, it provides a compelling and coherent direction for the future.

I am incredibly proud of what our small and dedicated team of staff, volunteers and supporters have achieved; and I must therefore take this opportunity to record my thanks to each and every one. Over the past 12 months, they have given us their precious time, shared their expertise and offered us vital financial support.

It's to their credit that we've been able to build on the Royal Institution's extraordinary heritage, offering a lifelong experience to inspire even more people to think more

deeply about science and its place in our lives.

So having created so many opportunities this year for people to connect with science, I am confident that somewhere among the many people we have reached there are a handful – and maybe even more – who will make their own ground-breaking discoveries in the decades to come. When they do, and when they say that their lifelong journey with science began with the Royal Institution, we should all feel enormously proud to have been involved in setting their imaginations on fire.



Sir Richard Sykes FRS
2010– present





‘If there’s one thing I can point to as the reason why I’m a scientist today, then it’s the Royal Institution CHRISTMAS LECTURES.’

— Prof Sophie Scott,
2017 Christmas Lecturer

CHRISTMAS LECTURES

Opening young eyes to science

First delivered by John Millington in 1825, the CHRISTMAS LECTURES have inspired a lifelong interest in science for generations of children. Always engaging and often explosive, they remain one of the most significant events in the annual science calendar. And having been continuously broadcast for more than half a century, they are a much-loved Christmas tradition for families throughout the world.

The 2017 Lecturer, Prof Sophie Scott, has said that watching Carl Sagan’s 1977 Lectures was like ‘being let in on a magical secret’. Fast forward 40 years, and Prof Scott is a leading neuroscientist at UCL undertaking cutting-edge research into ‘laughter’, a fundamental element of human behaviour that is little understood even today.

As such, she is the embodiment of the CHRISTMAS LECTURES, making science fun and engaging for children and adults alike, capturing their imaginations, and balancing scientific integrity with accessibility.

Year after year our young theatre audience remains captivated by a heady mix of fascinating facts and amazing demonstrations. And thanks to television and digital media the CHRISTMAS LECTURES reach far beyond the 1200 or so people who squeeze themselves into our world famous lecture theatre for three nights in December.

As we develop the Christmas Lectures, and take them further afield through international tours and digital reach, they continue to be a much-loved centrepiece through which we open young eyes to the world of science.

‘Watching Carl Sagan in 1977, it was extraordinary to me, that in the same way there are authors out there thinking of stories, there are also scientists thinking of research.’
— Prof Sophie Scott, 2017 Christmas Lecturer

‘The iconic Ri CHRISTMAS LECTURES introduce us to new ideas, to rising stars of science communication, and they never fail to entertain.’
— Prof Melanie Welham, Chief Executive at the Biotechnology and Biological Sciences Research Council





The 2017 CHRISTMAS LECTURES: 'The language of life'

Through the three Lectures on 'The language of life', Prof Sophie Scott took us on a fascinating tour of the most fundamental of human and animal behaviours, revealing our unstoppable urge to communicate.

From chirping crickets to hissing cockroaches, Prof Scott revealed the ways in which evolution has honed animal bodies to most effectively send and receive messages, and how even the most modern human communications, from emojis to beatboxing, can be linked back to our ape ancestry.

Filmed in our iconic lecture theatre in London, Prof Scott addressed three big questions in communication: how do we and animals send messages with sound? How much can we communicate without ever speaking a word? And how do we turn our thoughts into language?

The results were truly breathtaking. As ever, there were dramatic demonstrations, cutting-

edge technology and the help of some very special guests ranging from opera singers to the latest robots. And there were plenty of opportunities for our audience to get involved, both in the theatre and at home, with #xmaslectures trending on Twitter.

We must extend our thanks to 2017 CHRISTMAS LECTURES major supporter the Lloyd's Register Foundation; and to our community of CHRISTMAS LECTURES supporters, Schlumberger, Millennium Point, and the Biotechnology and Biological Sciences Research Council.

The 2017 CHRISTMAS LECTURES were produced by Windfall Films Ltd for BBC Four.

'Been watching the CHRISTMAS LECTURES with the kids. Fantastic, so well explained and great to see lots of women in STEM participating.'
— BBC Four viewer

'I loved helping in the CHRISTMAS LECTURES.'
— 2017 audience participant, Orla (aged 12)

'The Lloyd's Register Foundation is proud to be the major supporter of the Royal Institution's CHRISTMAS LECTURES for the next three years. We are determined to inspire the next generation towards lifelong engagement in science and engineering.'
— Dr Tim Slingsby, Director of Skills and Education at the Lloyd's Register Foundation, 2017 CHRISTMAS LECTURES Major Supporter



The Royal Institution

More and more ways to engage

It is now 192 years since the CHRISTMAS LECTURES were first delivered and 81 years since they were first broadcast on the BBC. They have been broadcast every year since 1966. In all that time the ethos of the CHRISTMAS LECTURES – making the latest scientific research and knowledge fun and accessible for a younger audience – hasn't changed.

But the Lectures themselves continue to move with the times. Working with our supporters, the BBC and series producers Windfall Films, we have made them brighter and bolder, with more topical links. And we are continuing to future-proof the Lectures, to make sure they remain relevant for our audience in a world of 24/7 media and on-demand viewing habits.

In 2017 we again took to social media to promote the Lectures and, in particular, to add value to their broadcast with online commentary and engagement in real time. As in previous years #xmaslectures was trending on Twitter, with people throughout the UK sharing their amazement, and their questions, about what they were seeing on screen.

We exceeded the success of our social media activity in 2016, across Twitter impressions, likes, re-tweets and mentions. We also used Snapchat for the first time this year, keeping the hundreds of excited children amused as they waited expectantly in the long queue snaking down Albermarle Street on filming nights.

For our younger viewers we ran an online 'design your own emoji campaign', asking them to tell us what emoji they felt was missing and why, as a fun and simple way to engage with an element of the Lectures. We chose our favourites from the brilliant submissions we received to feature as emoji of the day on the Ri website and other digital platforms. We will build on this success with similar activities to support the 2018 Lectures.

And to coincide with the start of Advent, we launched a new online home for our archive of CHRISTMAS LECTURES on the Ri website. By the end of 2017, 23 series of the Lectures were available for anyone to view for free, wherever they are in the world. Over the course of 2018 we will be regularly adding to this list, starting in January with the release of Sophie Scott's 'The language of life'.

23
The number of series Lectures available for anyone to view for free by the end of 2017



Extending our reach

To build on the success of the CHRISTMAS LECTURES broadcast, we are developing more and more ways to open young eyes to the world of science, with the accompanying educational activities generously supported by the Lloyd's Register Foundation.

At the start of 2017 we once again ran our popular online schools activity 'I'm A Scientist, Get Me Out of Here!', a forum for children to have their burning questions on the 2016 Lectures answered by scientists. The 24 experts who took part included the Lecturer, Saiful Islam, and a host of specialists from academia, the media and business. And with many people wondering whether there's enough energy for the future, and considering unlimited sources of energy and their effect on the planet, the live chat discussions achieved our aims perfectly.

Young people throughout the UK developed critical thinking skills, recognised that they have a stake in science and gained a new found confidence to question the ways in which it can benefit society.

In 2018 we will again be delivering this innovative interactive online forum, while trialling a 'debate kit' on the subject of communication and privacy, to provide teachers with an effective and structured resource to introduce ethical issues in science that are otherwise difficult to bring out in the classroom.

And the increasing reach of the CHRISTMAS LECTURES is not limited to the UK. The 2016 Lectures went on tour again in 2017, with a version being filmed for Singapore national television, and a Lecture also taking place in Tokyo.

Through the generous support of Johnson Matthey, we took the CHRISTMAS LECTURES to hundreds more children at their sites in Royston and Reading. And in the year ahead we have also been confirmed as the headline show at the highlight event of National Science Week in March, the Big Bang Fair. Taking place at the NEC in Birmingham each year, our participation will help us to engage directly with an audience of over 80,000 students.

80,000

The size of the audience we will engage with at the Big Bang Fair



'My son allowed himself to be challenged beyond the limits he had set for himself by being exposed to a scientific world that can actually be fun.'

— Parent of a Masterclasses Celebration Day attendee



Schools

Beginning a lifelong journey with science

A personal journey with science can begin at any age, but we believe it should ideally start with children and young people. The child whose interest is sparked by one of our schools activities today, is tomorrow's informed citizen, business leader, scientist or parent.

So our educational activities – enhancing the curriculum inside and outside of the school environment with a hands-on, immersive exploration of science – are central to our vision to inspire everyone to think more deeply about science and its place in our lives.

During the year we awarded 39 STEM enrichment grants to schools in underserved areas, allowing teachers to access inspirational activities and support, delivered by experts in their field, which would not have been possible otherwise. Our thanks go to the Clothworkers' Foundation whose generous support made such a difference in classrooms across the country.

In September, we also transferred responsibility for the teacher-focused STEM Directories to STEM Learning Ltd. With strong relationships in schools and the education sector, STEM Learning Ltd is ideally placed to maximise the impact of the Directories on teachers, and on the number of children who are able to benefit, supported by our enrichment grants.

And in October we ran our second annual conference for young people in conjunction with EY. Hundreds of children and young people attended the free 'Women in Technology' event, learning from those at the forefront of business and science, opening their eyes to a world of fantastic career possibilities.



'The children were very enthusiastic and have been inspired by your visit. I would thoroughly recommend the show to other primary schools – it is engaging, educational and inspiring.'

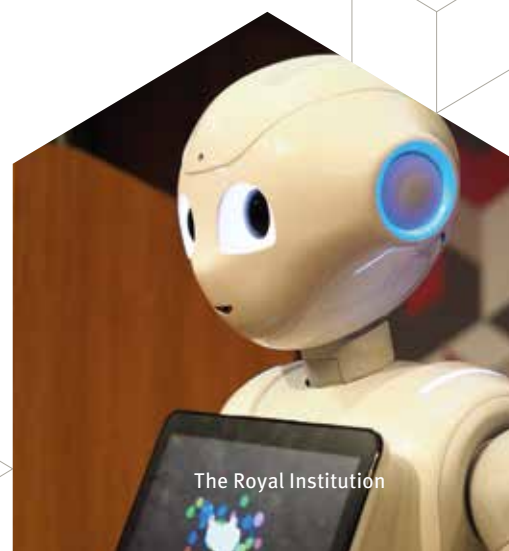
— Teacher, Science in Schools

'It was AMAZING! I was looking forward for this trip for sooo long.'

— L'Oréal Young Scientist Centre student

'What a super afternoon! Dan from the Ri came to talk to us about electricity, but not just boring lightbulbs, he lit up a gherkin, exploded gasses in someone's hands and never would I expect to see a Barbie doll fly across the hall, but I did!'

— Pupil, Holy Cross School, Kingston-upon-Thames



Science in Schools: Fun, stimulating... and explosive

Always made fun and stimulating – and often explosive – by our professional science presenters, our hands-on Science in Schools shows are a popular and growing part of our education offer for young people.

Our aim is to ignite a lifelong interest in science among all pupils, and those from less affluent backgrounds in particular, by engaging young people in science from early years to GCSE students.

Our approach is proving successful and this year we celebrated a significant increase in our programme. Having delivered shows to around 20,000 children in its first two years, in 2017 we nearly doubled that total in a single year, reaching 35,000 children in over 100 schools. And it doesn't stop with the children. Our shows also contribute to teachers' continuing professional development and, through bespoke events for parents, to science learning in the home.

Our expert presenters have taken wonder and delight to places as far apart as Arbroath in North East Scotland, and Tower Hamlets in east London, thanks to the generous support of our funders, the Shears Foundation, Simon Godwin, the John S Cohen Foundation, Aberbrothock Skea Trust, and Essex County Council.

Even during the holidays, there was no rest for our dedicated Ri staff. When schools broke up in July, we took our shows on the road, visiting larger scale events, including the Chichester University Community Space Fest, and the EDF Energy Science Zone Festival, reaching a further 1500 people.

We used these events to pilot our new show – Energy LIVE! – based on the 2016 CHRISTMAS LECTURES, which we then began to deliver to schools in September. We thank the Lloyd's Register Foundation for making this possible.

With science exploration giving way to exam pressures in the later stages of education, our Science in Schools programme is an invaluable route to achieve repeat engagement with children of all ages, instilling in them the spirit of scientific experiment and discovery.



35,000
children reached
during our shows
in 2017

39
STEM enrichment
grants awarded
to schools during
the year



LYSC: high impact science for new generations

In the very same basement where Sir Humphry Davy undertook so much of his work to isolate or identify no less than 9 elements of the periodic table, new generations of budding young scientists experience high impact science in our fully equipped lab, the L'Oréal Young Scientist Centre (LYSC).

As our important partnership with L'Oréal completed its eighth year, we reflected on another 12 months of growth, with record attendance levels at a record number of workshops.

In 2017, we organised 183 events – including 34 in the school holidays – for nearly 4400 students aged from 7 to 18. Younger children have fun making bath bombs and lip balm, or extracting their own DNA, while those in older age groups can discover their own genetic profile and make electric motors. In all, the workshops provide priceless curiosity-driven and practical learning that can sometimes be hard to replicate in school.

We also continued to extend the reach of our

LYSC beyond the confines of our historic building. At 3 Butlin's Holiday Camp sites, an estimated 30,000 more children enjoyed elements of colour chemistry and cosmetic chemistry delivered by the famous Butlins Redcoats, trained by Ri staff. And in March we were proud to see the opening of the new Baylab at Bayer's HQ in Reading, where children will benefit from workshops derived from both the LYSC and the original Baylabs in Germany.

In 2018 we look forward to welcoming thousands more children to LYSC workshops, where they can create and experiment, just as professional research scientists do, unconstrained by the need to produce the 'right' results in a fixed period of time.



'The workshop was very engaging. The hands on activities throughout the workshop allowed the students of different ages to engage with difficult subject matter and work at their own pace.'

— Lead adult, 'Magnets and motors' workshop

'Well this is too awesome. I need to tell my Mom!'

— LYSC student

183
events for nearly
4400 students
during 2017



The Royal Institution

Masterclasses: Ri expertise across the UK

Through our hands-on and interactive mathematics, engineering and computer science Masterclasses, top experts are inspiring young people all around the UK.

Our aim is to give young people the confidence and skills they need to explore and question the world around them, by going beyond the school curriculum and bringing the wider application of the Masterclasses subjects to life, through topics such as modelling, design, cryptography and medicine.

Having enriched the education of around 90,000 students since our Masterclasses started, we anticipate the 100,000th student will join our series in January 2019. We took significant steps towards this milestone in 2017, running 715 sessions for over 5000 students.

We also ran 13 celebration events – another increase on 2016 – for 2000 students across the UK, including

three careers focused events to provide advice to students at that critical juncture of making GCSE choices. Events for their parents helped to engage them in the subjects their children enjoy so much, making them better able to support their learning.

And we were very pleased to launch our new Masterclass alumni programme, starting with 1300 members, sign-posting them to further opportunities to engage with science and linking them to other events and activities for young people run by the Ri.

Through the success of our Masterclasses in 2017, we have continued to open the eyes of young people to the excitement, beauty and value of science.

'I just have to say how fantastic it was for the classes to start with a female lecturer. It was very inspiring and motivating for girls, especially important in a subject such as maths, and is so important to bring about change.'

— Parent, Masterclasses celebration event

'The Masterclasses have made me love maths even more, which I thought was impossible.'

— Masterclasses student





Family learning

Case study: Supporting teachers, captivating children

We took our ‘Explosive Food’ show to Harris Academy in Battersea, delivering our Science in Schools Programme to KS3 students. Biology teacher, Polly De Ferranti, was very happy to be approached by the team at the Ri:

‘We were thrilled to host a day of science shows at Harris, as many of our students come from disadvantaged backgrounds and may not have access to extracurricular cultural activities. The day was fully funded by the Royal Institution, which was fantastic, as budget constraints make these kind of opportunities impossible for an academy like ours.

Your presenter Dan was fantastic, and included everyone in his shows – all the students were captivated,

regardless of their ability or interest in science. His show was hilarious, as well as being informative and interesting; all about the digestive system and the energy we get from food.

The community show opened our eyes to some science history, so we’re following up with a visit to the Faraday Museum at the Ri in the spring term. And it was a great way to support my teaching, with the CPD session helping me to emulate Dan’s practical science and delivery in the classroom.’

‘These classes have changed my views about maths, as the maths taught at our school is very different to the real-life situation maths taught at these lessons. These Ri Masterclasses also pushed me to take Maths for A levels.’

— Masterclasses student

‘Sarah Jane was brilliant, so professional and well organised. Thank you, the children and parents really were enthused by the shows!’

— Teacher, Science in Schools

‘Our son has enjoyed the engineering Masterclasses so much, and is more convinced than ever that he wants to become an engineer!’

— Parent of Masterclasses student

Becoming your children’s best science teacher

We know that a lifelong journey with science begins best when the curriculum is supported by activities outside of the school environment. That’s why our Family programme is designed for children to discover the joy of exploration with their peers. When combined with our extensive online resources, it’s a stimulating and exciting way in which children and adults can grow their confidence in science together.

In 2017 we continued to expand our programme, delivering 135 events, including Family Fun Days, talks in the theatre, and hands-on experiments in our L’Oréal Young Scientist Centre. In all they provide multiple opportunities for parents to take the first steps in becoming their children’s best science teacher.

Family Fun Days are our busiest family events of the year, when we pack our building full with children and their parents, all enjoying exciting and inspirational hands-on experiments, demonstrations and talks.

Over 2000 people attended these popular events,

including ‘Supercharged: Fuelling the future’, based on the 2016 CHRISTMAS LECTURES and ‘Spooky Science’, taking a light-hearted look at the scarier side of science related to Halloween. And when celebrities resort to twitter to get their hands on a ticket (#mumfail) we know we’ve got it right!

Our thanks go to our enthusiastic volunteers who run activities on the day and really bring the science to life; and to the partner charities, companies and universities who helped to increase the variety of the experiments on offer. Without their hard work, these events would not be as wide-ranging or successful as they are.

‘We loved the fun way that the science was explained; the horse’s eyeball was gross but so captivating for the children!’

— Family Fun Day attendee

‘Very difficult to pick just one! The exploding pumpkin was the most dramatic, but close runners up were sailing spiders, and horses eyes!’

— Family Fun Day attendee



The Royal Institution



Over
2000
people attended
our popular
events

Summer Schools: Encouraging critical thinking

For six weeks every summer, our building is alive with children of all ages enjoying a closer look at science through a range of activities suited to their age and ability. Our Summer Schools proved to be popular again in 2017, with nearly 2000 children attending over 100 events covering mathematics, computing, engineering and laboratory science.

From exploring the chemistry of colour, to examining cryptography by recreating an Enigma machine with tubes of Pringles, our workshops are delivered by teams across the Ri, supported by teachers, lecturers and experts in industry. This range of tutors demonstrates different approaches to learning and gives children an insight into the many ways in which science can become a career for life.

Supplementing this learning, we also continued to expand our range of Family Masterclasses, encouraging families to work together on science activities and challenges, including designing and building bridges, investigating rainbows, and an exploration of psychology based on our popular ExpeRimental videos.

And highlights from our family theatre events included an explosion-filled talk on the chemistry of bonfires and fireworks, and our professional science presenter wowing audiences with our Science in Schools show 'Explosive food'.

All our family events take place outside of the school day, providing as much flexibility as possible for busy parents and carers. As a result, nearly 9000 people were able to come to a family event at the Ri, benefiting from our unique offer; a depth of engagement, a focus on experimentation and the encouragement to think critically about science in the context of their own lives.

'My son loved being around other young STEM enthusiasts who 'talked his language'. It was a fun and stimulating experience for him that he described as "so much better than school".'

— Summer Schools parent



The Royal Institution

Building the Family brand

We believe that our focus on a deep and long-lasting engagement with science is unique among science organisations at home and abroad.

To achieve this important objective, it is vital that our programmes and activities are clearly linked, with our audiences sign-posted to further opportunities to discuss and critically examine science, in ways which are suited to their needs.

So in 2017, as part of its continued expansion, we created a new visual identity for our Family Programme. The key element of the brief was to make the links between our activities clearer. But we also wanted a bright, playful and engaging identity, that was flexible enough to appeal to children of all ages, while being firmly grounded in the main Ri brand.

Working with designers at the Supple Studio, who had previously developed our ExpeRimental identity, we combined the Ri's core colours, hexagon elements and angular lines, with a flexible suite of bespoke design elements, suitable for Ri staff to adapt and evolve as we implement our exciting new strategy.

Kindly supported by L'Oréal UK & Ireland, the new identity was launched at our 'Spooky science' Family Fun Day in October, allowing the Family Programme to have its own unique style, while fitting perfectly with the broad range of media we produce as a whole.

'As a charitable organisation, it was important that the identity was scalable, allowing the Ri in-house team to expand and build on the identity once we had handed everything over.'
— Supple Studio's design director, Phil Skinner



Public events

The Wembley of science communication

When a speaker steps into our world famous lecture theatre, they follow in the footsteps of some of the most famous scientists of all time.

From Faraday to Tyndall, to Attenborough and beyond, the rapt audiences packed tightly into the steep banks of seats have witnessed the very first unveiling of many of the scientific advances that shape our modern world. Our wonderful theatre remains the inspirational setting for our public events today.

We believe in the need to create a two-way dialogue between science and society, relating science to people's everyday lives, and creating opportunities for the latest ideas and innovations to be introduced, exchanged and shared with the world.

Our public events encapsulate the very best of today's most influential and stimulating conversations, with people of all ages finding inspiration and knowledge at the Ri. When asked, 95% of people attending one of our events said they enjoyed it; 94% said they learnt something new; and 85% said they are more confident in discussing the subject with friends and colleagues as a result.

And with more people coming to more mind-blowing events than ever before, we continue to build on our theatre's reputation as the 'Wembley of science communication.'



'This was an evening of the highest order. Very entertaining and very informative.'
— Public event attendee

'The lecture theatre is undoubtedly the most impressive venue that I have come across – and with a great audience.'
— Ri speaker

'It's like sci comm Wembley.'
— Raghav Selvam, public event attendee



Attracting world-leading thinkers

In 2017 we continued to attract world-leading thinkers to the Royal Institution. From academic heavyweights such as Roger Penrose and Daniel Dennett, to pioneers including Dame Stephanie Shirley and Dan Martin, our speakers all made a unique contribution to our rich programme of discovery and discussion.

We were also delighted to host leading figures in TV and film, including Elizabeth White from BBC Planet Earth II and Mike McGee, the founder of world-leading special effects company Framestore. And we explored the lighter side of science with comedian Helen Keen, the live videogame comedy experience WiFi Wars, and Australian science legend Dr Karl.

Throughout the year we collaborated with a variety of organisations to bring diversity to our programme, from academic bodies such as the Genetics Society, to international bodies including the Canadian High Commission and French Embassy. And our programme was truly international, with many of our 117 different speakers coming from France,

the Netherlands and Denmark, and places further afield such as Canada, Australia and the USA.

In May we partnered with Euroscience and Academia Europaea to hold a summit for scientists, policymakers and key influencers to debate the wide-ranging consequences of the historic decision to leave the EU. We also continued our successful event partnership with long-term corporate supporters QuantumBlack, and tested a series of themed events to allow a deeper exploration of a particular topic.

At the same time we introduced more talks with an added cultural dimension – such as 'The science of salsa' and 'ExpeRience: A midsummer night of science' – furthering our

examination of science in society and culture, broadening our appeal, and drawing new audiences to the Ri, and through us, to science.

In the year ahead we will host more themed events at the Ri – including a series of talks transporting the science of Frankenstein into the modern age in celebration of the 200th anniversary of the book's publication – and more that appeal to a diversity of curious minds across the full spectrum of science and culture.



117

different speakers from the UK, France, the Netherlands, Denmark, Canada, Australia and the USA

Digital engagement

Ri content anywhere, anytime

We are committed to broadening our reach beyond the confines of our much loved and iconic building, providing our world-class programme of talks and Discourses with a permanent digital legacy and taking them to a truly global audience online.

In today's world of 24/7 media, engagement through digital and social media enables us to take our explosive content to millions of people who may never have the opportunity to come to the Royal Institution, allowing them access whenever and wherever they choose.

Throughout our history we have led the way in innovative science communication. Our work today furthers this tradition, placing digital at the heart of all we do and making it central to our new five-year strategy.

Our digital team are adept at developing new and creative ways to engage our vast international audiences with science, at a scale that could hardly have been dreamt of in the time of Michael Faraday.

We can think of no other more fitting place to harness the power of digital technology than at the Ri.



'It's rather amazing that I or anyone else with a computer and internet connection can 'attend' presentations at the Royal Institution.'

— Ri YouTube subscriber

'One of the best presentations I've seen anywhere, even from the Ri. Simply wonderful in its lucidity, importance of subject matter, and timeliness. Six stars out of five!'

— Ri YouTube subscriber

Creating opportunities in innovative ways

Through our award-winning videos and digital content we are taking the rich heritage and contemporary vision of the Ri to hundreds of new people each and every day.

In 2017, we attracted 101,000 new subscribers to our YouTube channel. In every corner of the globe we inspired people with the wonder of science, through the 114 videos we published during the year, on such eclectic subjects as 'What to do about space debris?', 'Humphry Davy's potassium volcano' and 'What is symmetry in physics?'

We partnered with the British Psychological Society to develop a new ExpeRimental video series for 2017, featuring 10 new psychology-themed activities for children aged nine to eleven. These videos show real families enjoying time together, empowering viewers with the confidence and creativity to explore, question and test some of the fundamentals of science.

Our 2017 Advent calendar revisited 24 video clips from past CHRISTMAS

LECTURES, including Sir David Attenborough, Carl Sagan and Richard Dawkins, alongside more recent Lecturers such as Chris Bishop and Danielle George. The videos all link back to our full CHRISTMAS LECTURES archive which is now free for everyone, at the heart of our rigb.org website.

Our digital team also produced an additional 16 videos on 'Humphrey Davy: Laughing Gas, Literature, and the Lamp', an online course allowing over 2000 people to cross the boundaries of science and culture. And in June, Prof Tara Shears, Physicist at University of Liverpool narrated our 'What is Symmetry in Physics?' animation by our 2016/17 animator in residence, Rosanna Wan, made possible through the support of the Sfumato Foundation.

'What I adore about your channel is that you're not afraid to give a speaker a bucket of time and let them go for it. There's no dumbing down the science.'

— Ri Channel viewer



Reaching out across the World

In 2017 alone, we had over 920,000 unique visitors to our website, with over 22.2 million unique page views. From finding out about the latest events at the Ri, to enjoying family fun with the help of our ExpeRimental videos, these amazing figures are testament to the quality and impact of our content and our continued success in meeting the needs of our audience. They represent a level of engagement we intend to build on as we inspire everyone to think more deeply about science and its place in our lives.

With 101,000 new subscribers we increased the size of our YouTube audience by nearly a third in a single year. In total, it now stands at a massive 330,000 subscribers, with our videos being viewed an incredible 9.5 million times in 2017 and 29.5 million times since 2010. The total watch time in 2017, and in total, equates to 220 years and 565 years respectively.

We know of no other science or heritage organisation in the UK, with a size of audience and global reach that comes even close to ours.

We are harnessing technology to reach hundreds of thousands more people than we could by face-to-face events alone,

meeting our strategic objective to extend our reach beyond our iconic building.

And as we deliver our mission to provide opportunities, to discover, discuss and critically examine science, we want our audiences to be more than just informed. Our feedback, as summarised by one YouTube subscriber, shows that we are helping them to question the way in which science shapes the world around us: 'The most important aspect of a science video for me, and the reason I love the Ri, is getting a grip on the 'why' and 'how' rather than the 'what'. The Ri handles this really well.'

We will build on this success in the year ahead.

330,000

subscribers to our
YouTube channel

9.5 million

video views in 2017

CHRISTMAS LECTURES Past

There's a timeless joy in the daily opening of an Advent Calendar, and at the Ri we've brought this much loved Christmas countdown into the 21st Century, via our own digital version.

This year 'Transmissions through time' saw us delve into our archives to bring 24 highlights from CHRISTMAS LECTURES past, to our online audiences today. Each window featured a short clip from the past 43 years of Lectures, connected to this year's theme of 'The language of life'. The clips ranged from old favourites from iconic Lecturers such as Carl Sagan, Sir George Porter, Richard Dawkins, Sir David Attenborough and Heinz Wolff, through to modern classics from Marcus Du Sautoy, Kevin Fong, Danielle George and Alison Woollard.

Each brought to the fore a different aspect for which the CHRISTMAS LECTURES are world-renowned: their humour, warmth, excitement and, of course, their clear and accessible explanations of the science that shapes the world we live in.

The project gave us the perfect way to highlight our timeless heritage, and to bring it to life for whole new audiences online via our Royal Institution YouTube channel, 85% of whom are from outside the UK and may have grown up without the yearly tradition of the CHRISTMAS LECTURES on television.

With 48,000 visitors to our Advent Calendar and 162,000 video views, 'Transmissions through time' has proved popular with old and new audiences alike.

48,000

Advent
Calendar
visitors

162,000

Advent video
views



Our heritage

Building on our heritage

We are keenly aware that our rich heritage provides the foundation for our work today. For over 200 years we have been engaging people with science; championing its advancement and examining its place in society and culture, and its contribution to economic prosperity and social and cultural wellbeing.

We are building on this heritage in a contemporary setting. And while our methods may have changed, the principles of our vision and mission would be recognised by the 58 gentlemen of science who founded the Ri in 1799.

Through our Faraday Museum and our internationally significant collection of scientific apparatus, books, journals, manuscripts (some of which are enrolled on the UNESCO Memory of the World) and images, we continue to make science and its history accessible to all; from the curious public to leading historians and scientific researchers.

In 2017, an estimated 80,000 people visited our Faraday Museum, which is free to access for all. And as well as the usual activities, including tours, talks, conservation and publishing, we also oversaw publication of a second volume on the heritage of the CHRISTMAS LECTURES. Written by Helen Scales, with a foreword kindly written by Sir David Attenborough, '11 Explorations into life on Earth' gives fascinating new insights into some of the best life sciences CHRISTMAS LECTURES of the past 100 years, including those by Sir Julian Huxley, Desmond Morris, Richard Dawkins, Sue Hartley and, of course, Sir David Attenborough.



'I dare say you will marvel at the extraordinary skill and ingenuity with which all my co-contributors devised such dazzling, entertaining and informative experiments...'
— Sir David Attenborough

Humphry Davy: Laughing gas, literature and the lamp

In October, we used digital technology to bring sources from the earliest years of the Ri to life for a new audience. Developed jointly in partnership with Lancaster University, and funded by the Arts and Humanities Research Council, our MOOC (massive open online course) entitled 'Humphry Davy: Laughing gas, literature and the lamp' attracted over 2200 participants.

Using significant quantities of Davy's original apparatus and manuscripts, and filmed by the Ri Digital team, the MOOC's presenters included Sharon Ruston, Richard Holmes, Tim Fulford and our historian, Frank James. Former Christmas Lecturer Peter Wothers spectacularly recreated Davy's model of volcanic action.

To a significant degree the success of our MOOC can be attributed to the cultural turn that the history of science has taken in recent years. In this, Davy assumes particular significance due to his poetry writing and close friendships with major Romantic figures such as Samuel Taylor Coleridge, Robert Southey and William Wordsworth.

The MOOC's success – with some individual elements attracting more than 400 comments – can be summarised by just one of the 2000+ participants:

'Brilliant course! I think the end of week summaries have really been an added treat, so thank you Prof Ruston and Prof James for the amount of extra work you have put in, with more info and thoughts about various questions that have come up.'
— Ri MOOC participant



Venue hire

A unique and world-class venue

As an independent charity, the income we generate through hiring our inspirational building funds the core costs of the Ri and helps us meet our charitable objectives.

With our unique heritage and central location, our wonderful building is recognised as a versatile and exciting event space, providing a memorable experience for corporate clients and private guests alike.

Our private entrance leads to the Grand Staircase, our palatial Georgian meeting rooms and libraries are perfect for networking, and people tell us our lecture theatre can somehow make 440 people feel like they're in the intimate setting of their lounge.

It is these features that saw us accepted this year as one of just 85 members of the exclusive marketing consortium, Unique Venues of London.

In 2017, we hosted over 35,000 guests at events, ranging from small private

parties to large corporate conferences. Frieze London held their Art and Architecture conference here in October; the Sir John Soane Museum held their Annual Lecture here; while Comic Relief brought Bill Gates to their Debate Mate event for young people.

And we were pleased to host and support the British Science Association – with whom we have a long and rich relationship – in delivering their annual Huxley Summit; just one example of our commitment to including business and policy makers in discussions about the place of science in society.

Many of our clients have become corporate members of the Ri, such is the depth of their repeat engagement with us and in 2017, 95% of our clients said they would use our venue again.

95%
of our clients
said they would
use our venue
again



The Royal Institution

'I run 3-4 events a week across multiple venues in London but without doubt the Royal Institution is in a league of its own.'
— John Gordon, the How To Academy

'Working with the Ri is a delight – the combination of exceptional event management and service, surrounded by the history of the conversations that have taken place in the space before us, makes it a unique world class venue. Having spent a fair amount of time searching the world for theatres, there isn't one out there like yours.'
— Kat Pegg, Stylus

Science abroad

Over 200 years ago Sir Humphry Davy, then Director of the laboratory of the Royal Institution, embarked on his epic trip to Italy, opening new minds to the best of British science and returning with greater learning from the eminent European scientists he had met. We are continuing that tradition today.

The universal language of scientific demonstrations means that the CHRISTMAS LECTURES or our Science in Schools shows travel well abroad; while our website and YouTube channel are available to anyone, at anytime, anywhere in the world.

So while the heart of the Ri is in our historic London home, our place in the world knows no barriers, being wherever we take our expertise and our inspiring content.

The CHRISTMAS LECTURES went on tour again in 2017, presented by 2016 Lecturer Saiful Islam, with a version of the series being filmed for Singapore television, and a Lecture also taking place in Tokyo. As ever the international appeal of science and the standing of an expert team from the Royal Institution, ensured a rapt audience.

Our thanks go to major sponsor the Lloyd's Register Foundation, and to our international partners, the Singapore Science Centre, A*STAR and The Yomiuri Shimbun, for making this global reach possible.

In the year ahead we intend to develop our international offer further, with plans to take the 2017 Lectures to three Japanese cities (Tokyo, Nagoya and Kanazawa), Singapore, and Hong Kong.

In November we broke new ground for our Science in Schools Programme, making our first trip abroad, to the British International School in Hong Kong, to deliver three shows, including 'Explosive food' and 'Bringing science to life'. Over 800 primary and secondary school children enjoyed the shows, along with their families and members of the community.

And our YouTube audience is truly international. With just 13%, or 41,600 of our 320,000 subscribers, being UK-based, our inspirational content is criss-crossing the globe; from Japan to Germany, Italy to India.

87%
of subscribers
are from outside
the UK



Our international reach

▼ Education and heritage outreach

- Brazil
- China
- France
- Hong Kong
- Japan
- Singapore
- UK
- Uruguay
- USA

◆ Ri Members

- Australia
- Belgium
- Canada
- Czech Republic
- Denmark
- France
- Germany
- Hong Kong
- India
- Indonesia
- Ireland
- Italy
- Japan
- Jordan
- Poland
- Qatar
- South Africa
- Spain
- UK
- USA

Our 2017 YouTube audience

Countries	Views	Proportion
United States	3,306,404	33%
United Kingdom	1,174,171	12%
India	537,524	5.4%
Canada	523,826	5.2%
Australia	366,278	3.7%
Germany	361,129	3.6%
Netherlands	218,542	2.2%
Sweden	172,742	1.7%
Brazil	162,446	1.6%
Vietnam	146,067	1.5%

Our community

Our members make a difference

A community of like-minded people, sharing their love for science and culture, our members sit at the heart of the Royal Institution. They help us make a difference.

Contributions from our members help support our charitable activities in the UK and beyond. And their enthusiasm and commitment helps set our direction, through election of Trustees, or voting rights on important Ri decisions.

In return, our members join us in our mission of creating opportunities to discover and discuss science, feeding our collective fascination with the world around us. They benefit from better than half price tickets to our public events; while attendance at our historic series of Discourses is free. And they receive a host of offers organised by our dedicated membership team, from organisations that share our spirit of exploration.

Throughout 2017, we took steps to increase the number of events designed exclusively for our members and their guests. Our heritage workshop on book conservation in the spring showcased our rich past in a contemporary setting; while in the summer we transformed our building into a magical forest, to explore the science of Shakespeare through 'ExpeRience: A midsummer night of science'.

It's no wonder that once someone becomes a member of the Ri, they tend to stay with us. Our youngest member is 5 years old; our oldest 96. Collectively they are the embodiment of our aim to create a lifelong journey with science and inspire everyone to think more deeply about its place in our lives.



'More events like these. The membership is worthwhile when we learn more about the Ri and its collections, work, and people!'
— Heritage workshop attendee

'An Ri Membership is a treasure.'
— Ri Member

'For anyone who is even slightly interested in science, the Ri is a great place to nurture that curiosity.'
— Ri Member



A member since childhood, a member for life

While still only aged in their late 20s today, Elizabeth Coker and Edward McCarthy have been Ri Members for 12 and 15 years respectively. They joined us at our AGM in May, to tell us why Ri membership is so special.

Lizzie

The Saturday morning maths Masterclasses were my first experience of the Ri. Until then, the maths we'd done at school had seemed formulaic and lacked context. I remember sitting in the Ri's amazing theatre, where all these great scientific discoveries had been unveiled, watching a lecturer show us how Trémaux's algorithm can be used to solve a maze. I'd probably never thought about maths in this way, but those Saturday morning lectures made me curious. At the end of the final Masterclass I signed up to become a Faraday junior member of the Ri.

Three years later I remember being fascinated by a talk on modelling crowds, demonstrated by a simple simulation of crowds moving round the Cutty Sark on a busy Saturday afternoon.

And in these two examples is what I believe is unique about the Ri; the knack of making sometimes complex science accessible – through creative, everyday examples and applications – and the ability to instil creative thinking skills in young people.

The Ri truly is a wonderful, unique organisation that I am proud to have supported. I have been a member since childhood and I believe I will be a member for life.

Edward

When I joined the Ri in 2002, I was continuing a family tradition. My grandfather had joined in 1959 and my grandmother continued to attend Discourses long into her old age. This means that at least one person in my family has been a member almost continually for the past 58 years.

I first attended the Royal Institution when I was 13; like Lizzie, I had been sent along to the maths Masterclasses by my school. But I quickly realised that there was a lot more to the place than just that. I snapped up the opportunity to become a Faraday junior member, and was soon attending lectures and Discourses that took the fundamental principles I was learning at school and extended them to the cutting edge of research.

To me, the Ri provides the opportunity to stay in touch with scientific thinking, despite working in another field; the opportunity to keep learning new concepts; and the stimulation to keep an open and critical mind in everything I do.



Our supporters

Helping us to inspire everyone to think more deeply about science

Year after year, our mission to create opportunities for people to discover, discuss and critically examine science is made possible by a close group of friends and advocates. Without their support – financial and in kind – we simply couldn't take the wonders of science to as many people as we do.

Thanks to them, we are able to extend and enhance our core charitable activities. We can take the world famous CHRISTMAS LECTURES to huge audiences at science fairs across the UK, and to new and eager minds abroad. We can send our expert presenters to schools to add real value to the science curriculum, and provide enrichment grants to aid science teachers' continuous professional development. And we can grow our digital activities, making our engaging science content

accessible to people of all ages, in all places, regardless of their social or economic circumstances.

Our vibrant community of supporters is made up of individuals and organisations from a diverse range of backgrounds including business, academia and culture. What they have in common is their invaluable contribution to the Royal Institution, helping us to inspire everyone to think more deeply about science and its place in our lives.

2017 CHRISTMAS LECTURES

Special thanks must go to our 2017 CHRISTMAS LECTURES major supporter the Lloyd's Register Foundation, who this year agreed a partnership for the next three years, and our community of supporters,

Schlumberger, Millennium Point and BBSRC. Together you are helping us to continue a 192-year tradition, which remains one of the highlights of the scientific calendar.

'The Clothworkers' Foundation is proud to have a long-standing relationship with the Royal Institution. Our support of more than £2.2m since 1985 reflects our confidence in its ongoing commitment to delivering high quality maths activities to pupils in schools in disadvantaged areas, which would otherwise not have been able to access such provision.'

— Philip Howard, Head of Grants, the Clothworkers' Foundation



Building on a remarkable legacy

'To point out the causes which impede this [scientific] progress, and invite the public to join in effectively removing them, is the purpose of the present address.'

With these words, recorded more than two centuries ago, the patronage of 58 philanthropists established the Royal Institution as an independent charity. Through their vision, the Ri has inspired generations of scientists and become the home of discoveries that have shaped our modern world.

Today, the support of our Ri Patrons – a growing community of loyal supporters who value a deeper connection with science – allows us to build on this remarkable legacy.

Ri Patrons enjoy access to a wide range of benefits including free access to our 'Ri Patrons present' event series, exclusive drinks receptions, behind-the-scenes access and the opportunity to attend our Faraday Dinner.

In return their deeper engagement with us and financial support – starting at just £350 – enables us to place science firmly at the centre of society and deliver our public programmes, our innovative science education, and our outreach activities for under-served communities.

Our supporters' feedback:

'We're delighted to be working with the Royal Institution and supporting the legendary CHRISTMAS LECTURES, to bring the joy of learning to young people and families.'

— Judith Armstrong, CEO, Millennium Point

'I always enjoy the Ri Patron evenings. They entertain and inform and are perfectly pitched for both scientists and non-scientists. They cover a multitude of topics and I always leave feeling that my brain has been stretched and that I have had the opportunity to listen to some brilliant scientists who are engaged with the big topics of our times.'

— Louise Terry, Ri Patron



Thank you

We must extend a huge thank you to all those who support the Royal Institution, in so many ways; our Trustees, Board sub-committee members, patrons, members, donors, corporate supporters, volunteers and visitors. As an independent charity we rely on your support to encourage people of all ages to begin their lifelong journey with science.

We look forward to continuing our important mission with you in 2018.

Major supporters

Causeway Technologies
Lloyd's Register Foundation
L'Oréal UK & Ireland
The Clothworkers' Foundation

Supporters

6point6 Technology Services
Company of Actuaries Charitable Trust
AWE plc
Bayer
BBSRC
BHP Billiton
British Psychological Society
John S Cohen Foundation
The Doris Pacey & Dr Michael and Anna Brynberg
Charitable Foundations
Equitable Charitable Trust
ERA Foundation
Ernest Cook Trust
Ernst & Young LLP
Faraday Foundation
Bernard Gold Foundation
Charles Hayward Foundation
Johnson Matthey
A G Manly Charitable Trust
Millennium Point
Brian Mitchell Charitable Settlement
G M Morrison Charitable Trust
Newtecnic
The Patron Fund
QuantumBlack
Reece Foundation
Roche
Schlumberger
Science and Technology Facilities Council
Sfumato Foundation
Shears Foundation
DS Smith Charitable Foundation
Sonardyne Foundation
UIN Education Community Interest Company

Ri Patrons

Faraday Circle

Fiona Forbes and Jonathan Hiscock
Simon Godwin
Hugh J. W. Harper
Monty Le Fay
Sir Desmond Pitcher
Hank Roberts

Diffusion Circle

Nicholas and Tobe Aleksander
The De Laszlo Foundation
Matthew Gill, MBE
Renato Lulia-Jacob
Duncan McInnes
Dame Theresa Sackler
Sarah Wills

Magnetic Circle

Alexoria
John Collins
Stephen Corben
James Cottam
Paul Drake
Daniel Feather
Karen Hodson
Jerry Horwood
Lady Sylvia Jay
Kunal Kishore and Jodi Humphreys
Ian Laming
Chris Lowe
James Malpas
Gautam Mitra on behalf of OptiRisk Systems
Richard Pinch
Geoff Potter
Benjamin R Miller
Ralph Rayner
E C Renton
James Rowe
Lawrence Staden
Sir Richard Sykes

Help us to inspire people to think more deeply about science

As an independent charity, we do not receive financial support from government. So it is only through the generosity of our patrons, members and supporters that we are able to inspire everyone to think more deeply about science and its place in our lives.

The more support we receive, the greater the impact we can have on public engagement with science, and the more we can serve the needs of our audiences, by improving the ways we share our expertise nationally and internationally.

If you would like to find out more about how you can get involved, please contact the Ri Development team at development@ri.ac.uk or visit rigb.org/support.

Support a project

We have a range of educational programmes for young people, from the CHRISTMAS LECTURES and Science in Schools, to a national programme of Masterclasses enhancing the science curriculum for talented children. Each offers a bespoke sponsorship opportunity. And our exciting plans for the future include many new projects that will help us deepen people's engagement with science, nationally and internationally.

Corporate support

As we look forward to exciting plans for the future, there has never been a better time for companies to be associated with the Ri, through corporate membership, venue hire, or in partnership with our wide-ranging programmes and innovative educational activities. Our corporate supporters benefit from access to leading thinkers in science and policy, brand association with our outreach programmes, exclusive invitations to networking events, and a perfect way to reward their staff with all the benefits of Ri Membership.

Packages can be tailored to the needs of your company and we welcome the opportunity to discuss how your company can benefit from a partnership with us.

Donate

You can make a donation to the Royal Institution online through our Just Giving page or by sending in a cheque payable to 'The Royal Institution.'

Become an Ri Patron

Deepen your engagement with the Ri and join the group of philanthropic individuals who give so much support to our charitable activities. There are four levels of patronage starting at £350.

Become an Ri Member

Support the Ri and join a community of like-minded people who share a curiosity and passion for science and culture. Members enjoy a range of benefits including free and better than half price tickets to Ri events.

A whole year's membership is just £29 for children and £75 for adults.

Leave a legacy

The generous individuals who leave a legacy to the Ri help us plan for the future and support our charitable objectives for years to come.

Our finances

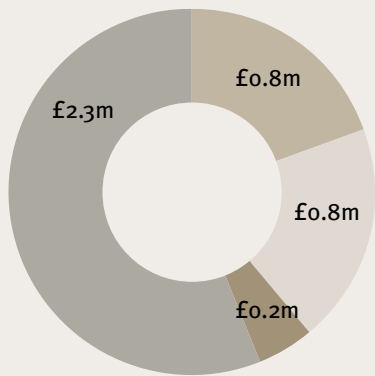
In the 2016–2017 financial year we made significant progress in consolidating our strengthened financial position and our long-term financial sustainability.

And with a new five-year strategy agreed by Trustees in December we are looking to the future with confidence as we seek to increase the reach and impact of our charitable activities.

In 2016–2017 we generated £2.3m of trading income and £1.8m in voluntary income through fundraising, membership and events. We have achieved a surplus of £0.28m on unrestricted funds compared to a £0.12m surplus in 2015–2016, and a £0.2m deficit the year before that.

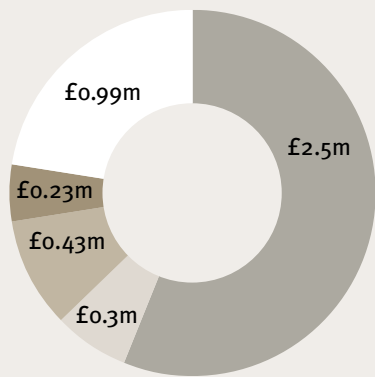
Our cash reserves remain robust with £1.07m as at 31 December 2017.

Full audited accounts are available to download from the Ri and Charity Commission websites.



How we fund our work
Total income 2016–17: £4.1m

- Fundraising
- Event income
- Membership
- Trading



How we spend our money
Total expenditure 2016–17: £4.5m

- Education programme
- CHRISTMAS LECTURES
- Heritage
- Public events
- Trading

Data for year ending
30 September 2017

Our governance

The Royal Institution was founded in 1799 and received its Royal Charter on 13 January 1800. It is an independent Royal Charter Charity and is governed by its byelaws and governing documents.

The Trustees number 11 in total, nine elected by the membership of the Ri and two appointed by the Board. The Trustees ensure the Ri carries out its charitable purposes for public benefit and complies with its governing documents. They have overall responsibility for managing the business of the Institution; setting strategic direction and objectives; safeguarding the Institution’s assets; overseeing all significant capital expenditure and maintaining relevant policies. The Board meets a minimum of four times a year and is supported by the Audit Committee, Finance Committee and Nominations Committee.

Please visit our website for full details of our governance
rigb.org/about/organisation

Registered Charity number
227938

Royal Patron

HRH The Prince of Wales
(2016 – current)

President

HRH The Duke of Kent

Honorary Vice President

Sir John Ritblat

Trustees

Sir Richard Sykes, Chairman
Dr Fergus Boyd
Simon Godwin
Mr Hugh Harper
(retired May 2017 and appointed June 2017)
Lord Julian Hunt
Dr Martin Knight
(retired May 2017)
Prof Sir Peter Knight
(retired May 2017)
John Krumins
Mrs Sarika Patel
Mr Geoff Potter
Ms Louise Terry
Prof Chris Toumazou
Lord Robert Winston

Ri Leadership Team

Dr Shaun Fitzgerald
Director
(appointed February 2018)

Prof Gail Cardew
Director of Science and Education

Michael de Crespigny
Director of Finance and Chief Operating Officer

Robert Davies
Head of Marketing and Communications

Prof Frank James
Head of Heritage and Collections



*‘I didn’t know science could be
so much fun. Best trip ever.’*
— L’Oréal Young Scientist Centre attendee, aged 11



Royal Institution of Great Britain
21 Albemarle Street
London W1S 4BS

ri@ri.ac.uk
+44 (0)20 7409 2992

rigb.org

Registered Charity Number: 227938

Image credits:

John Angerson, Marcin
Badzioch, Irene Carter, Paul Clarke,
Harry Harper, Karen Hatch, Mel
Koutchavlis, Katherine Leedale,
Edward McCarthy, Tim Mitchell,
NASA, Paul Wilkinson

Design:
them.co.uk

The CHRISTMAS LECTURES © is a registered trademark.
For more information contact: xmaslecs@ri.ac.uk