



# 2014 events programme

THE  
ROYAL  
SOCIETY

Part of the Royal Society

**summer  
science  
exhibition**

# The Summer Science Exhibition is an annual display of the most exciting cutting-edge science and technology in the UK.

Meet the scientists behind the research, try your hand at the experiments and discover more about the world around you.

Throughout the exhibition there is a programme of talks, debates, Café Scientifique and family events to challenge, inspire and excite you.

All events are **FREE** to attend. Doors will open 15 minutes prior to the start time and seats will be allocated on a first come, first served basis.

## Tuesday 1 July – Sunday 6 July

### Show and tell

12 noon – 1pm

Find out more about the exhibits over your lunch with these short taster sessions in the Terrace Café. Every day a different selection of exhibitors will be showing exciting demonstrations from their stands.



# Tuesday 1 July

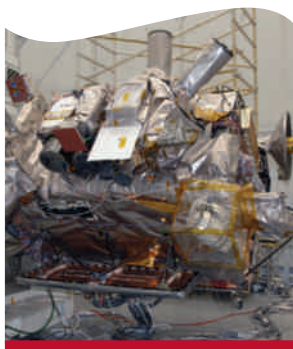


## Oxygen: breathing life into our planet

6pm – 7pm

### Café Scientifique Terrace Café

Today, the earth's atmosphere contains approximately 20 per cent oxygen. This oxygen allows complex life to flourish and animals to breathe. But how did it get there? Life evolved early in earth's history but complex life didn't appear until much later. Join Dr Patricia Sanchez Baracaldo to find out why it took so long, and what role the oxygenation of the atmosphere played?



## Exploring the Universe and watching TV with robots

6.30pm – 7.30pm

### Public talk Kohn Centre

Explore rockets, software and radio with Dr Chris Arridge to discover how the technology in your phone is used by scientists to learn more about our solar system.



© Stefan Krause

## Cultivating eureka

7.30pm – 8.30pm

### Panel discussion Events room

History is punctuated by so called 'eureka moments', from Archimedes to Einstein, and often the stories behind the discoveries are more famous than the science they produce. Join Professor Uta Frith and Dr Anna Maria Roos to find out the historical significance of instant inspiration and to explore how we might encourage modern scientists to unlock their inner eureka.

# Friday 4 July

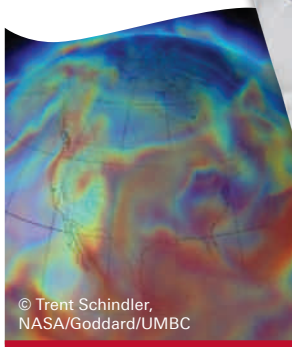


## **Building galaxies in the office**

5.30pm – 6.30pm

### **Public talk Kohn Centre**

If you have ever looked up at the sky, you may have asked yourself: “Where did the Milky Way come from?”. This question has fascinated humans for thousands of years. Join Dr Mark Wilkinson to explore what we know (and what we don’t know) about how a cosmic soup of dark matter, gas and dust produced the magnificent range of stars and galaxies that we see in the Universe.



## **The physics of climate change**

6.30pm – 7.30pm

### **Public talk Terrace Café**

Physics plays an integral role in the Earth’s climate. Professor Joanna Haigh will demonstrate how the circulation of the oceans, winds and weather patterns, and the amount of sunlight we receive impacts our climate. Hear how physics is being used to transform our ability to model and predict climate change.



## **Simon Watt’s frogs and friends**

7pm – 8pm

### **Comedy Events room**

Simon Watt thinks frogs are among the most fascinating and freaky species on our planet. There are frogs that break their bones and pierce their flesh to act as knives, and even frogs that can survive freezing. Frogs might be brilliant but, sadly, they are dying out. Simon Watt explores why frogs are better than most people he knows and how studying them has changed the world.



# Saturday 5 July



8 and under

## Be a Palaeontologist!

10.30am – 11.30am

**Family event**  
**Conference room**

Ever wondered what palaeontologists actually do? Join Dr Fiona Gill to find out, with an interactive session exploring fossils and geological time. Children will handle and identify real fossils, help to build a fossil timeline and create and name their own fantastical fossil creature to take home.



8-14

## Music to your ears

11am – 12 noon

**Family event**  
**Events room**

This exciting presentation from science made simple, packed with demonstrations and audience interaction, reveals the secrets of the basics of sound to the latest in music technology. Witness the ultimate 'hands-free' instrument and see a musical instrument played with a blowtorch.



Under 10

## Slimy seas

11.30am – 12.30pm

**Family event**  
**Kohn Centre**

The oceans might just seem wet but they are also sticky, gooey and squelchy. Creatures across the seas use slime to help them stay alive but how does it help? Join the National Marine Aquarium with this interactive show to discover how slime makes a sea snail move, why it protects an octopus and if it helps a parrotfish sleep at night.



### **Building galaxies in the office**

12 noon – 1pm

#### **Family event Terrace Café**

If you have ever looked up at the sky, you may have asked yourself: “Where did the Milky Way come from?”. This question has fascinated humans for thousands of years. Join Dr Mark Wilkinson to explore what we know (and what we don’t know) about how a cosmic soup of dark matter, gas and dust produced the magnificent range of stars and galaxies that we see in the Universe.



### **Lucky dip**

12.30pm – 1.30pm

#### **Family event Events room**

A sensational science show where you decide what will happen. David Price presents a random selection of his favourite science tricks. Will you see the floating sausage, burping pot or funny forks? Take your pick then sit back and watch as the hilarity unfolds.

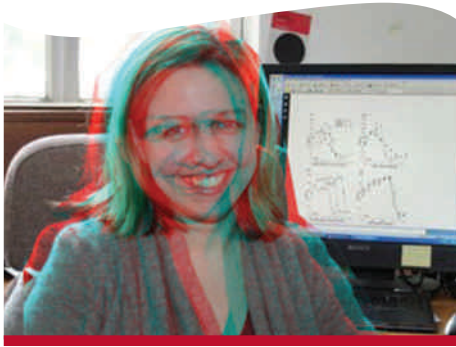


### **Buzzing!**

1pm – 2pm

#### **Family event Conference room**

Anneliese Emmans Dean brings to life her book *Buzzing!*, which was shortlisted for the 2013 Royal Society Young People’s Book Prize. Discover the ‘factabulous’ world of garden invertebrates through projected close-up images, poems, and musical interludes. Learn how you can make an important contribution to science just by stepping out into your garden.



### **Close encounters with the 3D mind**

1.30pm – 2.30pm

**Public talk**  
**Kohn Centre**

3D vision is an excellent tool for predators and tool users like us. Through the combination of the images in our two eyes, we experience a detailed, 3-dimensional world, with which we successfully interact. Test your 3D vision with Dr Kristine Krug and explore how 3D cinema works. You will find out how flat images on the cinema screen create the deceptive impression of depth we enjoy in 3D movies.



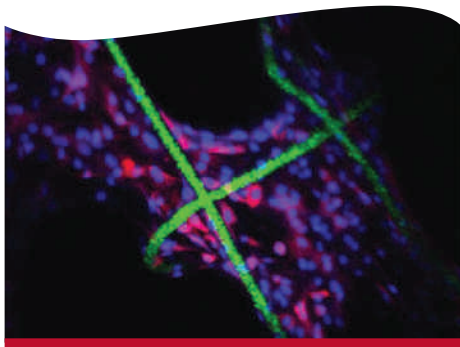
### **Intelligence in the animal kingdom: what makes us so special?**

2pm – 3pm

**Café Scientifique**  
**Terrace Café**

We have the capacity to use complex problem solving; to read motivation and intention in others. But what do we use our intelligence for on a day to day basis? However, we often bypass this with the use of unconscious reasoning and take shortcuts to reach decisions. Dr Suzanne Schultz will help you understand how and when we use fast and slow cognition, and if the same distinctions are present in the animal kingdom.





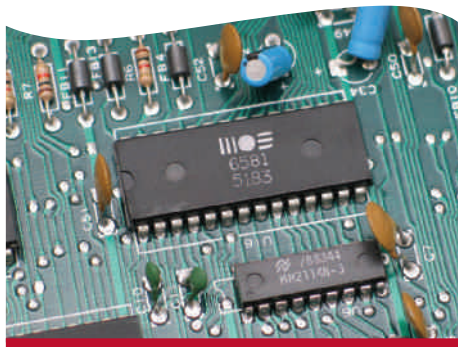
### **The tiny world of the cell**

2.30pm – 3.30pm

#### **Public talk**

#### **Conference room**

The cells within the human body exist in tiny, complex worlds working tirelessly in all parts of your body to keep you alive and functioning. Explore these microscopic environments with Dr Glen Kirkham and find out how the billions of cells in your body live, function and interact with each other.



### **Privacy with technology: where do we go from here?**

3pm – 4pm

#### **Panel discussion**

#### **Events room**

Recent revelations surrounding internet privacy have garnered global attention. As people live more of their lives online, along with growing 'always on' and wearable technology, the amount of data available for observation and analysis is growing faster than ever. Are current technologies robust enough to keep us protected, and what is being developed to better manage and protect our identities and privacy? Discuss the implications and challenges of the changing technological landscape with experts including Professor Ross Anderson and Professor Jon Crowcroft.



# Sunday 6 July



8 and under

## Be a Palaeontologist!

10.30am – 11.30am

### Family event

#### Conference room

Ever wondered what palaeontologists actually do? Join Dr Fiona Gill to find out, with an interactive session exploring fossils and geological time. Children will handle and identify real fossils, help to build a fossil timeline and create and name their own fantastical fossil creature to take home.



8-14

## Music to your ears

10.30am – 11.30am

1.30pm – 2.30pm

### Family event

#### Events room

This exciting presentation from science made simple, packed with demonstrations and audience interaction, reveals the secrets of the basics of sound to the latest in music technology. Witness the ultimate 'hands-free' instrument and see a musical instrument played with a blowtorch.



Under 10

## Slimy seas

11.30am – 12.30pm

### Family event

#### Kohn Centre

The oceans might just seem wet but they are also sticky, gooey and squelchy. Creatures across the seas use slime to help them stay alive but how does it help? Join the National Marine Aquarium with this interactive show to discover how slime makes a sea snail move, why it protects an octopus and if it helps a parrotfish sleep at night.

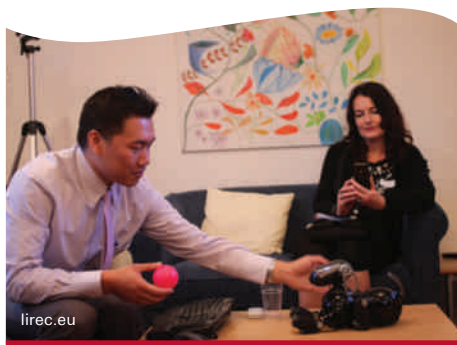


### **Lucky dip**

12 noon – 1pm

#### **Family event Events room**

A sensational science show where you decide what will happen. David Price presents a random selection of his favourite science tricks. Will you see the floating sausage, burping pot or funny forks? Take your pick then sit back and watch as the hilarity unfolds.



### **Frontiers of computer science: artificial intelligence, robotics and conscious machines**

2pm – 3pm

#### **Café Scientifique Terrace Café**

The fields of computer science, artificial intelligence and robotics are among the fastest growing in science. Some of the world's biggest corporations are backing them and are hoping to integrate future technologies into our everyday lives. Professor Peter McOwan will guide you through what the future might hold. Will we live in a world dominated by machines? Could we ever create a conscious machine? And what would it mean for us if we did?



14+

### **Building galaxies in the office**

2.30pm – 3.30pm

#### **Family event**

#### **Conference room**

If you have ever looked up at the sky on a clear night, you may have asked yourself: “Where did the Milky Way come from?”. This question has fascinated humans for thousands of years and lies at the heart of modern astronomy. Join Dr Mark Wilkinson to explore what we know (and what we don’t know) about how a cosmic soup of dark matter, gas and dust produced the magnificent range of stars and galaxies that we see in the Universe.



### **Scientists in the field**

3pm – 4pm

#### **Panel discussion**

#### **Events room**

Have you ever wondered what being a scientist would be like? Science is all about finding out how the world works, and sometimes, you can’t do that without stepping outside the lab and seeing it for yourself. Four Royal Society scientists, with first-hand experience, share the realities, the unique challenges and rewards of fieldwork, and its importance in scientific research.



### **The Royal Society**

6 – 9 Carlton House Terrace

London, SW1Y 5AG

**T** +44 20 7451 2500

For advice in advance of your visit  
please contact the exhibition team

**T** +44 20 7451 2683

**E** [events@royalsociety.org](mailto:events@royalsociety.org)

### **Opening times**

Tuesday 1 July 10am – 9pm

Wednesday 2 July 10am – 5pm

Thursday 3 July 10am – 5pm

Friday 4 July 10am – 8pm

Saturday 5 July 10am – 6pm

Sunday 6 July 10am – 6pm

Last entry is 30 minutes  
before closing time.