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INTERNATIONAL IMAGES FOR SCIENCE 2016

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26 SEPTEMBER – 8 OCTOBER 2016 Haymer's College, Hull

22 OCTOBER – 1 NOVEMBER 2016 Royal Exchange Theatre, Manchester

**21 JANUARY – 25 MARCH 2017** Banbury Museum

**17 – 27 FEBRUARY 2017** Millennium Centre, Derry

**1 – 17 APRIL 2017** City Arts Centre, Edinburgh

28 APRIL – 15 MAY 2017 Royal Albert Hall, London SW7

**4 – 12 JUNE 2017** Town Hall, Cheltenham

For further details of venues, please visit www.rps.org/exhibitions

### COVER IMAGE

NORM BARKER ASIS FRPS Computer Chip

#### CAPTIONS

### CORDELIA MOLLOY

The Council of The Royal Photographic Society wishes to express its sincere appreciation to the selection panel for their work in producing the final selection for the exhibition, and to its staff at Fenton House for helping bring this project to fruition.

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#### SELECTORS

LINDSEY GOFF Biomedical Picture of the Day

JOHN HALTON Engineering UK

HUGH TURVEY HonFRPS Gustoimages

PATRICIA WALKER Siemens plc

### MEDIA PARTNER



### WALTER BENZIE HonFRPS

President, The Royal Photographic Society

Almost since the very birth of photography, The Royal Photographic Society has been active in promoting both the art and the science behind making images. Many of our past presidents have been eminent scientists as well as accomplished artists.

Today our membership includes some of the people who make modern photography possible, as well as those pushing the boundaries of our art. The Society continues to support science through special interest groups, our world-class Imaging Science Journal and our science qualifications programme.

The application of science to photography is familiar to anyone who owns a digital camera or smart phone. Yet the application of photography to science has been perhaps less well known.

For this reason, we have been very pleased to produce the International Images for Science exhibition. This is the fourth exhibition of its kind since 2011, and the second year in which it has been generously supported by Siemens plc as part of the Curiosity Project. With their assistance, we have been able to host a competition that has seen more than 2500 entries from photographers, students and scientists across a wide range of ages, experience and nationalities. We are especially pleased with the number of entrants in the 17 years and younger category. The images that made it into the exhibition are all of a remarkable standard. Each is well achieved and has a strong aesthetic quality, yet each also tells an intriguing story.

On behalf of The Royal Photographic Society I would like to express our thanks to our staff and volunteers, the panel of selectors, and everyone who entered the competition for helping to make the International Images for Science a fascinating, entertaining and instructive exhibition.

#### SPONSOR'S FOREWORD

### JUERGEN MAIER

Chief Executive Officer, Siemens plc

Siemens is proud to support the Royal Photographic Society's International Images for Science competition and exhibition for a second year as part of our Curiosity Project.

The project, launched in 2015, aims to help bring science, technology, engineering and mathematics (STEM) to life and inspire young people to be the engineers of the future.

Siemens is a global engineering powerhouse with deep roots in the UK, going back more than 170 years. We have 14,000 employees here and 13 manufacturing sites and we are proud to support the future of engineering in Britain.

With Ingenuity for life, our new brand promise to our customers, colleagues and society, the 'for life' focuses and drives all of us to continue to make a positive societal contribution.

We congratulate the Royal Photographic Society on again running a successful International Images for Science competition and mounting an exhibition with beautiful and striking images. We hope that visitors to the exhibition and readers of this book will feel inspired and help us communicate the power and importance of science.

siemens.co.uk/curiosity-project

## LINDSEY GOFF

Editor-in-Chief Biomedical Picture of the Day

Lindsey is Editor-in-Chief of the MRC Clinical Sciences Centre's Biomedical Picture of the Day (www.bpod.mrc.ac.uk), which showcases the stunning and intriguing images that appear in today's vast array of biomedical publications, and briefly explains them with the non-scientist in mind. She has worked on BPoD since its inception in January 2012, and loves the diversity of the images amassed in the archive, which acts as a continuous and searchable record of the 'state of the art' of science. Before getting involved in scientific publishing and editing, Lindsey was with Cancer Research UK for twenty-five years doing laboratory and clinical research on cancers of the immune system.

## JOHN HALTON

Director, Business and Industry Engineering UK

John manages the Business & Industry team at Engineering UK, a not for profit organisation which works in partnership with the engineering community to promote the vital role of engineers and engineering to society. The team encourages companies and organisations from all sectors including Aerospace, Energy, IT, Automotive, Food & Drink, Construction, Transport etc. to provide their support, both 'in-kind' and financially for their Corporate Membership, Big Bang Fair and Tomorrow's Engineers programmes. John trained as an aeronautical engineer, working on projects such as the Typhoon fighter and the A320 airliner. He subsequently led major international marketing and strategic planning operations for a wide range of engineering consultancies.

### HUGH TURVEY HonFRPS

Photographer and X-ray Artist Gustoimages

One of the world's most innovative and creative artists, Hugh is a photographer and experimentalist who works primarily with X-ray technology. His work fuses art and science, graphic design and pure photography. His unique imaging approach captures both internal and external shadows of objects, which are called 'Xograms'. Hugh's work is published and exhibited worldwide by an extensive range of public, individual and corporate clients. As part of his devotion to public understanding and engagement, Hugh is the Artist in Residence at the British Institute of Radiology. In 2014, he was awarded an Honorary Fellowship by the Royal Photographic Society in recognition of his work as an advocate for imaging innovation and its role in the advancement of science and understanding.



Senior Technical Support Engineer Siemens plc

Patricia Walker is a Senior Technical Support Engineer at Siemens working in the Traffic (Mobility) sector. She joined Siemens 8 years ago after moving back to the UK from overseas. She specialises in providing technical support for Field Services Engineers, maintaining a wide portfolio of traffic management systems and electric vehicle infrastructure. She is also responsible for providing local authority customers with bespoke traffic solutions and assistance.

Patricia and her family of 4 live in Poole. She is a member of the Parkstone Camera Club, of which she is club secretary. She has been on numerous photography courses and has shared her passion for photography within the work place by encouraging her colleagues to take part. As a result, the Engineering Department in which Patricia works now holds a quarterly photography competition, which is judged by the Senior Management team.



# LARGE HADRON COLLIDER

A view inside one end of the ATAS determines an experiment on the Large Indon California (LHC), opened for maintenance he LHC is the most powerful particle adder, and the largest single machine wer built It uses superconducting electromynets to guide bunches of high energyparticles around a 27-kilometre acceleration of a almost the speed of light. The prices are collided inside detectors such aths to mimic the conditions prevailing at after the Big Bang, creating particles and the Higgs boson, in an attempt to aver some of the fundamental question approximation.

Hania Farrell



# LOOKING FOR THE BANG

A young visitor at London's Science Museum peers through a model component of the Large Hadron Collider (LHC), the most powerful particle collider, and the largest single machine, ever built. The LHC collides beams of high energy particles to re-create the conditions prevailing just after the Big Bang, in an attempt to answer some of the fundamental questions of physics.

Hania Farrell