

Engineering-themed public lectures in Cambridge

2017-18 season

Date	Event	Information
Monday October 9th	<p>The Return of The Comet An account by Roger Bailey, Chief Pilot the Shuttleworth Trust, of the De Havilland 88' aircraft of 1934, its place in Aviation History, and its return to flight at the Trusts' Airfield at Old Warden Beds.</p>	<p>Cambridge Industrial Archaeology Society 7.45 p.m. at the Friends Meeting House, 12, Jesus Lane, Cambridge CB5 8BA</p>
Tuesday 10th October	<p>Cryptography By Dr James Grime, Institute of Continuing Education, University of Cambridge Codes and ciphers have been used for 4,000 years to disguise the meaning of our most secret messages, from the most elementary ciphers of ancient times to the modern encryption methods used today. By the twentieth century, encryption had become mechanised, most famously in the Enigma machine, used by the German military. James' talk will describe one of the most secure ciphers available today, known as RSA, it is a method of encryption used on the internet, an example of Public Key Encryption. Cryptography is one of the most exotic real life applications of maths. Maybe James will even answer the question: "is there such a thing as an unbreakable code?"</p>	<p>Cambridge Physics Centre Sixth Form Lecture Series 6pm sharp Pippard Lecture Theatre, Cavendish Laboratory, JJ Thomson Avenue Directions at: http://outreach.phy.cam.ac.uk/programme/cpc/cpcdirections No need to book, just turn up</p>
Thursday 19th October	<p>CONSTRUCTING THE INTERNET - A MARITIME ADVENTURE We think of the internet as an intricate web of billions of interconnected devices through wireless and wired connections. In reality, the world wide web relies mostly on subsea intercontinental cables. The only time we hear about them is when they break, like in 2012 when a ship's anchor sliced one and cut off access to the web for 6 African countries. This talk tells how the challenges of getting these fibre cables to survive hostile subsea conditions have been met with a little help from a bush fire in Papua New Guinea. Rob Struzyna has spent 40 years working in Subsea engineering. He was Technical Director of the company which laid the first international fibre optic cable from the UK to Belgium followed by the first trans-Atlantic fibre crossing. The talk will also include a network repair at 9200m water depth (almost the deepest place on Earth).</p>	<p>The Institute of Engineering Technology Please make a booking at https://localevents.theiet.org/bc5fce Venue Institute For Manufacturing, Alan Reece Building Address: 17 Charles Babbage Rd, Cambridge, CB3 0FS United Kingdom</p>
Thursday 9th November	<p>Natural Structure: Materials, Form and Force By Dr Michael H Ramage, Department of Architecture, University of Cambridge. The relationship between structural form and natural force allowed medieval master builders to construct spaces that still inspire awe today, and which would be difficult to recreate. But with an understanding of antique knowledge, traditional construction and contemporary computation we can once again explore the forma and structure of centuries ago in contemporary architecture and engineering. Combining historic wisdom with the latest natural material technology offers novel and sustainable building solutions.</p>	<p>Cambridge Physics Centre Sixth Form Lecture Series 6pm sharp Pippard Lecture Theatre, Cavendish Laboratory, JJ Thomson Avenue Directions at: http://outreach.phy.cam.ac.uk/programme/cpc/cpcdirections</p>

	Michael Ramage will discuss new developments from his research at Cambridge and his practice, Light Earth Designs.	No need to book, just turn up
Monday November 13th	Re-opening a Railway Tony Smare will talk about re-opening railways with particular reference to the "Welsh Highland Heritage Railway" Porthmadog, Gwynedd, but with others thrown into the mix'.	Cambridge Industrial Archaeology Society 7.45 p.m. at the Friends Meeting House, 12, Jesus Lane, Cambridge CB5 8BA
Tuesday 5th December	Furry Logic: The Physics of Animal Life By Liz Kalaugher and Matin Durrani, Editor, Physics World magazine Why do dogs slurp from their drinking bowls while cats lap up water with a delicate flick of the tongue? How does a tiny turtle hatchling circle the entire northern Atlantic before returning to the very beach where it hatched? These puzzles - and many more besides - are all explained by physics. Matin and Liz introduce the great physicists whose discoveries helped us understand the animal world, and the animal experts of today who study the animals that seem to push the laws of physics to the limit.	Cambridge Physics Centre Sixth Form Lecture Series 6pm sharp Pippard Lecture Theatre, Cavendish Laboratory, JJ Thomson Avenue Directions at: http://outreach.phy.cam.ac.uk/programme/cpc/cpcdirections No need to book, just turn up
Monday December 11th	History of the Slate Industry in North Wales Continuing with the Welsh theme, Alan Daley of CIAS describes the development of the Slate Industry in the Principality.	Cambridge Industrial Archaeology Society 7.45 p.m. at the Friends Meeting House, 12, Jesus Lane, Cambridge CB5 8BA
Thursday 25th January	Planetary Magnetism: From Deep Time to Deep Space Dr. Richard Harrison, Department of Earth Sciences, University of Cambridge The Earth's magnetic field is generated by the constant churning of liquid iron in its outer core. This "geodynamo" is crucial to life: without it our atmosphere would be stripped away by the solar wind and we would be exposed to lethal doses of high-energy cosmic rays. But has the Earth always had a magnetic field? How has it changed throughout the last 4.5 billion years? Using the physics of "nanopaleomagnetism" we can turn tiny mineral grains into sensitive magnetic recording devices, with memories long enough to detect the magnetic fields that were present not only at the birth of our planet, but at the birth of the solar system	Cambridge Physics Centre Sixth Form Lecture Series 6pm sharp Pippard Lecture Theatre, Cavendish Laboratory, JJ Thomson Avenue Directions at: http://outreach.phy.cam.ac.uk/programme/cpc/cpcdirections No need to book, just turn up
Monday February 12th	Cambridge from the Air The Museum of Technology Webmaster reviews past aerial photography of the City. He may also touch upon the Gas Works!	Cambridge Industrial Archaeology Society 7.45 p.m. at the Friends Meeting House, 12, Jesus Lane, Cambridge CB5 8BA
Thursday 22nd February	Our Sun: Friend or Foe? Dr. Helen Mason, Department of Applied Mathematics and Theoretical Physics, University of Cambridge Helen Mason's research focuses on ultraviolet and X-ray spectra from the solar atmosphere. She studies solar active regions, solar flares and jets to understand and predict space weather events such as coronal mass ejections. Observations from solar satellites in the near Earth environment (SoHO, STEREO, Solar Dynamics Observatory, Hinode, IRIS) have given us new insights into the nature of the Sun and its interaction with the Earth.	Cambridge Physics Centre Sixth Form Lecture Series 6pm sharp Pippard Lecture Theatre, Cavendish Laboratory, JJ Thomson Avenue Directions at: http://outreach.phy.cam.ac.uk/programme/cpc/cpcdirections No need to book, just turn up

Monday March 12th	<p>The Cambridge Milling Landscape Stephen Temple of Impington Mill and TEAMS (aka' The East Anglian Mills Society) describes the restoration of and the current status of our County Mills.</p>	Cambridge Industrial Archaeology Society 7.45 p.m. at the Friends Meeting House, 12, Jesus Lane, Cambridge CB5 8BA
Thursday 22nd March	<p>Refreezing the Arctic Dr. Hugh Hunt, Department of Engineering, University of Cambridge We may want to cool the planet if (when) we fail to meet our CO₂ emissions targets. There are technologies out there that are almost ready to go but some sound quite scary. Is it safe to meddle with the climate when we only have one Earth, asks Dr Hugh Hunt?</p>	Cambridge Physics Centre Sixth Form Lecture Series 6pm sharp Pippard Lecture Theatre, Cavendish Laboratory, JJ Thomson Avenue Directions at: http://outreach.phy.cam.ac.uk/programme/cpc/cpcdirections No need to book, just turn up