

## Past U3A Technology and Science Speakers

<b>2013</b>		
Nov	Dr Ian Duerdoth	The Large Hadron Collider and the Higgs Boson
<b>2014</b>		
Jan	Clive Bosman	Aero engines
Feb	David Luke	Tin: What would we do without it? *
March	Dr David Burnham	What's the problem with energy? *
April	Roger Bowling	Sun dials
May	Dr Ian Duerdoth	Measurement of the gravitational constant "G"
	Clive Bosman	Gyroscopes
June	Quarry Bank Mill, Barbara Kleisser and Adrienne Noble	Visit to small scale hydro-electric scheme
July	no meeting	
August	no meeting	
Sept	Ron Pierce	Nuclear Power *
Oct	Dr Megan Argo, Jodrell Bank, University of Manchester.	When Galaxies collide
Nov	Joshua Bowmaker	Wind Energy *
Dec	no meeting	
<b>2015</b>		
Jan	Tony Hayter	Energy storage
Feb	Dr Bernard Loveday	Advances in Medical Imaging
Mar	Peter Redmill	Solar Energy
April	Clive Bosman	Three Reasons you won't understand Relativity *
May	Dr Iain Macdonald, Imperial College .	Carbon Capture and Storage. *
June	Manchester Airport	Technical tour of Concorde and Nimrod
July	no meeting	
August	no meeting	
September	Ray Jordan	History of photography
October	Prof Peter Styles, University of Keele.	Shale Gas: What the frack is all the fuss about?*
November	Dr Phil Turner	Medicine of Ancient Egypt
December	no meeting	
<b>2016</b>		
Jan	Professor Phillip Dawson, University of Manchester	Light Emitting Diodes
Feb	Keith Stevens	Global cooling - bring on the CO <sub>2</sub> . *
Mar	Ron Pearce	Traffic Alert and Collision Avoidance System

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April	Prof Brian Launder FRS, University of Manchester	Solar-radiation management: buying time to avert dangerous global heating
May	Prof Peter Roberts	Geotextiles - what in earth are they?
June	Dr Thurai Rahulan, University of Salford	The Airbus A380
July	no meeting	
August	no meeting	
September	John Irwin	The Life and Death of Stars. *
October	Dr Ian Duerdoth	Gravitational waves
November	Dr Bernard Loveday	Cardiac surgery
December	no meeting	
<b>2017</b>		
Jan	Prof Ian Morison	Beauty in the Heavens
Feb	Dr Al Dossetter, Medchemica Ltd.	Big Data – “The Revolution That Will Change All of Our Lives”
Mar	Caroline Traves	A beginner’s guide to the construction and maintenance of a human – EPIGENETICS. *
April	Dr Rhian Jones, University of Manchester.	Meteorites
May	Prof Peter Roberts	Geological Armageddons - Take Your Choice. *
June	Professor Ian Cotton	Visit to High Voltage Laboratory, University of Manchester
June	Peter Donnelly, Nuclear Regulatory Authority.	Treatment and storage of nuclear waste – a regulator’s view
July	no meeting	
August	no meeting	
September	Prof Ben Stappers, Jodrell Bank, University of Manchester.	Radio astronomy
October	Dr Tony Bristow, AstraZeneca.	Real time analysis of human disease
November	Prof Robert Dryfe, University of Manchester.	Batteries for power storage and graphene electrochemistry
December	no meeting	
<b>2018</b>		
Jan	Dr Fabio Parmeggiani and Dr James L. Galman, University of Manchester	Biocatalysis and Synthetic Biology: The future of pharmaceuticals?
Feb	Dr Jamie Ellingford, Manchester Centre for Genomic Medicine.	DNA in medicine: promises, challenges and everyday applications. *
Mar	Professor Terry Brown, Manchester Institute of Biotechnology.	DNA and human history.
April	Prof Peter Budd, University of Manchester.	Sifting molecules with twisty polymers and flat materials.
May	Dr Clive Saunders, University of Manchester.	Thunderstorms

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June	Euan Soutter, University of Manchester.	The Halibut Slide - a giant submarine landslide triggered by Palaeocene mantle plume activity in the North Atlantic
June	Dr Brian Smith	Visit to Waters Inc at Wilmslow, manufacturer of mass spectrometers.
July	no meeting	
August	no meeting	
September	Dr Ros Todhunter	Is HS2 on shaky ground through Cheshire?
October	Prof Terry Hewitt, Bangor University.	Supercomputers
November	James Mason, University of Manchester.	Climate mitigation in shipping
December	no meeting	
<b>2019</b>		
Jan	Professor Peter Roberts.	How Gravity is created - a new theory for the 21st century
Feb	Dr Angela Davies, Division of Evolution & Genomic Sciences, School of Biological Sciences, University of Manchester.	Delivering the genomic revolution in health care.*
Mar	Dr Richard Waller, University of Keele.	Glacial and permafrost environments - key elements of the global "cryosphere". *
April	Professor Ian Morison.	Proving Einstein right
May	Dr Helen Price, Keele University.	Leishmaniasis: new ways to tackle a neglected tropical disease
June	Professor Sheena Cruickshank, Lydia Becker Institute of Immunology and Inflammation, Faculty of Biology, Medicine and Health, University of Manchester	The Human Microbiome
July	No meeting	
August	No meeting	
September	Paul Barron, University of Manchester	Nuclear Fusion: The Science, the Technology, and the Materials. *
October	Professor Peter Roberts	Geological history of the British Isles.
November	Keith Stevens	Finding your Way: The history of the Ordnance Survey through to the GPS age. *
<b>2020</b>		
Jan	Dr Robin Preece, School of Electrical and Electronic Engineering, the University of Manchester.	Going green – the hard parts*
Feb	Professor Francis Livens, Director of Dalton Institute, University of Manchester.	Future of Nuclear Power in the UK
March	Cancelled due to Covid-19 epidemic.	

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April	Dr Sebastian Cosgrove, Manchester Institute of Biotechnology, University of Manchester.	"Go with the flow? The future of organic chemistry"
May	Dr Justyna Kulczyk-Malecka, Research Associate, Manchester Fuel Cell Innovation Centre, Manchester Metropolitan Univ.	A hydrogen-based future?*
June	Dr Steve Hurley	SETI and the rare earth hypothesis
July	No meeting	
August	No Meeting	
Sept	Dr Hywel Owen, Accelerator Physics Group, University of Manchester.	The physics of Proton Beam Therapy*
Oct	Jack Saunders, University of Manchester.	Watching Paint Dry: How to Stop Corrosion
Nov	Prof David Brough, School of Biological Sciences, University of Manchester.	Inflammation and Alzheimer's disease*
Dec	No Meeting	
<b>2021</b>		
Jan	Dr Dave Clements, Department of Physics, Imperial College.	Phosphine in the Cloud Decks of Venus*
Feb	Professor Phil Manning, Chair of Natural History, Department of Earth & Environmental Sciences, University of Manchester.	Last Day of the Dinosaurs*
Mar	Professor Coskun Kocabas, School of Materials & National Graphene Institute, University of Manchester	Graphene for smart optical surfaces
April	Professor Nick Loman, Professor of Microbial Genomics and Bioinformatics, School of Biosciences at the University of Birmingham	"How can sequencing coronavirus genomes put us on the front foot of this pandemic?"
May	Howard Lyne, Honiton U3A	Meteorology – a tour of the basics governing our weather and climate.
June	Professor Jim Wilde, University of Lancaster	Space Weather
July	No meeting	
August	No meeting	
Sept	Professor Jane Clarke, F. Med. Sci, FRS President, Wolfson College, University of Cambridge	Proteins: How do they fold and why do they have to?
Oct	Professor Jonathan Sharples, School of Environmental Sciences, University of Liverpool.	Oceanography: from microbes to the global climate.
Nov	Professor Andy Abbott, Department of Chemistry, University of Leicester.	Recycling electric vehicles.....

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<b>2022</b>		
Jan	Dr Jonathan Radcliffe Chemical Engineering, University of Birmingham	The role of energy storage in the UK's energy system*
Feb	Dr Steve Hurley	Dark Matter and Dark Energy
Mar	Lloyd Mitchell, Hydrogen Engineering Lead, FutureGrid Innovation, National Grid	Exploring hydrogen in the National Grid
April	Dr Penny Hundleby, Senior Scientist, John Innes Centre, Norwich	Genetically Modified Crops*
May	Professor Peter Roberts	The Geological History of the British Isles and Ireland.
June	Professor Ian Morison	Our Island Universe: The Milky Way and its place in Space and Time.
July	No meeting	
August	No meeting	
September	Ron Pierce	Radiometric Dating
October	Gillian Gibson, Gibson Consulting, Tarporely	Unnatural cycles: impact on human and planetary health
November	Professor Steve Liddle, Professor of Inorganic Chemistry, Department of Chemistry, University of Manchester	Uranium, the Bogeyman of the Periodic Table: A Case of Dr Jekyll or Mr Hyde?
December	No meeting	
<b>2023</b>		
January	Dr Anna Bonaldi, Project Scientist, SKAO, Jodrell Bank	Bigger, better, faster, further: Back to the cosmic origins with the SKA Observatory.
February	Professor Perdita Barran, professor of mass spectrometry, and Joy Milne, University of Manchester	Detecting Parkinson's disease
March	Dr Keith Paver	Viruses are fun – until you catch them!
April	Professor Jamie Gilmour, Professor of Planetary Science, University of Manchester	Meteorites and the Early Solar System
May	Dr Gareth Hatch, Managing Director, Strategic Materials Advisory	Why going green starts with brown earth
June	Andrew Devereau, Division of Informatics, Imaging & Data Sciences, University of Manchester	Capturing disease descriptions to analyse genomes, a story from the 100,000 Genomes Project
July	No meeting	
August	No Meeting	
September	Professor Alistair Sutcliffe, Emeritus Professor of Systems Engineering, University of Manchester	Artificial Intelligence: How it works and why we should be worried

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October	Dr Soheb Mandhai, Research Associate, Jodrell Bank Centre for Astrophysics	From massive stars to the gold in your body - The lives of neutron star mergers
November	Dr Mike Palmer, formerly of the Christie Hospital and AstraZeneca.	Lies, Damned Lies and the Uses and Abuses of Statistics
December	No meeting	
<b>2024</b>		
January	Professor David Johnson, Chair in Soil Microbial Ecology, Department of Earth and Environmental Sciences, The University of Manchester	The Wood Wide Web
February	Ron Pierce	Keeping Complex Systems Safe
March	Dr Sarah Jones, Reader in Thrombosis and Haemostasis, Department of Life Sciences, Faculty of Science and Engineering, Manchester Metropolitan University.	Reducing animal usage in cardiovascular research
April	Professor Arthur Garforth, Department of Chemical Engineering, University of Manchester.	Recycle Today, Save Tomorrow
May	Professor Jayne Lawrence, Division of Pharmacy and Optometry, School of Health Sciences, Manchester University	Neutron scattering and the development of novel drug formulations
June	Dr Darren Graham, Reader in Physics, University of Manchester	Terahertz Radiation - a new tool for accelerator scientists and engineers.
July	No meeting	
August	No meeting	
September	Dr Trevor Higgins	The life of a pharmaceutical – from conception to death
October	Mike Greenwood	An introduction to Clinical Trials
November	Dr Marco Domingos, Senior Lecturer, Mechanical and Aerospace Engineering, University of Manchester	Biofabrication: Emerging technologies and strategies towards the next generation of healthcare therapies
<b>2025</b>		
January	Graham Hall, Chief Strategic Officer, Avocet Battery Materials Ltd, Holmes Chapel.	The Science of Batteries
February	Professor Philippa Browning, Jodrell Bank Centre for Astrophysics, University of Manchester	Solar Flares, the most powerful explosions in the solar system

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March	Professor Jason Micklefield FRSC, Department of Chemistry, Imperial College London and Honorary Professor, Department of Chemistry & Manchester Institute of Biotechnology University of Manchester	Sustainable bio-inspired ways to build molecules
April	Professor Paul Connolly, School of Earth and Environmental Sciences, University of Manchester	Clouds, nucleation and snowflakes
May	Dr Steve Hurley	Global Satellite Navigation Systems
June	Dr Kathryn Simpson, SCLC Biology Group, Cancer Research UK, Manchester Institute	Cancer Biomarkers and Preclinical Models



In the control room of the High Voltage Test Laboratory

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