

York U3A Science in Society - Talks for the 2022 - 2023 season

Date of talk	Full or 1/2 session	Name		Title	Synopsis
12 Sep	Full	David	Worsley	Science and History (continued)	This lecture will consider how historical thinking has been influenced by scientific concepts such as reductionism, determinism, catastrophism and uniformitarianism. This will be illustrated by examining the significance of geography in determining the course of human history, and the history of speculation about possible links between ancient civilizations
26-Sep	1/2	Abby	Walklett	A 'sweet' new strategy to tackle superbugs	Abby is a first year Biochemistry PhD student at the University of York looking at a novel antimicrobial target in ESKAPE pathogens.
26-Sep	1/2	Rod	Moreton	Videos about vaccination	
10-Oct	Full	Annie	Hodgson	Serendipitous science	Some of the most amazing scientific discoveries have been made completely by accident. The sign of a great scientist is that they recognise the significance of what they observe; then, led by curiosity and imagination, experiment to develop an idea or invention. Whether the accident is the result of a clumsy cat or a careless chemist, serendipity has played an important role in the history of science. Dr Annie Hodgson will take you into the world of serendipitous discoveries and will try to recreate some of these accidents on purpose!
24-Oct	Full	Martin	Birley	Airport expansion and climate breakdown	Leeds Bradford Airport company applied for planning permission to expand. The talk examines the proposal and it's consequences
14-Nov	1/2	Peter	Jarman	The early universe as seen by the James Webb telescope	Complementing short talk on the detectors of the telescope
14-Nov	1/2	Christine	Jarratt	The East African Pygmies in Yorkshire	Bringing of the East African Pygmies to the UK and the reaction to them in the light of Darwin's theory of Evolution

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28-Nov	Full	Alan	Hunton	Treescapes: An arboreal history from the Ice Age to the Present	There have been several ice advances over the past million years. In response to each ice advance, trees and wildlife retreated south from Northern Europe to ice-free refuges in Spain, Italy or the Balkans. In this talk we will chart how our familiar oak and other trees slowly moved north as the climate began to warm 15000 years ago. Low sea level allowed trees to move unhindered into Britain until, in the middle of the Mesolithic period the English Channel suddenly formed. From this point onwards we see that humans began to shape the landscape through farming and deforestation. New species from all over the world were introduced from the 16th century onward but the industrial revolution and 2 world wars brought our tree cover to crisis point.
12-Dec	Full	Michael	Alexander	'Soils, their formation and a world overview	An examination of how environmental inputs influence soil development processes.
9-Jan	1/2	David	Randon	Gold and other scarce metals	
9-Jan	1/2	John	Bibby	Is 2023 a prime number?	
23-Jan	Full	Cath	Blacketer	The UK space industry	"UK Space. Its past, its present and how new start ups are creating an exciting future"
13-Feb	1/2	Ziggy	Attala	Verification of robotic systems involving neural network components	The combination of robotics, automation, and AI has the potential to benefit many aspects of our lives: it enables intelligent behaviour in robots. Currently, however, no deductive guarantees can be made about the behaviour of these systems. Our work enables the first such guarantee combining advanced techniques for verification.
13-Feb	1/2				
27-Feb	1/2				
27-Feb	1.2	Robin	Jenkins	Using Monoclonal Antibodies ("MABs") to detect fraudct fraud	Low molecular weight chemical markers added at ppb levels - which can thus only be detected by MAB's (which are exquisitely sensitive) can be added to liquids to detect fraud by dilution or substitution
13-Mar	1/2	Ros Perry		How Science and technology have helped to shape independent Singapore	A few years ago Ros gave a talk about colonial Singapore and its agricultural production. Since independence the poor colony has transformed itself into one of the richest per capita economies in the world.
13-Mar	1/2	Paul Thomley		The East Yorkshire Geopark Project	UNESCO Global Geoparks and the opportunities for sustainable development and education in a Geopark East of York

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Date of talk	Full or 1/2 session	Name	Title	Synopsis
27-Mar	Full	Joshua Levett PhD Researcher & GTA. Department of Computer Science. University of York	Internet Architectures and the Security of Internet Routing	A talk looking at security, societal, environmental and ethical issues in Internet routing – the way traffic carves paths through the Internet. Can we enhance Internet security whilst reducing the carbon footprint of an email? We discuss revolutionising the Internet's architecture and how it could change the Internet we know today.