



LIVERPOOL HOPE
UNIVERSITY
175 YEARS OF ACADEMIC
EXCELLENCE



BRITISH SCIENCE WEEK

At Liverpool Hope University

9th – 12th March 2020



British Science Week

At Liverpool Hope University

Here at Liverpool Hope University, we have a packed schedule of fun and interactive educational events planned for British Science Week 2020.

Our programme of activities explores science, technology, engineering and mathematics, as well as showcasing the state-of-the-art facilities available to our science students.

Open to schools, colleges and members of the public, our 2020 programme has something for everyone and aims to make science accessible to all. We'd like to invite you to join us for what promises to be an action-packed schedule of science and discovery.



Professor Atulya Nagar
Pro Vice-Chancellor (Research)
and Dean of Science
Liverpool Hope University

#BSW2020

MONDAY 9TH MARCH

Time: 9.30am

Welcome from the Vice-Chancellor

Join us for the official opening of our British Science Week celebrations. On arrival, please go to the Health Sciences Building where you will be met by members of the British Science Week team.

A series of workshops and talks hosted by the Sport and Exercise Science department.

Time: 10am - 12pm

Assessing sports performance

Two one-hour workshops for school pupils on measurement of sports performance (running in parallel).

Workshop 1: Introduction to biomechanical assessment of human movement

A series of interactive demonstrations giving an insight into how human movement and function is analysed in sport, including 3D motion capture, muscle activity and impact forces.

Workshop 2: Cardiorespiratory fitness: Maximal oxygen uptake

A high maximal oxygen uptake is a prerequisite for entry into elite levels of endurance sport performance. In this session, students will conduct a maximal exercise test on a volunteer and measure maximal oxygen uptake via the analysis of pulmonary gas exchange.

Employability workshop

Time: 10 - 11.45am | Location: LTC B

Employability workshop for Level I and Level H Sport students.

Hope student poster conference

Time: 11.45 - 12.45pm | Location: LTC Foyer

A selection of HSSCORE I infographic posters, and HSSCOREH motor control research posters will be on display.

The Role of Science in Sport

Time: 12.45 - 1.30pm | **Location:** LTC A

Guest speaker Dr Ian Horsley discusses Applied Sports Rehabilitation and Physiotherapy.

Dr Horsley is Lead Physiotherapist and Technical Lead for the English Institute of Sport (North West). Dr Horsley was a Physiotherapist for England Rugby Union for 14 years and is the Clinical Director of Back In Action Rehabilitation, in Wakefield. He currently lectures at Salford University.

Time: 1.30 - 2.15pm | **Location:** LTC A

Guest speaker Professor Greg Whyte OBE discusses Applied Sport and Exercise Science.

Professor Whyte was awarded an OBE for his services to Sport, Sport Science and Charity in 2014. He is an Olympian in modern pentathlon and well known for his involvement in Comic Relief. He is currently a Professor of Applied Sport and Exercise Science at Liverpool John Moores University.

Time: 2.30 - 3.30pm | **Location:** LTC A

Guest speaker Professor John Wood presents In Science We Trust.

This talk will look at how we view so called scientific truths, as well as exploring large international research projects such as at CERN, which help us challenge accepted ideas of truth and reality.

Professor Wood is a materials scientist by background and was previously Head of Engineering at Imperial College, he is currently a consultant to the European Commission and CERN in Geneva.

#BSW2020

TUESDAY 10TH MARCH

A series of workshops and talks hosted by the department of Nutrition.

Time: 10am - 12pm | **Location:** Bioscience Lab

Exploring Bioscience

Students will get hands-on doing bioscience experiments in our state-of-the-art laboratories.

Time: 12 - 1pm | **Location:** EDEN Corridor

Hope student conference and employability workshop

Professional development and careers advice for Nutritionists.

Time: 1 - 1.30pm | **Location:** EDEN Corridor

Poster session and networking lunch

Nutrition and Bioscience students demonstrate their work.

Time: 1.30 - 2.30pm | **Location:** EDEN 130

Guest speaker Dr Margaret Ashwell OBE presents Advice to a young scientist (from me and Dr Elsie Widdowson)

Dr Margaret Ashwell was awarded an OBE for her services to the UK Government's Food Advisory Committee in 1995. She is President of the Association for Nutrition and Director of Ashwell Associates, a company of independent scientific consultants and disseminators who focus on obesity, heart disease and health claims, among other areas of expertise. Dr Ashwell devised the Ashwell® Shape Chart, which shows how the simple waist-to-height ratio (a proxy for abdominal obesity) can predict early health risk.

Time: 3 - 4pm | **Location:** EDEN130

Professor David Park presents Twenty years running high-tech start-ups: Translating university innovation into the real world.

Professor David Park is a Professor in Entrepreneurship & Innovation within the University of Nottingham's Business School where he lectures and mentors in entrepreneurship, IP commercialisation and innovation. He is also Director of Executive Education and Associate Dean (Business & Community Engagement).

WEDNESDAY 11TH MARCH

Time: 9 - 11am | **Location:** Hope Park Sports Mezzanine

Hope student conference

Level H: Investigating Psychology Poster Conference.

A series of workshops and talks hosted by the departments of Psychology, and Mathematics and Computer Science.

Time: 10am - 12pm

Illusions workshop

Location: HSB Foyer

An introduction to visual illusions and how they can be explained. A variety of activities will allow students to directly experience perceptual distortions, with Psychology tutors explaining the biological and cognitive reasons behind illusions.

Height perception and interior design in virtual reality

Location: FML 420

This activity is run jointly by Computer Science and Psychology and involves two sessions. In the first session, students will experience height in a virtual reality environment and what this can tell us about human perception. In the second session, they will experience different interior design environments and how this experience impacts on liking.

How to keep a secret: Cryptography through the ages

Location: FML 301

The story of mankind's attempts to devise ways to send secret information, from the early days to modern cryptography. The session will involve a number of activities that challenge students to encrypt and decrypt different messages.

Introduction to Robotics: Problem-solving applications using robotic buggies

Location: FML 413

Students will learn how to design algorithms from scratch using flow codes. The algorithm will be used to move/control robotic buggies. The robotics will follow lines and avoid obstacles on their path, as students control the speed and angle. There will also be an interactive demonstration showing how two mini robots can play football using a simple Android application.

Dr Ogbonnaya Anicho, Department of Mathematics, Computer Science and Engineering, presents High Altitude Platform Station (HAPS) research

Time: 1 - 2pm | **Location:** EDEN130

It is hard to imagine living in contemporary times without any form of connectivity to the internet. However, this is the reality for a significant number of people, especially in rural and remote locations in the world. Through the High Altitude Platform Station (HAPS) research, the University is contributing to the global effort to make HAPS a viable solution for rural connectivity and disaster management. The research is also enabling us to raise awareness, and influence policy positions and attitudes of key stakeholders towards HAPS; a critical step in the mission to connect the unconnected.

Time: 2.15 - 3.15pm | **Location:** EDEN130

Guest speaker Dr Simon Duff presents The Psychology of Stalking.

This talk will consider how we understand/respond to stalking, why it is difficult to police and manage, and how we might work to support victims and stalkers. Dr Duff is a Chartered Forensic Psychologist and Deputy Director of Forensic Programmes for the Faculty of Medicine & Health Sciences at the University of Nottingham.

Liverpool Hope University, Hope Park, Liverpool, L16 9JD
www.hope.ac.uk/britishscienceweek



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