

# **IOP** Institute of Physics Yorkshire Day

(A day for anyone teaching or supporting the teaching of physics)

**Thursday 5<sup>th</sup> January, 2017**

Leeds University, Leeds, LS2 9JT

09.30	Registration & Coffee
10.00	Welcome: Prof Helen Gleeson, Leeds University.
10.10	'Out of the frying pan... from spin-out to academic' Prof Cliff Jones, Leeds University.
10:45	Workshop 1*
12:00	Lunch
13:00	Workshop 2*
14:00	Workshop 3*
15:00	Evaluation & Finish

\*Teachers will have a choice of three workshops from the following:

## **A Shocked and Stunned**

This workshop aims to improve your knowledge of how the Van de Graaff generator works and build your confidence with effective ways of using the generator in class. These shrunk down particle accelerators can really help visualise physics and make for a memorable lesson so come along to play with the portable generators and accessories supplied and get some ideas about how to employ them in your teaching. Gary Williams (IOP)

## **B Do Physics!**

Non Specialist teaching Physics? Need ideas and confidence? Do Physics is a series of 20 short hands-on practicals designed to inspire provoke and engage. They may be used as starters, investigations or bait to draw students into greater involvement in Physics. They are cheap, easily set up and rich in intriguing Physics. KS 3-5. Mick Rolley (IOP)

**C What's new about Energy?**

As you may be aware, there are some subtle and fundamental changes to the way that the concept of Energy is presented and assessed for the new KS4 curriculum. This workshop aims to unpick some of these changes, and provide some straightforward strategies to enhance your teaching of this topic at both KS3 and KS4 along with the usual opportunity to share ideas over coffee! Dan Hannard (IOP)

**D AQA's Required GCSE Practicals**

An opportunity to consider and try out AQA's required physics practicals. We'll consider alternative ways of approaching the requirement and how best to ensure that each practical opportunity works best for the development of students' knowledge and understanding as well as preparing them for those practical assessment questions expected in the exam. Bob Kiddle (IOP)

**E "Making Light Work of It"**

In this session you will explore methods of modelling the behaviour of light through practical work and ray diagrams. This will include the basic concepts of reflection, refraction, transmission and absorption in KS3 through to the action of lenses at KS4. Materials will be provided to support teaching at all levels making the teaching of light a little simpler" Darren Forbes (IOP)

**F Stimulating physics for Early Career Teaching**

This workshop is aimed at teachers who are relatively new to the joys and challenges of teaching Physics. We will consider some of the issues linked with developing pupil understanding of concepts and offer some engaging strategies to enthuse both you and your pupils. Christine Mayson (IOP)

**G Using isaacphysics.org in your teaching**

Isaac Physics aims to improve the problem solving skills of Physics A-level students. In this session, you will see how you can use Isaac Physics materials in your teaching. You'll also learn how to set (FREE) online homework assignments for your students and see their marks before you get into the next lesson! Heather Peck (Isaac Physics)

**H Astro Academy: Principia**

Learn how the National Space Academy designed, constructed, flight-qualified and developed experimental procedures for a suite of physics and chemistry demonstration experiments that were conducted by ESA astronaut Tim Peake aboard the International Space Station (ISS) during his six -month mission in 2016. You'll get to see the resulting videos and learn how these can be used to engage and educate people of all ages on different aspects of physics and chemistry. Conor Davies (National Space Academy)