

## Bristol Scientific Club: Meetings 2013-2014

### (1) Friday, 6 September 2013

Julian Lea-Jones: "Controlling a Flying Brick – Agility through instability"

"Passenger planes vs Military; have markedly differing requirements.

Passenger planes are designed to be aerodynamically stable and must not exert high G forces on the passengers, whereas a Fighter relies upon agility and ability to withstand much higher G forces to survive. Nevertheless the advances in Aviation Electronics have allowed control systems to be developed that benefit and overlap both sets of requirements. Within the constraints of confidentiality I hope to explain how these developments have come about. My talk is based upon my role firstly as a research group leader responsible for developing the new systems, both civil and military, and secondly as the head of a multinational group of fifty aerospace companies covering the entire avionics supply chain.

Will include some hopefully interesting anecdotes."

### (2) Saturday, 5 October 2013

Roger M Vincent Smith: "How I discovered the Higgs Boson - together with 7,000 colleagues"

Two enormous detectors at the Large Hadron Collider at CERN claim to have discovered the Higgs Boson, a particle that had been predicted for nearly 50 years. The talk will describe the theoretical reasons which motivate the need for such a particle, the design and operation of the collider and detectors at CERN and the evidence for this discovery. The talk will explain the physics behind the discovery for the non-expert. 3

### (3) Saturday, 23 November 2013

Brian Vincent and Ray Holland: "Chemistry in Bristol: an Historical Perspective"

The aim will be to tell the story of the chemistry department at Bristol University, and its links with local industry down the years.

Ray of course was strongly involved with the local group of the Society of Chemical Industry down the years, serving as its Chairman for more years than he would probably care to count up! To avoid "embarrassing" too many current club members, we would probably concentrate on the period from the 19th century down to the mid-1960's, i.e. around the time that the so-called "new" chemistry building in Cantock's Close was opened. There are many great stories to tell, from William Herapath in the mid-19th century, through Ramsay, Travers, Francis Francis, Worsley, Capper Pass, down to more recent stars like Wilson Baker and Everett, with perhaps just a few "indications" of some, even more recent developments such as the new synthetic building.

### (4) Saturday, 22 March 2014

John Phillips: "Where is Wave Power Now?"

This is an update on John's original talk which was entitled "Why is Wave Power so Difficult?"

John is doing a part time PhD at Plymouth University and should have completed the experimental work on a promising new device to get energy from sea waves. The inventor (now aged 92) of the device being studied is Francis Farley FRS whose early career included developing radar control of the Dover guns in WW2. He subsequently worked at CERN, winning the Royal Society's Hughes Medal in 1980 for his measurements of muons (many references can

be found on Google). Francis has been working on ideas to obtain energy from sea waves for over 30 years, and working with him is a unique experience. His fantasy novel "Catalysed Fusion", self-published in 2012 and based around 1980's CERN is a really good read.

(5) Friday, 4 April 2014

Guest Speaker: Dr J Bryan Carroll

Director Bristol Zoo Gardens

"Bristol Zoo Gardens- a Vision for the Future"

Synopsis to follow.

(6) Friday, 16 May 2014

To be arranged