IOP London and South East E-Bulletin – October 2012

Welcome to the IOP London and South East Branch's second e-bulletin. The aim of this newsletter is to be a one stop shop keeping IOP members up to date with what the Branch is doing in their local area.

The last bulletin mentioned that this would be a bi-monthly communication. However, as there are a number of things that the Branch would like to tell you about it was decided to send an additional bulletin this month.

Keep Updated
There are a host of ways for you to find out about what your local IOP branch is doing.
On the web **http://london.iop.org**
Join us on Facebook **www.facebook.com/ioplse**
Follow us on Twitter **@IOPLSE**

IOP London and South East Branch Annual Dinner – BOOKS NOW BEING TAKEN!

Don't forget that this year's annual dinner will be on the 21st November at the IOP's headquarters in central London. The dinner starts at 8pm and follows Prof. S. Swithenby's lecture on *The Working Brain*, which begins at 6.30pm.

The cost of the dinner (including wine) will be £36.00 per head and members are encouraged to bring along guests. Further details and booking forms can be found by clicking on the above link. We very much hope that you will be able to attend and look forward to meeting you.

London and South East Branch Committee

At present the position of Branch Secretary is still available. If you would like to get involved with the work of the Branch and become Branch Secretary or find out more about the role please contact **Member.Services@iop.org**.

Lecture Series (October and November)

This autumn sees the continuation of the London and South East Branch's lecture programme. The IOP strongly encourages members to bring along guests to these free public lectures. Please click on the links below for further details.

AWE – 22 October, 7.30 p.m. – Dr. Pedro Teixeira-Dias

Particle Physics, Higgs Particle and the Large Hadron Collider

Particle physicists study the most elementary particles and how they interact. While our understanding of nature at this level has been on solid footing for many decades, one fundamental question remained unanswered: how do elementary particles get their mass?

This talk will cover the rationale for the existence of the Higgs particle and the exciting journey that has led to the discovery of a new particle by the ATLAS and CMS experiments at CERN's Large Hadron Collider in 2012.

KENT - 23 October, 7.30 p.m. - Dr David S Berman

Theoretical Physics and String Theory

Theoretical physicists around the world dream of finding a unified theory of fundamental physics. In his talk, Dr Berman will review this goal and discuss how string theory might one day achieve this objective.

LONDON - 31 October, 6.30 p.m. - Prof. Monica Grady

Astronomy by Microscope

Studying meteorites in the lab through a microscope can teach us about the formation of our solar system. In this lecture, Prof. Grady will describe how instruments designed to look at the very small can enhance our understanding of the stellar processes that have shaped the very big.

HERTS - 7 November, 7.00 p.m. - Dr Steve Kane

The Physics of Finance

Excellent numeracy skills mean that physicists are wanted by many industries – and finance is no exception. In this talk, Dr Kane will give an overview of how physics is being used in the industry, and in particular, how techniques have been developed to help model uncertainty in the financial markets.

MILTON KEYNES - 13 November, 7.30 p.m. - Ian Butterworth

From Seeing Sound, to Killing Tumours with Ultrasound: Acoustic Research at the National Physical Laboratory

This talk will discuss two areas of research: "Seeing Sound" will show laser-based approaches to the visualisation of sound and include high-fidelity videos of acoustic fields. "Ultrasound as a Medical Treatment" will look at new applications of ultrasound that can be used to kill cancerous tissues through intense localised heating.

KENT - 20 November, 7.30 p.m. - Dr Suzanne Aigrain

Exploring the Diversity of Exoplanets

Over the past 20 years astronomers have been discovering hundreds of exoplanets – many of which are challenging our theories of planetary formation. Dr. Aigrain will discuss the highlights and challenges of exoplanet exploration, outlining how we are detecting a wider range of planets, including some that may harbour life.

LONDON - 21 November, 6.30 p.m. - Prof. Stephen Swithenby

The Working Brain: What Physics Can Tell Us About Autism, Shopping, and Learning Algebra

With modern scanners now able to image brain function, Prof. Swithenby, will talk about how magnetoencephalography (MEG) imaging is making a big contribution to our understanding of complex processes in the brain.

L&SE Branch Dinner will follow this lecture – see above for further details.

Information about future lectures can be found on the Branch website (http://london.iop.org), in future e-bulletins or in the Branch's 2012 autumn lecture programme leaflet.

The WOOFYT comes to Science Oxford

On 2 November Jeremy Sampson will be running 4 half hour WOOFYT (Wooden One Octave Organ for Young Technologists) sessions starting at 11am, 12pm, 2pm and 3pm. These sessions are supported by the IOP London & South East Branch and show hands-on how a pipe organ works, while explaining some of the background science.

Free with entry to the Discovery Zone, but places are limited (20 youngsters) so booking is recommended. Book with Science Oxford either online at www.scienceoxfordlive.com or on 01865 810 000.

L&SE Committee Member Honoured

The Branch is proud to announce that long-time committee member, Dr. Cyril Isenberg, from Kent University has received an Honorary Fellowship from the British Science Association.

The Fellowship was awarded to Dr. Isenberg for his tireless efforts in “engaging and inspiring adults and young people with science and technology” as well as “promoting openness about science and society”. This sentiment is clearly demonstrated by the fact that, in addition to his many talks, since 1984 he has organized the British Physics Olympiad competition for A-level students.