

## Message from the Chairman 2011-12

Our challenge for the year ahead is, through our events programme and our association with both our local business partners and education centres, to participate in the IET Strategy for the 21<sup>st</sup> Century objective to make to the IET the Professional Home for Life for Engineers and Technicians

The objective is to provide a home for life, no matter what career stage you are at and is about providing products, services, support and opportunities for all engineers and technicians from graduate/apprentice through to retirement.

Key to this is to provide an events programme which encourages an interest in engineering and to use this to attract new members and to retain existing members. This year we will again be working in Swindon with the BCS, the IMechE and now also the Institute of Physics (IOP).

In the past year we have seen our average attendance grow and we would now like to build a closer relationship with Young Professional members within the Swindon network, particularly in committee activities. As part of this we shall again be running a 'Present around the World' competition which is strictly for Young Professionals and also hosting the SW Regional final.

Succession planning is necessary if we are to provide a continuous and effective committee for the future and you are invited to join us. What we have achieved so far however would not have been possible without the dedication of the existing committee members and I thank them on your behalf for their support and commitment. I would also like to welcome our newest members, Mike Halliwell, Ken Mills and Ed Burch and say thank you and farewell to Peter Catherwood, Pete Cotton and Maria Santos who have recently left the committee.

Good venues for our events are also essential and we are grateful to St Joseph's College and Intel for their support in providing us with event facilities.

From the feedback forms it is apparent that the site visits are well received and the new programme includes for even more than before. These visits, for security and safety reasons, will have restrictions on numbers and I must ask you please cancel if you find you able to attend as this will allow others who may be on the reserve list to attend.

Thank you for your continuing support, I look forward to meeting many of you during the coming year.

Ray Lewington MIET Chairman Swindon Local Network

## Attention Young Professionals! Present Around the World Competition (PATW) on Tuesday 28<sup>th</sup> February 2012

This is a technical presentation competition for young professionals. Each presentation is for fifteen minutes including questions. The prizes are £150 and £75 for 1st and 2nd places and both receive a year's IET membership. The winner of the local competition goes forward to the regional competition, and if successful onward to the national and then to the global final, with a prize of £1000. If you are interested in taking part please contact Sachin Seesurrn at: [sachin.seesurrn@theiet.org](mailto:sachin.seesurrn@theiet.org)

## Please cancel your registration if you can't make it to an event.

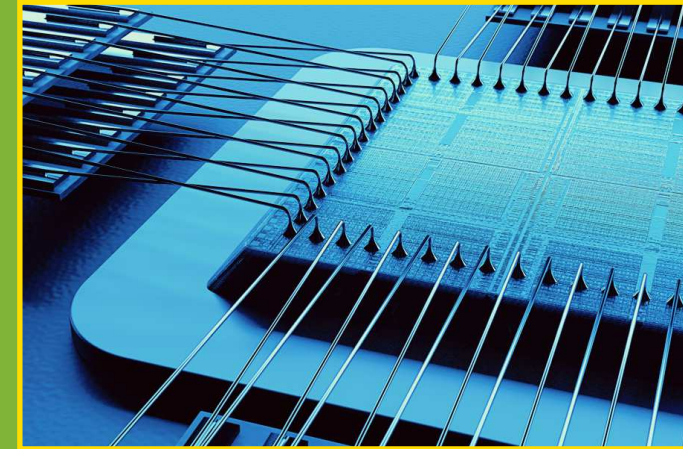
**If you don't and a visit has limited spaces, you will prevent someone on the reserve list from taking your place.**

We are grateful for people registering for events as it helps us plan and control costs and we are also able to meet the IET's budget allocation requirements for Local Networks by providing event attendance figures.

### Committee Members 2011-2012 Session

Chairman	Ray Lewington <a href="mailto:rblewington@theiet.org">rblewington@theiet.org</a>
Hon. Secretary & Events Coordinator	David Dale <a href="mailto:dpedale@theiet.org">dpedale@theiet.org</a> Tel. 01793 881553
Hon. Treasurer	Robert McLaughlan <a href="mailto:rmclaughlan@theiet.org">rmclaughlan@theiet.org</a>
Benevolent Fund Rep.	Derek Bateman
Professional Registration Advisor	<a href="mailto:Derek.Bateman@talktalk.net">Derek.Bateman@talktalk.net</a>
Web Master	Ken Mills
Registration Manager	Chis Riach
Major Event Champion	John Turton
Publicity Manager	Mike Halliwell
Present Around The World	Sachin Seesurrn
Members:	Bob Perry, Terry Skellern, Karamchedu V. Prasad, Edward Burch, Nesh Neclalajan.

**IET** The Institution of  
Engineering and Technology



Picture courtesy of Intel UK Ltd. A Business Partner of the Swindon LN.

# IET Swindon Local Network Events Calendar 2011 - 2012

[www.theiet.org](http://www.theiet.org)

The Institution of Engineering and Technology is the  
Professional Home for Life for Engineers and Technicians



## Programme of Events

### Who Can Attend?

All are welcome to attend IET events, especially the general public.

To attend please register at the IET Swindon LN website:

<http://www.theiet.org/local/uk/southwest/swindon/>

### Meeting times:

All evening meetings commence with refreshments from 6.30pm with the event itself starting at 7pm, except for visits and tours, which may be during the day.

### Event Location Addresses:

St Joseph's Catholic College, Ocotal Way, Swindon, SN3 3LR

Intel Corporation (UK) Ltd., Pipers Way, Swindon, SN3 1RJ

RAF Brize Norton, Carterton, Oxfordshire, OX18 3LX

Diamond Light Source Ltd, Chilton, Didcot, Oxfordshire, OX11 0DE

Royal Military College of Science, Shrivenham, Swindon, SN6 8LA

Honda UK, Highworth Road, South Marston, Swindon, SN3 4TZ

### Tuesday 20<sup>th</sup> September 2011

#### Visit to Engineering Facilities of RAF Brize Norton

RAF Brize Norton has a key role in the provision of UK defence airlift and strategic tanker capability, being the Main Operating Base for the Globemaster, VC-10 and from September 2011 the Hercules fleets of the RAF. This visit will focus on the engineering support facilities provided for these aircraft.

**Note: Numbers are limited to 20 for this event. Your name, address and car registration will be required when registering for this event.**

**Start Time 14.00 for 14.30 Meeting at RAF Brize Norton**

### Tuesday 11<sup>th</sup> October 2011

#### Hardware Encryption

Business PCs powered by the 2nd generation Intel® Core™ vPro™ processor family provide IT organisations with a unique set of features to help them remotely manage their business client fleet more cost effectively than ever before. These features are implemented in a combination of hardware and firmware and are independent of and invisible to the main operating system. The same features are starting to be used in other markets such as Digital Signage and Electronic Point of Sale. Understand how this technology is implemented, what it can do for the user of the technology and whether you could take advantage of it in your own line of business

**Speaker: Steve Cutler,**

**Technical Marketing Manager, Intel Ltd.**

**This is a joint event with the BCS**

**Event Location: Intel Ltd**

### Tuesday 8<sup>th</sup> November 2011

#### Safe Hydrogen Storage for Road Transport

Hydrogen has three times the energy density of gasoline and when burnt produces nothing but water. Current vehicles prototypes use liquid hydrogen or pressurized gas, both pose safety issues. Cella takes complex chemical hydrides which bind hydrogen into a solid in very high densities and encapsulates them in a nanostructured hydrogen permeable plastic. This makes these highly flammable materials safe to handle in air. Small micro-beads of these materials are pumped like a fluid so that a consumer can refuel a car in a few minutes. This talk will discuss the progress of hydrogen powered vehicles and developments at Cella Energy to store hydrogen in a safe and compact way.

**Speaker: Professor Stephen Bennington, Cella Energy**

**This is a joint event with the IMechE**

**Event Location: St Joseph's College.**

### Tuesday 22<sup>nd</sup> November 2011

#### Professional Registration Workshop

Local Members who are eligible for consideration for professional registration will be sent an invitation by the IET. Profession Registration Advisers will conduct individual advice sessions with each attendee. This is not an open event: those Members who have not received an invitation by the end of October should contact: Louise Parfrey, [Lparfrey@theiet.com](mailto:Lparfrey@theiet.com).

**Event Location: Intel Ltd. Between 16.00 to 20.00 hrs.**

### Tuesday 13<sup>th</sup> December 2011

#### Nanotechnology

Nanofibres are the glue that hold cells of living beings together. Engineering at the nanoscale, is creating new materials merging biological systems with man made structures providing some of the solutions to the challenges facing

our world. This talk will concentrate on how the nanofibre systems being developed can be used to create novel products which impact on our aging population, our need for energy harvesting and storage devices, environmental technologies and devices which improve the defence and security of our Nation.

**Speaker: Professor Bob Stevens**

**Principal Scientist, Micro and Nanotechnology Centre & Professor of Smart Materials and Devices, Nottingham Trent University**

**This is joint event with the Institute of Physics**

**Event Location: St Joseph's College**

### Tuesday 10<sup>th</sup> January 2012

#### National Grid, Future Transmission Networks

The UK is committed to producing 15% of its energy from renewable sources by 2020 and a carbon dioxide emissions reduction trajectory leading to an 80% reduction by 2050. This presentation sets out a potential energy supply mix that can achieve these targets and some of the challenges that will be faced by energy networks, the supply chain and consumers in providing the infrastructure and operating regime to enable this to happen affordably and securely.

**Speaker: Michael Edgar, BEng, MSc, CEng, MIET Strategy Development Manager, National Grid**

**Event Location: St Joseph's College**

### Tuesday 21<sup>st</sup> February 2012

#### Shipshape and Automated – What are the Current Automation Systems in Marine Vessels?

As vessels have grown in complexity so have the demands of pin point accuracy in their control, for stability, safety and efficiency. This talk will explore automation systems currently employed in the marine industry, with a focus on methods and technologies used for the dynamic positioning of vessels, from holding a tight position in extreme weather, to close range track-and-follow.

**Speaker: Edward Burch MIET**

**Event Location: St Joseph's College**

### Tuesday 28<sup>th</sup> February 2012

#### Present Around the World Competition

A ten minute technical presentation competition for young professionals. Prizes are £150 and £75 for 1st and 2nd places and a years IET membership. Please see the back page for more details and who to contact to take part.

**Event Location: Intel Ltd**

### Tuesday 13<sup>th</sup> March 2012

#### History and Development of the Transistor

Discovery of the transistor in 1947 and its development changed the world in which we live. Since the 1950's, firstly as discrete devices and then in integrated circuits, transistors have become all pervasive in every form of equipment. This talk will describe the transistor's discovery at Bell Labs and its subsequent development illustrated by a basic description of transistor operation. The personalities and companies involved will also be discussed.

**Speaker: David Dale BSc CEng MIET MIEEE**

**This is joint event with the Institute of Physics**

**Event Location: St Joseph's College**

### Tuesday 27<sup>th</sup> March 2012

#### Visit to Diamond Synchrotron at Chilton-Harwell Science and Innovation Centre

The Diamond Synchrotron is a ring shaped vacuum chamber of half a kilometre circumference through which electrons travel at nearly the speed of light. Emitting infrared, ultraviolet and X-ray beams of exceptional quality and brightness, the synchrotron acts as a super microscope. These beams enable scientists and engineers to delve into the basic structure of matter and materials. Research areas include: Biology and Medicine, Physical and Chemical Sciences and Engineering and Environment Sciences.

**Note: Registration is required for this event, which is limited to 20.**

**This is the same tour as 21<sup>st</sup> April 2009 and priority will be given to those who did not attend then. Those who attended previously will be put on a reserve list and notified if spaces become available.**

**Event Location: Diamond Light Source Ltd, Chilton, Didcot, Oxfordshire, OX11 0DE**

**Map: <http://www.diamond.ac.uk/Home/About/Location.html>**

### Tuesday 17<sup>th</sup> April 2012

#### Visit to the Firearms Collection of the Royal Military College of Science, Shrivenham

The Royal Military College of Science (RMCS) at Shrivenham has an impressive collection of military firearms through the ages, from small arms through to large calibre artillery weapons. Many are maintained in working condition and continue to be used for teaching and educational purposes also many can be seen up close. There will be expert knowledge available to provide an insight into the workings of the equipment and their use in military operations and also give up to date briefings on Small Arms Design and Counter IED (Improvised Explosive Devices) Systems. The tour will last about 1.5 – 2 hours.

**Note: Registration is required for this event which is limited to 25. Photographic identification (e.g. driving licence) will be required to gain access.**

**Event Location: Royal Military College of Science,**

**Shrivenham, Swindon. SN6 8LA**

### Tuesday 24<sup>th</sup> April 2012

#### The Hybrid Rocket for Bloodhound SSC

Beginning with an introduction to the main types of rocket and the handling and properties of various liquid oxidisers, this talk will discuss the challenges of hybrid rocket design and their solution. Including catalyst pack development, the 6-inch chamber development programme (including the development of the hybrid combustion model), HTP pump development, monopropellant testing and the development of the 18-inch hybrid chamber. The talk will conclude with a look forward to the next stage of the Bloodhound programme.

**Speaker: Daniel Jubb, The Falcon Project Ltd.**

**Event Location: Intel Ltd**

### Tuesday 8<sup>th</sup> May 2012

#### Smart TV

Smart TV puts everything you love about TV and Internet together on to one screen. Learn about the capabilities of Intel's "system-on-a-chip" products at the heart of smart TV enabled devices, delivering world-class HD video, audio and advanced graphics

**Speaker: Andrew John, Technical Marketing Engineer**

**Intel Ltd.**

**Event Location: Intel Ltd.**

### Tuesday 12<sup>th</sup> June 2012

#### Day time tour of Honda of the UK Manufacturing

The itinerary for this visit will include an introduction by Honda, tours of the engine plant and car plants, a Q&A session and buffet lunch to be followed in the afternoon by technical presentations.

**Note: Registration is required for this event, including car registration numbers. Attendance is limited to 40. Details of joining instructions, restrictions regarding clothing, footwear and cameras etc. will be given in the IET Swindon website and when registering.**

**Event Location: Honda Ltd. South Marston Swindon**

**Time of Visit: 10.00 to 14.15.**

### Tuesday 26<sup>th</sup> June 2012

#### South West Region Final:

#### Present Around the World Competition

Swindon LN is hosting this year's regional final for those who have won their South West Local Network competition.

**Event Location: Intel Ltd**

### Tuesday 10<sup>th</sup> July 2011

#### New generation of Nuclear Power Stations

Nuclear power is experiencing a renaissance for reasons of rising fossil fuel prices, new concerns about greenhouse gas and a desire for an uninterrupted domestic supply of electricity. However there are also barriers: the unresolved nuclear waste issue, unfavourable economics, industrial bottlenecks, and personnel shortages. Improvements in reactor safety and the waning memory of past nuclear accidents and the plant construction cost overruns of the 1970s and 80s are factors lowering resistance to new nuclear construction. This talk will look at the future for nuclear power.

A short Swindon Local network AGM will be held before this talk.

**Speaker: Dr John Lillington Chief Technologist, Serco**

**Technical & Consulting Services**

**Event Location: St Joseph's College**

## IET Information and Services for Members

The IET website at [www.theiet.org](http://www.theiet.org) provides wide ranging information concerning the IET and its activities, if you want to find something out about the IET this is the first place to look. Below is an introduction to what you will find on the website and also how it is supported by the Swindon LN.

### Local Communications and Services to Members

The most efficient method for the Swindon LN to keep its members updated about events is by using email. If you are registered to receive email from the IET and your contact details change they should be updated through your personal IET webpages at "MyIET". If you have not registered for this facility this can be done on the IET website by clicking on Register to obtain a user name and password. To receive email make sure you have ticked the "Contact me by email" box in the "My communications" page.

For those without email hard copy mailings are usually only made for the yearly events program. However internet access can be readily obtained, and hence to the IET website, at Swindon public libraries which are well equipped with computers.

### IET Events in Local Networks near to Swindon

IET local networks bordering Swindon also offer full events programmes. Details can be found of other local networks in the IET website in the menu "In your area"

### IET Business Partners - Regional Development Manager

The Regional Development Manager manages the IET Business Partners scheme, working with companies, universities and colleges to give advice about IET Membership and Professional Registration. Please contact him if you would like him to visit to your company or organisation.

Dan Sanders 07515 579529 [dsanders@theiet.org](mailto:dsanders@theiet.org)

### Schools Liaison

The Local Network supports schools liaison through STEM Learning Network events. The Swindon LN schools liaison contact is Robert McLaughlan [rmclaughlan@theiet.org](mailto:rmclaughlan@theiet.org)

### IET Technical & Professional Networks (TPNs)

TPNs provide access to specialist technical knowledge and offer a wide range of conferences, seminars and events on a varying scale. Visit the IET website and click on "The Knowledge Network" to access. If you have previously registered as a member on the IET Website you can log into your personal "MyIET" webpage and register to be a member of the Professional Networks that interest you.

### IET Connect - the IET Benevolent Fund

IET Connect provides advice on legal, monetary and welfare issues, as well as financial assistance to members and their families who can now get in touch via a new low-cost phone 0845 number below. Further information can be obtained from: IET Connect, Savoy Place, London, WC2R 0BL, 0845 6850685, email [ietconnect@theiet.org](mailto:ietconnect@theiet.org)

Website: [www.ietconnect.org](http://www.ietconnect.org) or via the Swindon LN Representative:

Derek Bateman, email [Derek.Bateman@talktalk.net](mailto:Derek.Bateman@talktalk.net)

### Membership and Professional Registration Advice

The first stop for those interested in IET membership is the IET website menu "Membership" which will provide details of membership and how to join. For Professional Registration advice the IET website menu "Careers and training-Professional Registration" has the basic information to get started and includes the new ICT *Tech* registration for ICT practitioners. For direct one-to-one advice contact an IET Professional Registration Adviser. For local advice, the Membership and the Professional Registration Advisors are Derek Bateman email [Derek.Bateman@talktalk.net](mailto:Derek.Bateman@talktalk.net) or Peter Mayers at email [Peter.Mayers@Intel.com](mailto:Peter.Mayers@Intel.com)

### Professional Development

Continuing professional development (CPD) is the process of developing and then maintaining competence which is a necessity for all engineers. The IET can help with structuring and managing CPD activities, go to the IET website menu "Careers and training – Professional development" for more information. On the same menu "Career Manager" is an online professional development system that allows IET members to build a competence profile, carry out an assessment and record supporting evidence.

### Mentoring

The IET mentoring service is provided by members for less experienced members who can apply for an IET mentor to support them with career and professional development. Alternatively experienced members can apply to become a volunteer mentor and support others in achieving their goals. See IET website menu "Careers and training – Mentoring" or locally contact Peter Catherwood [pcatherwood@theiet.org](mailto:pcatherwood@theiet.org)