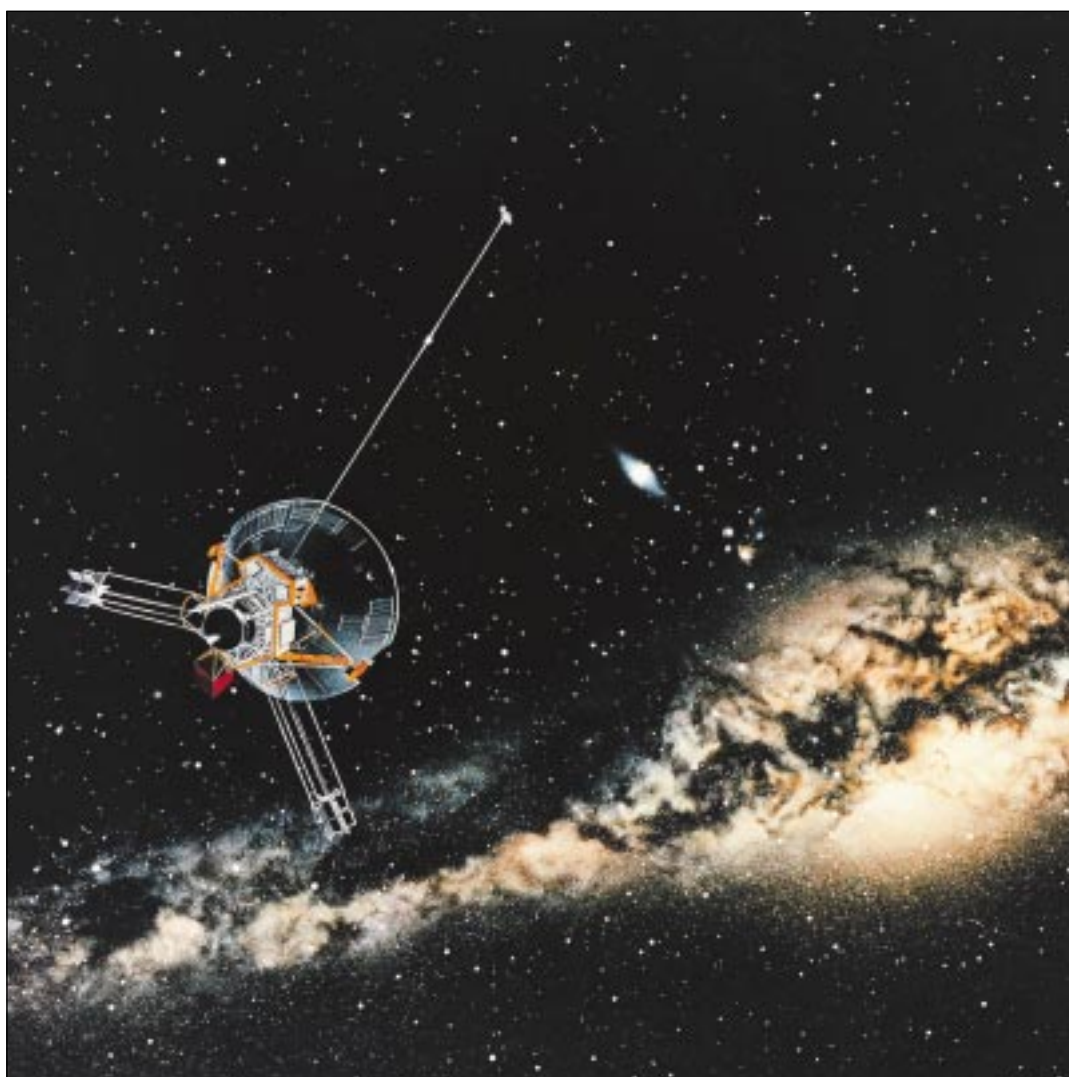




Sussex Branch

Branch Newsletter September 2004

Volume 6 No. 3





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How to Contact us

By email: sussex@iee.org

Regional Co-Ordinator Lisa Miles Lmiles@iee.org.uk
Telephone: 01438 765512 (office hours)

Chairman/Hon Sec designate Dr Derek Wright Telephone: 01342 713641 (evening pref)

postal communication to: IEE Sussex
30 Lashmere
Cophorne
West Sussex
RH10 3RT

Use our website: <http://www.iee.org/sussex>

Have we got your correct email address ?

If not please send it to sussexemail@iee.org

(and also please tell us any old email address that it replaces)

Cover Picture:

As we often muse about the majority of our membership "Hello! is there anybody out there?". There is of course a less tenuous connection with the Children's Christmas lecture scheduled for Wednesday 15 December.

Hello Sussex Members!

Those of you who have attended an IEE Sussex Event in the past year will recognise the name Lisa Miles from the registration procedure. I am the Regional Co-ordinator for the South East Branches of England, which includes your Branch, Sussex.

The IEE has over 95 Branches worldwide and each of them is assigned a Regional Co-ordinator. We act as a point of contact at IEE HQ for the Branch committees and assist in co-ordinating events and activities as well as providing information, operational guidance and support.

The Branches play an important part in organising activities for IEE Members and act as the local presence of the Institution. If you would like to become more involved with the IEE in your area and gain Management, Organisation and Presentation experience then volunteer for the Branch Committee.

Sussex Branch are currently looking for help with the following committee roles:-

* **Website administrator** to look after the Sussex Website - training is provided as well as support from the Regional Co-ordinator and the Internet Services Group at IEE HQ in Stevenage

* **Publicity officer** to collate articles from Members for the Sussex Newsletter, liaise with our Regional Co-ordinator for printing and distribution, and with the email officer and website administrator to ensure maximum publicity for our events and Branch activities.

* **Events/programme co-ordinator** to collate ideas for Lectures and other events and organise their smooth running. You'll also be working closely with the Publicity Officer and the Regional Co-ordinator

We are looking for Members who can spare a few hours a month, have use of a computer, would like to gain maximum value from their IEE Membership and become more involved with the IEE in the Sussex area.

For more information, please contact Lisa Miles (lmiles@iee.org.uk), or the Sussex Branch Committee (sussex@iee.org)



Lisa Miles
IEE Regional Co-ordinator

Notice of AGM

This years AGM will be held at 5.30 p.m. on Wednesday 10 November, to be followed by the refreshments prior to the lecture by Eric Cleobury on the Evolution of the National Grid - please see the events listings. If the AGM business should overrun it will be suspended at 6.45 p.m. and continue after the lecture.

Events Planned

All lectures at the Hawth start at 7.30pm (refreshments from 6.45), unless otherwise stated. They are open to IEE members, or any other colleagues wishing to attend. Please note that pre-registration is required for all Sussex Branch Events. For the latest details and to check for any possible last minute changes, please go to our website <http://www.iee.org/sussex/>

Thursday 30 September (Joint with IMech E)

Lecture Theatre C311a, Cockcroft Building, University of Brighton
Lewes Road, Brighton BN2 4GJ.

Sensors for Technology

Dr. Tom Bach (Research Director, Sensatech Ltd., Brighton.)

The speaker will outline the types of sensors used in image acquisition, moisture sensing, high temperature and water rejection capabilities of capacitive sensing. Basic problems of measurement of gaps to a target, image acquisition and moisture sensing with capacitance, optical or microwave techniques will be discussed with the aid of case studies such as mine detection, x-raying luggage at airports, and locating the shape and position of objects at up to a metre.

Lecture starts at 7.00 p.m., refreshments from 6.30

Contact: Dr. Dal Koshal Tel:01273 642328 / 01273 642300 or
email: d.koshal@brighton.ac.uk

Wednesday 6 October 2004 Jointly with Surrey Branch
The Studio, Hawth Theatre, Crawley, West Sussex RH10 6YZ.

Bluetooth Mobile device security

Speaker: Matthew Dunn, European Technical Manager CATC Europe

Bluetooth is a reliable short-range radio and software system for cordless cable replacement, supporting a wide range of applications. Well known examples are cordless connection of keyboard and mouse to a PC and connection of a hands-free headset to a mobile phone, and wireless network access for a PC. But the open global specification allows much more than this. The talk will explore the capabilities of the system and make comparisons with alternative technologies and examine Bluetooth Mobile device security and vulnerability from BlueJacking and BlueSnarfing attacks.

Lecture commences at 7.30 p.m. Check in desk open from 6.45

Pre-registration is required. Please contact Lisa Miles with your membership number and the names of your guests: email lmiles@iee.org.uk, tel. 01438 765512

Saturday 9, 16 or 23 October (one of these dates - provisional details)

Double Visit to Southern Water Mains Pumping and Sewage Treatment plants

The locations will be Ford and Hardham, which are in the Arundel area and about 10 miles apart. The itinerary is being currently worked upon along the lines of one visit before lunch and one after, with time to stop for pub food between sites. Full details will be published by email in due course. If interested and not on our email list/s, send an email or SAE to Derek Wright (contact details on page 2). Put "Southern Water visit" on the envelope flap or in the email title.

Wednesday 10th November 2004

Lecture Theatre AS1, University of Sussex, Falmer, Brighton, BN1 9QT
Annual General Meeting followed by lecture

Power to the People!

Presenter: Eric Cleobury (Formerly System Development Manager with the CEGB/National Grid Company, now retired, and consultants Preece Cardew & Rider (later Mott MacDonald))

The talk will describe the development of the UK Grid System from the 1930s to the 1990s.

AGM commences 5.30 p.m.
Lecture commences at 7.00 p.m. refreshments from 6.20

Wednesday 20 October 2004.

Visit to Shoreham CCGT power station

John Narborough has 'provisionally' booked for another group of 20. A few places remain after covering those that could not be accommodated on the last visit. If oversubscribed we will create a waiting list for the next one.

Gather from 6.30 p.m for a 7.00 p.m. start. Booking is essential, directions will follow with booking confirmation.

If interested, please leave your contact details on John Narborough's answerphone (01273 483537) or email him at jnarborough@iee.org

Wednesday 1 December 2004 Jointly with Surrey Branch
The Studio, Hawth Theatre, Hawth Avenue, Crawley, West Sussex RH10 6YZ.

No new thing under the Sun

Speaker John Narborough (Amberley Working Museum)

Broadly based upon the 2001 Chairman's address seen at various venues along the south coast, this updated version offers a chance for members in the Crawley/Gatwick area to share, in a classical style, the speakers enthusiasm for technological history.

Are all our present-day engineering achievements as original or as socially useful as we like to think?

Lecture commences at 7.00 p.m., refreshments from 6.30

Pre-registration is required. Please contact Lisa Miles with your membership number and the names of your guests: email lmiles@iee.org.uk, tel. 01438 765512

Wednesday 15 December 2004

University of Sussex (Chichester Lecture Theatre) Falmer Brighton BN1 9QJ
IEE Sussex Children's Christmas Lecture
 (Sponsored by The Thales Group, University of Sussex Dept of Engineering and AIm Higher)

Black Holes, Worm Holes & Time Machines

Speaker: Dr J Al-Khalili

Jim Al-Khalili is a senior lecturer in the Department of Physics at the University of Surrey and a Fellow of the Institute of Physics. He is author of a number of popular science books including one on which this lecture is based. The lecture will cover some of the most fascinating topics in modern physics that lead from Einstein's theories of relativity such as the Big Bang, black holes, wormholes through space and time and how they can be used to build a time machine. The lecture will aim to provide answers to questions such as: 'Do the law of physics allow us to travel back in time?' 'Do parallel universes exist?'

Lecture commences at 5.00 p.m., refreshments from 4.30 p.m.

Lecture theatre holds 340 but, due to a large booked attendance by local schools, seats for members are limited and pre-registration is required.

Please contact Lisa Miles with your membership number and the names of your guests: email lmiles@iee.org.uk, tel. 01438 765512

There will, hopefully - subject to confirmation, be a party/reception afterwards for committee members, local members and their spouses/partners, at which the Vice Chancellor of the University of Sussex and senior members of the local education authority will be present. Please advise Lisa Miles if you would like to attend.

Wednesday 2 February 2005 Jointly with Surrey Branch
 The Studio, Hawth Theatre, Hawth Avenue, Crawley, West Sussex RH10 6YJ.

Power Line Communications, bane or bonanza ?

Speaker: Richard Marshall, Richard Marshall Ltd

High speed data from a 13 amp socket is an intriguing prospect, but the economic and environmental issues of PLT make it arguably today's hottest topic in Electromagnetic Compatibility. Richard Marshall has strong interests in Electronic Design, EMC testing, and the technical standards of the European Community. He is a member of the BSI ad-hoc committee charged with establishing the UK position on EMC Standards for PLT. This lecture will cover all these aspects of PLT in a manner that is accessible to non-specialist IEE members."

Lecture commences at 7.30 p.m. Check in desk open from 6.45

Pre-registration is required. Please contact Lisa Miles with your membership number and the names of your guests: email lmiles@iee.org.uk, tel. 01438 765512

Lecture commences at 7.30 p.m. Check in desk open from 6.45

Pre-registration is required. Please contact Lisa Miles with your membership number and the names of your guests: email lmiles@iee.org.uk, tel. 01438 765512

Wednesday 5 January 2005 Jointly with Surrey Branch
 The Studio, Hawth Theatre, Hawth Avenue, Crawley, West Sussex RH10 6YJ.

Mobile Phones and your Health

Speaker: Graham Barber (IEE Engineering Policy)

This talk considers the 'Biological Effects of Low-Level, Electromagnetic Fields', looking into the potential health effects of mobile phones and over-head power lines. Every two years the IEE publishes on the worldwide web its Position Statement on the possible biological and health effects of low level electromagnetic fields and radiation principally attributable to power lines, mobile phones and associated base stations. The IEE's Biological Effects Policy Advisory Group carries out a consensus analysis of contemporary published peer reviewed scientific studies that have enhanced the cumulative subject knowledge.

Lecture commences at 7.30 p.m. Check in desk open from 6.45

Pre-registration is required. Please contact Lisa Miles with your membership number and the names of your guests: email lmiles@iee.org.uk, tel. 01438 765512

Pre-registration (Children's Christmas Lecture)

On Wednesday 15 December 2004 at 5.00pm (refreshments 4.30 pm), At the University of Sussex (in the Chichester Lecture Theatre).

I wish to attend this lecture:

Name: _____

Address: _____

Post code: _____ Tel No: _____

e- mail: _____

Please return this slip to:
 Dr. Derek Wright, 30 Lashmere, Cophthorne, West Sussex, RH10 3RT



Your Benevolent Fund 2004 Annual Review

Once again, overall, I have been encouraged by the decisions reached by your Benevolent Fund's Review Committee, following my Spring Visiting recommendations; typical aspects and results to come out of this year's Annual Review, can be summarised as follows:-

- £600 Holiday Grants for 3 Beneficiary Families, plus a further £600 each for the Carer. These Grants are particularly encouraging, since over the last 2 to 3 years I have had a growing concern for the Carer Wives concerned, who throughout the years of their Husband's illnesses have had, and continue to have, the year in year out responsibilities and running of their Family homes, under stressful conditions.
- The continuation of a number of Grants that the Benevolent Fund put in place last year for a bachelor Member of the Institution, after some 20 years of suffering due to a growing catalogue of chronic illnesses. Again, here, there is particular encouragement, because very happily this Member got married in the autumn of last year. But unhappily their joint assets meant that the Social Securities Benefits Agency were no longer able to pay much of the Income Support related grants that Stephen had been receiving for some 10 years. Understandably, the Social Services are unable to let through exceptions to standard Benefits Agency conditions. Happily, your Local Representatives' reasonings can sometimes be such that your Institution's Benevolent Fund Review Committee can, I gauge, take a less exacting and more compassionate view.
- Sadly, also, Philip, died back in January of this year. For some 20 years he had battled with the growing debilitations of Multiple Sclerosis, such that his increasingly fragile immune system was unable to battle with a sudden attack of septicaemia. For some 10 years of those 20, your Benevolent Fund has found

itself able to provide varying supports to this Family. Inevitably, Philip had much frustrated day in and day out time on his hands. Two years ago, in association with a Disabilities Charity, we were able to write a suitable Computing System Specification, and then to supply the System to Philip. He often very appreciably acknowledged to The Fund that it had unlocked much of the physical straitjacket to which his disabilities confined him.

There were, however, a couple of disappointments too, for instance:-

- The 2003/2004 Academic Year was the 1st. of a 4 year Architectural & Civil Engineering degree course for the eldest daughter of a family that The Fund has been able to help for some 8 years, since this Father's career was also cut short by Multiple Sclerosis. For that 1st. year, we provided £1,500 of grants towards both equipment and accommodation costs. This year The Fund felt that the needs of both older and infirm Members of the Institution must take the higher priority.
- For some years now, we have had a Member's Widow in the Sussex area who has benefited from a token Christmas Grant of £100. This has been to express the Institution's appreciation to the Widow for the selfless caring that she provided for her Husband for some 15 years, following an accident which left him with severe brain damage. Sadly however now, the Government's affiliated Charities Commission have tightened up in respect of Grants given when sheer Financial Necessitousness cannot be substantiated.

From the above typical examples, it is your Committee's hope that the Sussex Membership can see something of the caring that the Institution's Benevolent Fund endeavours to exercise on behalf of both its Membership and their Dependants. On this basis, come Subscription time in January 2005, we urge you all to support the Benevolent Fund as generously as you are able.

Regards to You All

Alan Muckleston (01892 864410)

Crawley/Gatwick Retired Engineers Group?

Would anyone like to help me set up a Retired Engineers Group in the Crawley/Gatwick area? I thought we could start with ad-hoc (self funded) coffee mornings at the Hawth theatre on the nth whateverday of each month. Contact me if interested on 01342 713641 or email dtwright@iee.org. We can set a date for a trial gathering, advertise it by email and go along to see if anyone else turns up.

Derek Wright

Arundel Festival

On Sunday 22 August, 33 members and guests took part in a technical visit to the open air theatre site at the Arundel Festival. This very well equipped covered stage and open auditorium lives for about two weeks each year in the grounds of Arundel Castle. During an afternoon rehearsal, we inspected the generators, the lighting desk and the sound desk, asked lots of questions. We even stripped down a computer controlled Vari*Lite to see how it worked. Then while half the party went

into a smallish backstage marquee to see the lighting power supplies, the other half reassembled the luminaire (I hope the Crew remember to check it before use). We then had an excellent group meal in the VIP dining area and stayed to watch the evening show. We extend most grateful thanks to John Glover, an IEE Sussex member and long standing volunteer helper with the Festival, who made the suggestion and did quite a bit of the initial spadework to get our visit set up. A most enjoyable afternoon and evening. We are now looking for further events in this family-orientated technical-plus-entertainment vein.

Places to go: South Downs Planetarium

Surely a 'must visit' place for all IEE Sussex members, and their families and friends; but first a caveat. Although there are presentations most Friday evenings and Sunday afternoons together with occasional Wednesdays, this is not a continuous performance show in the style of the London Planetarium; rather each show is specific and tailored specially around a current interest topic - though having stated that, there is some repetition.

This Planetarium is very new. It was commissioned in the summer of 2002 and first opened to the public in the autumn of that year. Starting as a gleam in an enthusiast's eye it was a long time coming, well over six years in fact: first a team, then equipment, and finally the star chamber itself, which was opened by Sir Martin Rees in April 2002.

The theatre has a 10 metre diameter display dome, is air conditioned, and seats 100 people in aircraft style reclining chairs. The projector has a 4000 star and other object display, and there are also film/video and slide facilities which were used with very good effect to illustrate details of the cosmos during my recent

visit when the topic was Galaxies and the Hubble Telescope. The principal lecturer, Dr John Mason, is inspirational and an excellent speaker and presenter.

As well as all this there is a well equipped IT laboratory with several computer programs (e.g. Red Shift), on-line displays of satellite weather pictures, and access to the Web. They hope in time to gain direct access on-line to images from some of the world's major telescopes. There is also a small library/lecture room.

The planetarium complex, an educational charity, is housed in the grounds of Chichester High Schools and Sixth Form Centre. It divides its time between schools and other educational establishments Monday to Thursday term time and the general public Fridays, some evenings, and weekends. Wheelchair access is excellent, and, while the facility is child friendly, the presentation is directed towards an interested audience. For your enthusiastic 12+ year olds perhaps - you must be the judge of that. At the time of writing entry fees are £5.00 for Adults (no concessions) and £3.00 for children (7 - 16 years). It is advisable to book in advance on **01243-774400**, and the lecture programme (and much more, including how to get there) can be seen on their website www.southdowns.org.uk.

Peter Gibson

Electronic Newsletter Feedback

Web-hit data for the period around the electronic launch of the last Newsletter revealed that 365 different users visited the website. An optimist commented on the significant number of web hits. As a realist I noted that two thirds of those that were invited to download decided to wait for the paper version?

The link to the download routed via a web page that invited two types of comment. One generated an email with a title indicating how much of the newsletter you read and the other opened an email for comments on electronic delivery. With my Engineer hat on I panicked about the possibility of getting two emails (via the webmaster alias) from each of the 1145 members invited to download. But, silly me, the initial flood of emails stopped at 36.

From the emails received there was a fairly even split between those that wanted only electronic

delivery and those that did not want to lose the paper version. None of the comments said that they did not read any of it (predictable?), just a few said it was a good read and most said they read some of it.

The most consistent comment was on the formatting of the electronic version, asking that the column space used for each article should be divided into two equal parts placed side by side so that the item could be read without scrolling up and down the page. I suspect that many of those making this comment do not have a wheel mouse as this does very much simplify that scrolling problem.

We have considered and may use upsides columns in this issue, subject to IEE branding guidelines and the artistic judgement of the typesetter. But a better offer from Lisa Miles was to put the news items into a web page format as an alternative to the pdf version. Assuming Lisa finds time organise it on our behalf, the web version will also include material for which there is insufficient space in the paper copy. [See the webmaster opportunity on page 3].

Budget Feedback

We put in a business plan proposing up to 18 technical events in the coming season, with an accompanying budget bid of £20k. Last year we planned 14 events on an £18k budget but we only managed nine, resulting in a significant underspend. This year the Members Board Finance Committee liked the detail of our business plan but thought we were being over ambitious to try and organise so many events after falling so far short last year (and still no extra committee members). We have been allocated £14k with £3k held in reserve. Based upon this "guidance", I have decided to defer proposed lunchtime tutorial lectures on the Crawley industrial estate pending the necessary organisational effort becoming available.

Should we merge with Surrey Branch?

At our last committee meeting, one of the five present suggested we should try and merge with Surrey Branch. None of those present disagreed and there have been no comments either way following the circulation of the minutes. I have put the matter to the incoming Surrey Chairman, Nigel Ward, and it is scheduled for discussion at their next committee meeting in September.

Meanwhile, do you the members of the Branch have any views regarding the possibility of a merger with Surrey Branch?

Dover Castle

The Branch summer outing was cancelled after only two members applied for tickets.