Physics network to continue

Heather Pinnell reports on a decision to continue funding a physics project, and new targets to recruit physics teachers.

The government has decided to continue funding the Stimulating Physics Network. The announcement by the Department for Education (DfE) on 28 February was welcomed by the IOP, which runs the project in collaboration with the regional Science Learning Centres.

The decision means that the project, which is designed to support and stimulate physics education in schools in England, will continue for at least another year from 1 April. Its key elements include 37 physics network co-ordinators who work with schools throughout England, of which 12 are funded by the DfE, and 23 teaching and learning coaches, who work intensively with targeted schools.

There are also 16 physics network co-ordinators in Wales, Scotland, Northern Ireland and the Republic of Ireland, but these mostly existed before the project began and 14 of them are funded by the Institute and two by the Northern Ireland government. The Institute’s director of education and science, Prof. Peter Main, said: “We are delighted that this project is continuing to go forward. It has been very successful and we hope to build on our work, which we have shown has correlated with a considerable increase in the number of students taking A-level physics and triple sciences at GCSE.”

“We have built up a team with a tremendous amount of experience and expertise that would have been lost if the funding had stopped.”

Specific targets

In February the government also announced a target to recruit 925 entrants in 2011/12 to teacher-training courses for people who intend to specialise in teaching physics. The move was welcomed by the Institute, which has previously called for a specific target for increasing the number of trainee physics teachers rather than just improving the overall number of trainee science teachers.

Main, said: “We’re delighted to see the government recognising the need to specify the subject requirement rather than bracketing all of the sciences together. To redress the balance between scientific subjects we need to recruit around 1000 new specialist physics teachers each year for 15 years. The government’s target to recruit 925 trainees for 2011/12 is a major step in the right direction.”

“With physics making up a third of the science school timetable, an ideal situation would see a third of all science teachers having a strong physics background. At present, only 19% of science teachers are specialists in physics, leaving many students gaining their first impression of physics from biologists and chemists, who may lack confidence in the subject. More than 500 schools across England don’t even have a single physics specialist on their staff.”

The importance of physics as a specialism was underlined by explicit advice issued by a group of the UK’s 20 leading universities to prospective applicants in February (see News, p2). Students were urged to take A-level physics if they hoped to study certain courses at institutions in the group. The more transparent approach to how A-level choices affect university applications is in line with the Institute’s policy that students should be given clear and well informed careers guidance.

In the same week that the advice was issued, the Royal Society called for A-levels to be scrapped and replaced with what it called an “A-level-based baccalaureate” to allow students to take a wider range of subjects post-16.

Its fourth State of the Nation report, Preparing for the transition from school and college science and mathematics education to UK STEM higher education, noted that 17% of schools in England, 13% in Wales and 43% in Northern Ireland did not enter a single student for A-level physics.

It argues that the numbers and proportion of students studying science and maths from 16–19 in these parts of the UK need to increase to the level seen in Scotland, where Higher enable students to take a wider range of subjects.

The Royal Society report argues, as the IOP has done, that the shortage of specialist science and maths teachers has resulted from there being too few graduates in science, engineering, technology and maths, which in turn leads to there being too few specialist science teachers, in a self-perpetuating cycle.

“It’s been very successful and we hope to build on our work.”

Funding for a project to stimulate physics education will continue.

Scientists turn to video to present their work

Researchers who publish in the New Journal of Physics (NJP) can now present video extracts about their work online. One of the first videos explains how an optical cavity could be used to trap viruses and put them into a quantum superposition (see illustration). NJP, which is owned by the IOP and the German Physical Society, is published by IOP Publishing.

New booklet shows the potential of graphene

A new booklet from the IOP, Graphene – A New Form of Carbon with Scientific Impact and Technological Promise can be downloaded from www.iop.org/publications. For a hard copy, e-mail tajinder.panesar@iop.org.

Follow us on Twitter and Facebook:
http://twitter.com/physicssnews
www.facebook.com/instituteofphysics
Launch of the IOP’s Carers Fund

In summer 2009 the Institute’s Women in Physics Group initiated a survey of IOP members on childcare. The aim was to learn more about how caring responsibilities for children affected the careers of professional physicists and how easy (or difficult) it was for members to access childcare, particularly out of hours or emergency childcare.

One issue highlighted by the survey was paying for out of hours or additional childcare. There are very limited sources of support for these costs, yet attending meetings and conferences is often essential for career development as a physicist.

As a result, the Diversity Committee recognised that this was an issue for all of the Institute’s members with caring responsibilities, whether this was for children, elderly or disabled relatives or friends. Sometimes members may be prevented from attending conferences and events simply because there is no provision for the cost of paying for the additional care needed.

The Institute has therefore established a new Carers Fund to provide members with a grant to support them in attending meetings, events or conferences that they might not otherwise be able to attend because they care for someone.

The grant is to be used for the additional costs of care needed while at the event. The Diversity Committee hopes that all IOP members who have caring responsibilities will consider applying for a grant from the fund. Individual grants, up to a maximum of £250 per year per member, will be awarded.

Enquiries about eligibility for the grants and how to claim should be directed to the Institute’s diversity team. For more information, contact Frances Ling, diversity programme co-ordinator, Institute of Physics, 76 Portland Place, London W1B 1NT, telephone 020 7470 4842, or e-mail carersfund@iop.org.

Christine Davies is chair of the IOP’s diversity committee.

‘Elite’ group values physics

Students need an A-level in physics if they want to study certain courses at 20 leading UK universities, according to advice published by their representative body, The Russell Group. While physics is essential for entry to physics and engineering courses of all kinds, many universities also insist on either physics or maths A-level for entry to medicine, veterinary science and dentistry, it says.

The publication, Informed Choices, also lists physics A-level as “useful” for students applying to study 28 subjects other than physics. As well as traditional sciences, these include subjects as diverse as architecture, speech therapy and sports science.

Some universities have been criticised in the past by those who felt that there was an unspoken or “hidden” list of favoured A-level subjects, giving an advantage to independent schools that understood the system. The Russell Group has denied this, but in publishing the advice, its director-general, Wendy Piatt, said: “All students – particularly those from less advantaged backgrounds – must have access to appropriate information and guidance about the choices that will maximise or reduce their opportunities.”

The guide can be downloaded from www.russellgroup.ac.uk.

Memories of Gagarin in the UK are wanted

Choosing A-level physics will put students at an advantage, The Russell Group says. Choosing A-level physics will put students at an advantage, The Russell Group says.

Individuals who met or were inspired by Yuri Gagarin during his tour of the UK in July 1961 are being asked to share their memories and pictures online. The appeal is part of the 50th anniversary celebrations of the Russian cosmonaut’s first human spaceflight on 12 April that year.

A campaign, YuriGagarin50, has been set up to stimulate activities based on the anniversary, and to use the occasion to showcase achievements in space and to engage the public with space science. It has the backing of the UK Space Agency, the Royal Astronomical Society and the Space Education Trust, among others. The IOP is represented on the YuriGagarin50 group.

Chris Welch, who chairs the campaign, said: “Gagarin’s flight was an immensely important cultural event as well as a technological milestone. You can see clearly in contemporary footage and images how warmly the British people received Gagarin during his visit to the UK. There are several wonderful photographs that show Gagarin meeting people during his tour.

“We would very much like to make contact with some of them: the boy that gatecrashed the press conference at the Soviet Exhibition at Earl’s Court; the girl who presented Gagarin with flowers on his arrival at the Russian Embassy. It would be fantastic to hear their memories, or the stories that have been passed down through families.”

To learn more or to take part, visit http://yurigagarin50.org.

CRB guidance will not alter till 2012

People who work with children or vulnerable adults will need to follow existing guidance on CRB checks until at least 2012, it has emerged, despite a government announcement that it has reviewed the relevant legislation, which applies to volunteers as well as to paid employees.

In February the government announced that it had reviewed the current system and would seek to relax some of its requirements, including cutting down on the number of positions requiring CRB checks. It intends to include legislative changes in a Protection of Freedoms Bill. However, in announcing the plan, the Home Office said that the Bill, which is subject to parliamentary approval, is not expected to become law until early 2012.

The Institute’s physics in society manager, Caitlin Watson, said: “The exact nature of the new system is yet to be agreed and all members taking part in outreach activities on behalf of the Institute should continue to abide by the Working with Children and Vulnerable Adults policy until further notice.”

The full policy documents are available in the knowledge section of MyIOP.

Heather Pinnell
Marshall Stoneham dies

The IOP’s president, Prof. Marshall Stoneham, died on 18 February, aged 70. The news was received with sadness by the IOP, which said that he would be greatly missed by the physics community and by everyone at the Institute.

Stoneham became the IOP’s president in October 2010, having served as president-elect since October 2009 after being chosen by a ballot of the IOP membership. He had recently been recovering from an operation and the IOP’s immediate past-president, Prof. Jocelyn Bell Burnell, had been acting as president during his absence. This arrangement will continue for the present.

Stoneham had a distinguished career in theoretical condensed matter physics with a special interest in the effect of defects in solids. More recently he had directed his attention to quantum information technology. At the time of his death he was Emeritus Massey Professor in the department of physics and astronomy at University College London. He was also a director of Oxford Authentication Ltd, which he founded with his wife, Doreen, who survives him along with their two daughters. A full obituary appears on p7 of this issue.

IOP offers a new category of membership

The IOP has launched a new category of digital membership, IOPimember, which is open to anyone who is interested in physics wherever they are in the world.

People signing up for IOPimember will have access to the digital editions of Interactions and Physics World, and to many of the services provided electronically by the Institute. The IOP’s director of membership and business, John Brindley, said: “IOPimember is an important new initiative to bring the IOP to a wider community using exciting new digital platforms, which will also improve the services we offer to all IOP members. “Last month, science minister David Willetts helped us to celebrate our membership passed the 40 000 mark for the first time in our history. Now IOPimember will help us to communicate the excitement of physics even more widely.” The annual fee for IOPimember will be £15 in the UK, €20 in Europe and $25 elsewhere. For more details on how to join, visit http://members.iop.org/iopimembership.asp. Heather Pinnell

HONORARY FELLOWSHIP
Call for nominations

The Institute of Physics is seeking help in identifying exceptional individuals to whom it might award its highest honour of Honorary Fellow.

Honorary fellowship is conferred by the Institute on distinguished individuals for exceptional service to physics. It may also recognise important service to the Institute or someone whose relationship with the Institute has been of tremendous benefit.

Nominations can be submitted at any time throughout the year. For consideration in 2011, nominations must be received by 21 March 2011.

The Institute would particularly welcome nominations for women physicists and physicists from the ethnic minorities.

Further information about honorary fellowship, including a nomination form, can be found on our website. Go to www.iop.org/about and select “Awards”.

Alternatively, contact Claire Copeland (tel +44 (0)20 7470 4800; e-mail awards@iop.org).

brightrecruits.com

IOP Publishing’s specialist recruitment website for vacancies in physics and engineering, brightrecruits.com, has been revamped and relaunched. The improved site, which went online this month (March), will provide an improved job-searching facility, comprehensive careers information and additional features such as recruiter videos. IOP Publishing’s job site, TIPTOP, which allowed recruiters to list jobs free of charge, is being incorporated into brightrecruits.com. The listing service will still be available on the new site, but there will be enhanced facilities for paying advertisers on brightrecruits.com.

The Institute helped to provide material on the importance of the physics base for the economy for a breakfast briefing session for Northern Ireland Assembly members in Belfast on 16 February. The meeting at Stormont featured a number of speakers on Knowledge Transfer Partnerships and several Institute members took part in the event, including IOP vice-president Norman Apsley, who is chief executive of the Northern Ireland Science Park.

News in Brief

The Institute’s 2011 Born Medal and Prize has been awarded to Prof. Phillip Woodruff, of the University of Warwick. The award is for his pioneering work in the development of experimental techniques for quantitative surface structure determination and their use in providing new insights into a range of surface phenomena. Woodruff, who is a fellow of the Royal Society, was also awarded the IOP’s Mott Medal and Prize in 2003. The Born Medal is made in alternating years by the IOP and the German Physical Society.
NEW FELLOWS
Alan Copestake, Nicola Stanton.

NEW MEMBERS

IN MEMORIAM
Nancy Alderson, Donald Breadner, Keith David Cole (Australia), Richard Edward Copland, Werner Daniels (France), Alan Stirling Dickinson, Trevor Evans (Reading), John Edward Flood (Solihull), Dennis Raymond Goddard, G Hanson (Glossop), Sein Htoon, John Huggill, Alfred James Kennedy, Peter Robin Stephen Knight, John Gwyn William Lee (Welwyn), Frank Rohlfing (Cambridge), Marshall Stoneham, Dennis Teer, Catherine Mary Vigar (Farnborough), Robert Stanley Watson, Hinne Zijlstra, Lucyna Zybert.

ANNOUNCEMENTS

Places are available on a residential course for practising physics teachers, Spring Physics Update, to be held at the University of York on 15–17 April. The course, organised by the IOP, includes lectures designed to update teachers on the latest innovations in physics and curriculum matters, and hands-on workshops with opportunities to try new equipment, develop experimental techniques, try out novel investigations and engage with alternative teaching and learning strategies. It includes a demonstration lecture on magnetic liquids; talks on the physics of computer games, teaching electricity, nuclear astrophysics and fusion; and a night visit to the university observatory. There will also be workshops on medical physics activities, context-led teaching and how to encourage more girls to engage with physics. For details, visit www.iop.org/update or contact Manchi Chung by e-mail (manchi.chung@iop.org) or by telephone on 020 7470 4820. The closing date is 5 April.

The IOP confers Best Practice in Professional Development Awards on companies and organisations that can be shown to provide outstanding training and professional development opportunities for physicists working in the UK. The awards recognise a commitment to clear career paths and progression, professional development, promoting a work–life balance and supporting physics and physicists. There are separate categories for enterprises that have fewer than 250 staff and for larger organisations. For details of the awards and how to apply, visit www.iop.org/bestpractice or e-mail cpd@iop.org. The closing date is 27 May.

Applications are invited for round two of the IOP’s Public Engagement Grant Scheme 2011. If you have an idea for making physics accessible, you want to reach a wider audience or you need support to make your outreach activity happen, you can apply for a grant of up to £1000 to support physics-based outreach activities throughout 2011. For application forms and guidelines, visit www.iop.org/activity/outreach, or e-mail physics.society@iop.org. The closing date is 2 May.

MEMBER OFFER

Online subscription prize draw
Edward Lloyd Lewis from Kent is January’s prize-draw winner. He receives a 4 GB data stick. For your chance to win a data stick, pay your membership subscription online at http://members.iop.org.
The editor writes ...

This is the second Interactions issue since we have moved to a digital format, and we’ve taken careful note of the feedback that we received after the first issue was published in February.

We’ve made a few changes and looked at how we can clarify the guidance on reading the Interactions pages, and we hope that the following information will help you to get the most out of the online issue.

- If you want to move around the page without changing the magnification, click and drag the red rectangle on the small screen that should appear to the top right of your view.
- To move to full-screen mode, click the small square icon that is the last in the row of icons on the top of your screen. To exit the full screen, hover your mouse over the top edge of the screen and click the same icon when it appears. The panel of icons will have a “see-through” appearance.
- You can post new information or recollections to an existing obituary in the obituaries forum on MyIOP by using the reply button. You can also add a new obituary by clicking on “New Topic” and giving your obituary a title (ideally the deceased person’s name) in the “Subject” field. You can write your text in the “Message” field, copy and paste in text, or attach files by using the paper clip icon.
- You can attach photos by clicking on the icon immediately to the right of the Ω symbol on the top row of buttons, and choosing photos from your computer using the “Browse” button.

Council news

The January meeting of the IOP’s Council is traditionally an occasion for members to focus on the “big picture” issues of governance and strategy. Budget priorities, government policies and the future of IOP Publishing were all on the agenda when Council met on 29 January.

- The Institute’s budget is set annually and is the outcome of a comprehensive planning process. Council members wish to become more engaged with the process and with the breakdown of expenditure between the Institute’s strategic goals. Various options were discussed, including the possibility of holding a full-day Council meeting, as part of the planning cycle, on an annual basis. Proposals were put forward to hold this meeting in different areas of the UK and Ireland, and to link it to a meeting with local branch members wherever possible.
- The impact of new government policies on the landscape for physics in the UK is gradually being clarified, but many issues have yet to be resolved. Council agreed that the IOP should seek to work with other learned societies wherever possible. Outstanding issues on research funding, higher education and support for innovation were referred to the relevant boards to develop detailed recommendations for the next meeting of Council on 10 May.
- Steven Hall, appointed in July 2010 as managing director of IOP Publishing, presented his first impressions and future plans for the business. He identified key strengths, including the current staff’s commitment and skills, which will be critical to its success in the rapidly changing world of STEM publishing.
- Council also noted the successful sale of the Advancing Physics A-level module to Oxford University Press, and the generous support given by IOP members towards the IOP for Africa campaign (see p2, February).

Supporting Carers

The IOP Carers Fund has been recently established to support members to attend IOP meetings, events or conferences that they might not otherwise be able to attend because they have the responsibility of caring for someone.

Any IOP member is eligible to apply for a grant of up to £250 to help fund additional care arrangements necessary to enable their attendance at IOP meetings, conferences or events.

For further details and to find out how to apply, see www.iop.org/diversity or e-mail carersfund@iop.org.

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PUBLIC ENGAGEMENT GRANT SCHEME 2011 ROUND 2

Do you have a fantastic idea for making physics accessible? Do you want to reach a wider audience? Do you need some support to make your outreach activity happen?

Then why not apply for a Public Engagement Grant from the Institute of Physics? They are worth up to £1000 and aim to support physics-based public outreach activities throughout 2011.

Application forms and guidelines for the grant scheme are available online at www.iop.org/activity/outreach/, or by e-mailing physics.society@iop.org.

Closing date: 2 May 2011

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<td>Science of Armageddon&lt;br&gt; Midland Branch&lt;br&gt; Poynting Physics Building, University of Birmingham&lt;br&gt; 8 March, 7.30 p.m.</td>
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<td><strong>The Carbon Revolution</strong>&lt;br&gt; London and South East Branch&lt;br&gt; 76 Portland Place, London W1&lt;br&gt; 2 March, 6.30 p.m.&lt;br&gt;</td>
<td>Did We Really Land on the Moon?&lt;br&gt; Midland Branch&lt;br&gt; Nottingham Trent University&lt;br&gt; 9 March, 5.00 p.m.</td>
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<td><strong>Complex Molecules at Surfaces</strong>&lt;br&gt; Thin Films and Surfaces Group&lt;br&gt; 76 Portland Place, London W1&lt;br&gt; 2 March, 9.30 a.m.&lt;br&gt;</td>
<td>Radiating Health: an a, b and c of Radionuclide Imaging&lt;br&gt; Lancashire and Cumbria Branch&lt;br&gt; University of Lancaster&lt;br&gt; 9 March, 6.30 p.m.</td>
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<td><strong>Optoelectronics 2: Illumination and Communication</strong>&lt;br&gt; Teacher Network&lt;br&gt; The Gleed Girls’ Technology College, Spalding&lt;br&gt; 3 March, 4.00 p.m.&lt;br&gt;</td>
<td>Topics in Statistical Engineering&lt;br&gt; South West Branch&lt;br&gt; Elwes Building, Cheltenham Campus, University of Gloucestershire&lt;br&gt; 9 March, 7.00 p.m.</td>
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<td><strong>Ice in 3D</strong>&lt;br&gt; Teacher Network&lt;br&gt; SRC Bede Sixth Form, Billingham&lt;br&gt; 3 March, 4.15 p.m.&lt;br&gt;</td>
<td>Lights, Camera, Images&lt;br&gt; Teacher Network&lt;br&gt; Sixth Form Centre, Ripley St Thomas CE High School, Lancaster&lt;br&gt; 10 March, 4.15 p.m.</td>
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<td><strong>IOP Intervarsity Physics Quiz 2011</strong>&lt;br&gt; Institute of Physics in Ireland&lt;br&gt; University College Dublin&lt;br&gt; 4 March, 7.00 p.m.&lt;br&gt;</td>
<td>Seminar by Ferenc Krausz&lt;br&gt; Institute of Physics in Ireland&lt;br&gt; Dublin City University; University College Cork; Queen’s University, Belfast&lt;br&gt; 14, 15 and 16 March</td>
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<td><strong>Challenges and Opportunities for the First Generation of CCS Plants in the UK</strong>&lt;br&gt; South West Branch&lt;br&gt; Badminton School, Bristol&lt;br&gt; 7 March, 7.00 p.m.&lt;br&gt;</td>
<td>Next-Generation Nuclear Systems&lt;br&gt; Merseyside Branch&lt;br&gt; Daresbury Laboratory, Daresbury&lt;br&gt; 15 March, 6.30 p.m.</td>
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<td><strong>How Round is an Electron and Why Does It Matter?</strong>&lt;br&gt; London and South East Branch&lt;br&gt; Bemill Lecture Theatre, Open University, Milton Keynes&lt;br&gt; 8 March, 7.00 p.m.&lt;br&gt;</td>
<td>Brian Greene: the Hidden Reality&lt;br&gt; South West Branch&lt;br&gt; At-Bristol, Harbourside, Bristol&lt;br&gt; 15 March, 6.30 p.m.</td>
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<td><strong>Geoengineering: Experiment Earth</strong>&lt;br&gt; Institute of Physics in Scotland&lt;br&gt; Royal Society of Edinburgh, George Street, Edinburgh&lt;br&gt; 8 March, 7.30 p.m.&lt;br&gt;</td>
<td>Science of Ice Cream&lt;br&gt; Midland Branch&lt;br&gt; Malvern St James School, Malvern&lt;br&gt; 15 March, 7.00 p.m.</td>
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<td><strong>Science and Engineering of Thin Films and Surfaces</strong>&lt;br&gt; Thin Films and Surfaces Group&lt;br&gt; 76 Portland Place, London W1&lt;br&gt; 2 March, 9.30 a.m.&lt;br&gt;</td>
<td>Electrically Powered Vehicles&lt;br&gt; South West Branch&lt;br&gt; Mercure White Hotel, Salisbury&lt;br&gt; 15 March, 7.30 p.m.</td>
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<td><strong>Senior Group Lunchtime Rendezvous</strong>&lt;br&gt; Institute of Physics in Scotland&lt;br&gt; Daniel Stewart’s and Melville College Inverleith Playing Fields, Edinburgh&lt;br&gt; 16 March, 10.00 a.m.&lt;br&gt;</td>
<td>Seniors Group Lunchtime Rendezvous&lt;br&gt; Institute of Physics in Scotland&lt;br&gt; Daniel Stewart’s and Melville College Inverleith Playing Fields, Edinburgh&lt;br&gt; 16 March, 10.00 a.m.</td>
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<td><strong>Materials Microstructures and Damage in 3D Using Synchrotron X-rays</strong>&lt;br&gt; London and South East Branch&lt;br&gt; Manchester Branch&lt;br&gt; John Dalton Building, Manchester Metropolitan University&lt;br&gt; 23 March, 6.30 p.m.&lt;br&gt;</td>
<td>Astronomy and the Digital Revolution: Portrait of a Modern Milky Way Survey&lt;br&gt; London and South East Branch&lt;br&gt; Lindop Building, College Lane Campus, University of Hertfordshire&lt;br&gt; 23 March, 7.00 p.m.</td>
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<td><strong>2nd Vacuum Symposium</strong>&lt;br&gt; Vacuum Group&lt;br&gt; Diamond Light Source, Didcot&lt;br&gt; 23–24 March&lt;br&gt;</td>
<td>Nanopores and a Skin Full of Photophysics&lt;br&gt; Institute of Physics in Ireland&lt;br&gt; Queen’s University, Belfast; Dublin City University; NUI Galway&lt;br&gt; 23, 25 and 28 March&lt;br&gt;</td>
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<td><strong>The Energy Challenge and the Need for Nuclear (talk by Sir Chris Llewellyn Smith)</strong>&lt;br&gt; Nuclear Industry Group&lt;br&gt; 76 Portland Place, London W1&lt;br&gt; 24 March, 7.00 p.m.&lt;br&gt;</td>
<td>Visit to HMS Collingwood&lt;br&gt; Engineering Physics Group/South Central Branch&lt;br&gt; Newgate Lane, Fareham, Hampshire&lt;br&gt; 25 March, 9.00 a.m.</td>
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<td><strong>Alzheimer’s Disease and Yoghurt: a Physicist’s Exploration of Proteins</strong>&lt;br&gt; London and South East Branch&lt;br&gt; 76 Portland Place, London W1&lt;br&gt; 30 March, 6.00 p.m.&lt;br&gt;</td>
<td>Star Formation&lt;br&gt; Menseyside Branch&lt;br&gt; Chadwick Lecture Theatre, University of Liverpool&lt;br&gt; 31 March, 6.30 p.m.</td>
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<td><strong>Optoelectronics 3: Colour Vision and Displays</strong>&lt;br&gt; Teacher Network&lt;br&gt; The Gleed Girls’ Technology College, Spalding&lt;br&gt; 31 March, 4.00 p.m.&lt;br&gt;</td>
<td>Events requiring registration are marked with an *.</td>
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Prof. Marshall Stoneham, 1940–2011

Beth Taylor remembers the president of the IOP, Marshall Stoneham, who died in February.

Prof. Marshall Stoneham, the president of the IOP, died on 18 February, having been in office since 1 October and served as president-elect for the preceding year.

Stoneham was a theoretical condensed-matter physicist who pioneered the application of modern solid-state theory to industrial problems and in doing so added to our fundamental knowledge of materials science.

His long research career covered an immense range. His work in applied physics included corrosion, radioactive waste, ceramics, diffusion, the reliability of non-destructive inspection, passivation and radiation-damage processes.

Stoneham’s basic research encompassed work on polarons, muons and muonium, quantum diffusion and tunnelling, as well as electronic coherence in quantum dots and quantum computing.

He was the author of several highly influential books, including Theory of Defects in Solids, which is considered to be the definitive work on the subject.

Stoneham was born in Barrow-in-Furness on 18 May 1940 and educated at Barrow Grammar School for Boys. It had been expected that he would follow his father – a distinguished obstetrician and gynaecologist – into the medical profession. However, at around the age of 16 Stoneham found that he was drawn more towards physics, his interest having been stimulated by inspirational teaching at the school and the influence of friends. He spoke with pride of the three fellows of the Royal Society whom the school had with pride of the three fellows of the Royal Society whom went on to important positions.

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Stoneham was always interested in what he called “physics in action”, the application of fundamental science to solve technological challenges. In 1997, he and his wife Doreen – also a physicist – founded Oxford Authentication Ltd, a small firm that uses thermo-luminescence techniques to establish the provenance of art ceramics.

Beyond the world of physics research Stoneham was also a keen musician and musicologist. He was a gifted French horn player and was actively involved in playing with orchestras and a member of a longstanding wind chamber group for more than 40 years. He had co-authored a prize-winning book, Wind Ensemble Sourcebook, having spent many years researching the subject in libraries around the world. These were often visited while travelling to scientific conferences or to meet international collaborators.

Stoneham had a long association with the Institute, having been a director of IOP Publishing for 14 years, the last four as chairman of its board. He had also been the IOP’s vice-president for publishing and was editor-in-chief of the Institute’s Journal of Physics: Condensed Matter.

Bob Kirby-Harris, chief executive of the Institute, said: “Marshall made a major contribution to the Institute during his year as president-elect and comparatively short time as president. He was a wonderful person to work with; committed, enthusiastic, and kindly; with a penetrating intelligence and gentle wit.”

He was a staunch supporter of physics and a generation of physicists – both theoreticians and experimentalists – regarded him as an inspiration.

Stoneham is survived by his wife Doreen and two daughters, Elise and Nicky.

Beth Taylor is the IOP’s director of communications.

To record your memories and condolences, please follow the link from the homepage of MyIOP to the Remembering Marshall Stoneham forum.
Art emerges from a collision in space

Heather Pinnell reports on an art exhibition that takes a collision in space as its inspiration.

An exhibition on the theme of the collision between a Russian and a US satellite in 2009 has been showing at the Space art gallery in east London since January. Called Session_14_Structure, it is by a group of artists known as Am Nuden Da, who asked film-maker and physicist Srik Narayanan to give a talk about gravity in February as part of the exhibition.

To reach Structure you pass through an installation called “Good Morning Mr. Orwell” – a darkened room containing four televisions that show a surreal broadcast of eccentric acts, music and visuals dating from 1984.

After this room, Structure seems calm and austere. It consists of a white painted room with shelves on one wall and a steel pole from floor to ceiling. On the wall opposite the shelves is a computer screen that displays some text. This begins with some sentences that are comprehensible as English, but the meaning gradually disintegrates and the sentences trail off or are cut off mid-way, rather like the doomed satellites.

One of the group explained to Interactions that the text was created by the three artists talking separately into smartphones that transcribe their speech messages into text and send it automatically to a computer. Because the software isn’t perfect, the input from the three is jumbled together in a way that results in mistakes and miscalculations. New messages are sent each day so the text is constantly changing, and parts of it are recognisably topical, such as references to the uprising in Egypt.

The piece is intended to bring different elements together around the concept of structure and to hint at the idea of destruction. Just as the fragments of the satellites were scattered into space, information is spewed out into space in a sometimes random manner.

Session_14_Structure also includes a website set up by Am Nuden Da and a handout of a news story from Reuters about the collision of the satellites.

The exhibition is open until 5 March – visit http://spacestudio.org.uk for details.