A Monthly Newsletter for Council Staff DECEMBER 1998

LAB NEWS

INSIDE THIS ISSUE

Christmas Message

Christmas provides each of us with an opportunity to relax and enjoy the pleasures of time spent with family and friends, Christmas music and festivities, and of too much good food. As for Jeannie and myself, we are looking forward to visiting our children and grandchildren back in sunny New Mexico, and to spending two pleasant weeks getting re-acquainted with our 'dream house', which was completed just a few weeks before I came over to join the staff.

This year's message is a cheerful one, because we have accomplished much, and because we have many positive things to look forward to.

On the technical side, there are always far more exciting developments than can possibly be mentioned in a brief letter. I have especially enjoyed hearing about the intriguing discoveries made by SOHO, the solar observing satellite carrying a spectrometer co-developed by SSD. Amongst its findings are flashing 'blinkers' and 'tornadoes' that approach the size of the Earth. Studies of such phenomena will certainly help our understanding of the dynamic nature of the Sun, and may even lead to a better appreciation of what, if anything, we can do to significantly influence global warming... or cooling.

Research at Daresbury is taking us increasingly into the life and bio-sciences and, as I write, it seems highly likely that the world class synchrotron X-ray source Diamond will be located at DL, coming on stream in 2004. The Laboratory also is contributing to the advancement of medical science in ways beyond its well recognised work in protein crystallography. At RAL, we have continued to develop a whole-body PET scanner with rapid read-out and diagnostic capabilities based on our work for the particle physics community. And at DL we have helped researchers at De Montfort University, Leicester demonstrate the feasibility of growing nerve cells on silicon. Potential applications include biological neural networks for use in image and voice recognition... and artificial eyes.

Some of our particle physicists, working with colleagues at the University of Sussex, have determined that the electric dipole movement (EDM) of a neutron is less than 6.3 x 10^{-26} ecm. No doubt you will appreciate that this result helps explain why the Universe is composed of matter, rather than anti-matter! Ken Peach comments that our work on the EDM of neutrons has, over the years, "helped rule out more theories (of the nature of the Universe) than any other work in the history of physics"... presumably implying that our results are positively negative!

ISIS, the world's most powerful and efficient pulsed neutron source, continues its productive ways, and with such new instruments as MAPS - a very large chopper spectrometer that will help us probe the mechanisms of magnetism and superconductivity, and TOSCA - an indirect geometry spectrometer that will permit the study of molecular vibrations in complex chemical systems such as drugs and catalysts, plus various planned or projected upgrades, its future looks bright for many years to come.

For me, one of the most enjoyable events of the year was the Open Days at RAL. Some 4,750 family members, neighbours, dignitaries, industrial managers and school children visited the site during this six day event, and much time and imagination went into preparing and presenting a variety of demonstrations. But perhaps the most significant benefit of Open Days was the opportunity it provided for each of us to see what the rest of us spend our lives doing. The skills, ingenuity and enthusiasm displayed helped both our visitors and ourselves appreciate just why it is that CCLRC is recognised at home and abroad as a great laboratory. The breadth of challenges that we undertake, and the creativity we apply in meeting them, is truly remarkable.

/continued overleaf...

Christmas Message continued...

Another memorable event was HRH The Duke Of Edinburgh's visit to Daresbury. We treated him to presentations on topics ranging from ATP to cures for cancer, via chocolates and Diamond. He told me that he had "really enjoyed the visit".

Then, there is FAMIS. Even here there is good news because, with a lot of help from our Finance and DCI staff, the system finally produced a set of accrual accounts that we trust will satisfy NAO's scrutiny, and we are now upgrading the software to ensure that it is year 2000 compliant.

So, looking back, 1998 was a good year. How about 1999? Well, given that our customer research councils now know how much better their budgets are going to be for the next three years, we too should be able to look forward to some degree of stability. And we even have a budget (small, but our own) to fund some of our best ideas for research leading to performance improvements in the sorts of devices, systems and instruments for which we are noted.

My New Year's wish is to get to know more of you personally, especially in social situations in which we are all enjoying the pleasure of our company.

It should be another good year, and we all need to get rested and ready for it. So, may I wish each of you, and all your loved ones, a truly enjoyable and relaxing Christmas holiday, and a happy, healthy and productive New Year. And remember that old adage, "Die young, but put if off as long as possible!"

Bill Wallace

Poster prize

Staff at DL were awarded a prize for the best poster at a conference in the summer. The Radiology 98 conference was organised by the British Institute of Radiology and covered all kinds of medical imaging, attracting more than 2000 delegates. The poster entitled 'The advantages of synchrotron radiation for breast imaging' focused on some imaging carried out at DL by Rob Lewis, Bill Helsby and Chris Hall in association with the Christie Hospital, and was awarded the RAD magazine best poster prize out of a total of more than 100 posters.

Rob Lewis pictured with Professor Judith Adams, Chairman of the congress committee. Photo courtesy Rob Lewis

Safety at Christmas

A few simple checks will ensure that everyone will have a safe, peaceful Christmas...

Christmas tree lights

Check all the lights to ensure that the cables have not been damaged. Use the correct replacement bulbs. Unplug all lights at night before going to bed, or when leaving the house unattended.

Candles, matches, heaters

Do not leave candles to burn unattended, especially when small children and pets are around. Hot wax can also cause burns. Keep all matches and lighters out of the reach of children.

Do not leave space heaters (paraffin heaters, electric fires etc) on when the house is empty. They can be knocked over by pets and start fires.

Smoke detectors

If you have smoke detectors fitted at home, make sure that they are cleaned and tested regularly and that the battery is replaced annually. If a detector keeps sounding for no apparent reason, reassess the position of the detector - do not take the battery out to stop it.

If you do not have smoke detectors, think about fitting them; they save lives.

Apprentices receive indentures

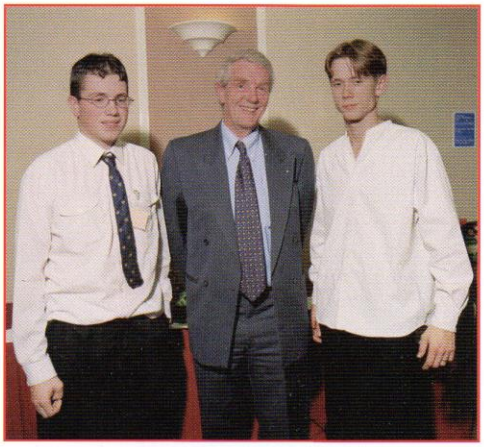
Seven apprentices from RAL who completed their training this year received their indentures recently from Gordon Walker at a ceremony at The Cosener's House in Abingdon.

Dr Walker congratulated the apprentices, commenting that he was envious of young people starting off now as an engineering apprentice, "This is an exciting time in technology, particularly in the field of 'smaller, smarter systems'. I will be reading about their exploits and achievements in the newspapers long after I've retired".

Bert Westwood presented the John Wilkins Prize for the best apprentice to Matthew Roberts, who had "shown a constant commitment to his training throughout the four years training". John Wilkins worked on the original design for an early experimental facility at RAL and, when he died, a fund was created in his memory.

The apprentice training programme consists of one-year block release at Abingdon College where they study for an academic qualification (either City & Guilds or BTEC National), during which time they will also have obtained NVQ2 (National Vocational Qualification level 2). Their remaining three years are spent at RAL where they work in different departments perfecting their skills and completing their academic training.

The Daresbury event for the apprentices who have completed their training will take place in the New Year.



Two new apprentices, Christopher Crowshaw and Andrew Daniels, who start their training this year were also welcomed at this event (98RC5078)

Relaxing after the ceremony: (l to r) Thomas Lovett, Matthew Roberts, Joseph Russell, Robert Majors, Daniel Edwards, Chris Pulker (98RC5086)

Chip pans

A number of fatalities have occurred this year due to chip pan fires. Never leave chip pans unattended. If the oil does catch fire, turn off the heat under the pan, cover the pan with a tight-fitting lid, fire blanket or damp towel, and phone the Fire Brigade (999). Do not attempt to move the pan, there is a very real danger that the oil will splash out and cause severe burns. Wait at least 30 minutes before moving it.

TVs and computer screens

Do not leave TVs and computer screens in 'stand-by' mode or with screen-savers running. If you suspect that a fire may be starting, unplug the unit - don't wait for the flames to appear.

Remember

If a fire does occur, get everyone out, call the Fire Brigade out and stay out. Do not return to collect personal belongings - your life is the only one you get.

If you suspect that there may be a fire behind a closed door do not investigate it.

Fran Childs

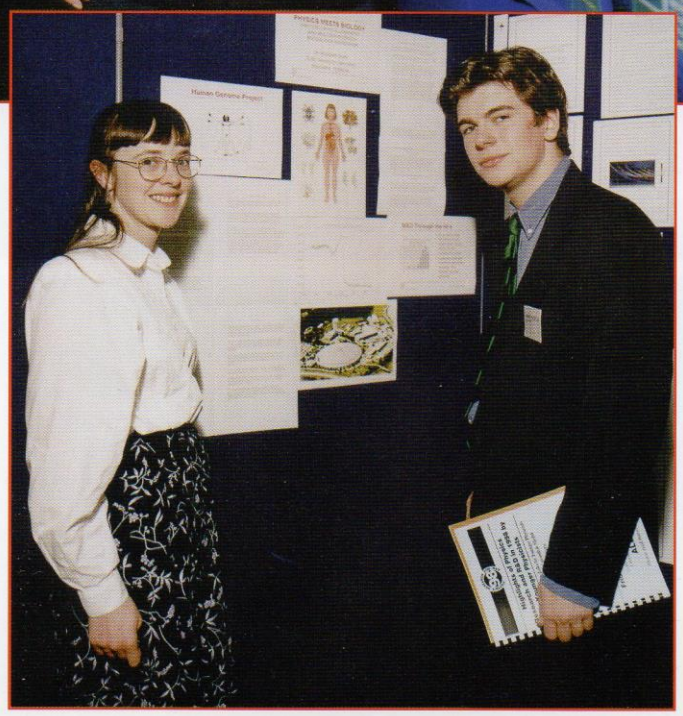
Lively debate at young physicists' day

Helen Thornley chats to Chris Batty (98RC5467)

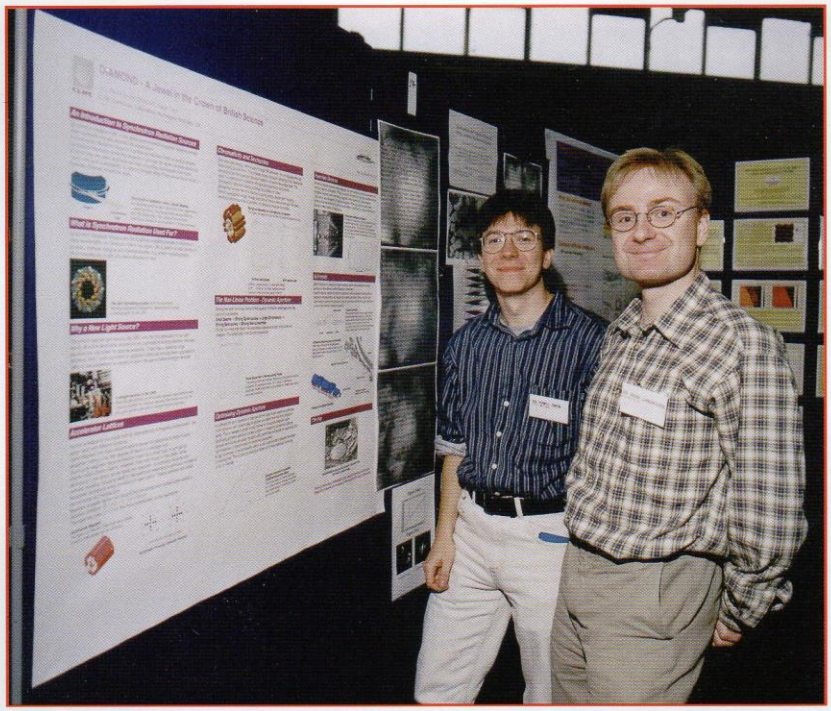
Over 80 of Britain's top young physicists met at RAL recently for a lively one-day meeting presenting posters, exchanging ideas and giving short talks. The event was organised by Eric Wharton's 'Physics Research and R&D for Britain' scheme.

The meeting was opened by Gordon Walker and keynote speakers included Trevor Bayliss OBE (of clockwork radio fame) and Professor Ian Halliday (Chief Executive, PPARC).

Several CLRC staff presented posters during the day and prizes were on offer to those physicists whose posters were chosen by a panel of judges. Chris Batty was one of the



Liz Duke presents her poster to a fellow delegate (98RC5493)



Hywell Owen and Sean Langridge (98RC5479)

The poster winners (Carlos Saba, Karsten Balluder, Mark Clifford, Alison Laird and Debbie Stokes) with Robert Jackson and Ian Halliday (98RC5459)

people charged with judging the posters. Bridget Murphy presented a poster about the surface of a semiconductor and James Lord presented 'muon sites and diffusion in Lithium Oxide'.

A' level student Helen Thornley was one of the youngest delegates. She had spent four weeks at DL as part of a Nuffield Bursary and her poster 'Studying condensed matter using computer simulation' was based on her work there with Phil Lindan.

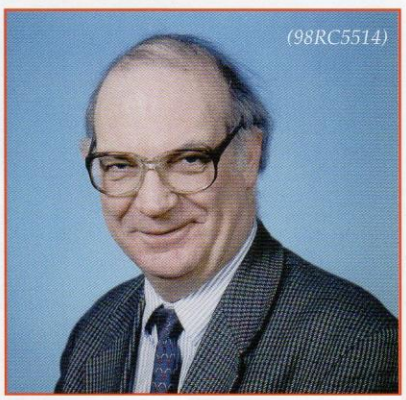
The poster prizes were presented by Robert Jackson MP and included the 'CLRC prize' which was awarded to Karsten Balluder from Heriot-Watt University for his poster entitled 'Diffractive optical elements for intra-cavity beam-shaping of laser modes'.

IiP - a personal perspective

Peter Norton is the Investors in People representative for Particle Physics. He explains what IiP means to him and his department.

When I was asked to be the Investors in People representative for Particle Physics Department I, along with many other people at the Laboratory, had very little idea what it was about. Since then I have attended courses and meetings, been given volumes of documentation, and slowly come to a better understanding. In short, IiP is '... a framework that sets a level of good practice for improving an organisation's performance through its people'.

The two essential ingredients are effective communication throughout the department of our overall aims and objectives, and the availability of training and development in order best to meet these objectives. It was reassuring that many of PPD's practices were IiP-like without our realising it. For example, we have a regular departmental newsletter distributed by email that keeps everyone aware of new developments, and we review training needs for every member of the department at the annual staff review. However, we have to remember that IiP is not simply about training, but about tailoring the training programme to our future needs and evaluating whether it has been successful. IiP has made me aware that we as a department can make improvements and over the next few months we hope to see the benefits.



(98RC5514)

Appleton Laboratory remembered

When Eric Dunford (the Director of Space Science department) retired earlier this year, his successor took the opportunity to sort out Eric's old office before moving in. During the clear-up Richard Holdaway found a plaque which had once had pride of place at the Appleton Laboratory. The plaque had been unveiled by Margaret Thatcher at a re-naming ceremony for the Laboratory almost 25 years ago to the day and Richard thought it would be nice to hang the plaque once more.

It can now be found on the wall outside CR12 and 13, R68.

Ex-Appleton staff gathered for a photo before Richard formally unveiled the plaque again. (Apologies if you worked at Appleton and weren't invited to be in the photograph, it was arranged at very short notice - Ed) (98RC5281)

ERCIM meeting at RAL

The biannual ERCIM (European Research Consortium for Informatics and Mathematics) meeting took place at RAL recently. On Wednesday 3 November the Executive Committee met, and after a long day there was an Executive Committee dinner at The Cosener's House. On Thursday morning presentations on CLRC's work in Informatics and Mathematics were given by Keith Jeffery (ERCIM Executive Committee member), Stuart Robinson, Ken Robinson, Juan Bicarregui, Jennifer Scott, and Chris Cooper which were followed by a tour of the Central Microstructure Facility by Zheng Cui and Ejaz Huq. The delegates enjoyed the presentations and the tour was very well received by everyone.

On Thursday afternoon the attendees were taken on guided tours of Oxford and in the evening the Cor-Baayen award (for the best recent PhD thesis associated with an ERCIM Institute) was presented by the current ERCIM President Gerard van Oortmerssen from CWI in the Netherlands. The winner, Matthias Grossglauser, made a short speech explaining his work on network performance. Pre-dinner drinks preceded the Directors' Dinner at TCH, where Bert Westwood made a speech of welcome, mentioning his enthusiasm for Information Technology. On Friday morning the Directors of the ERCIM Institutes met before departing for the weekend, leaving the Executive Committee members with lots of actions before the next meeting!

http://www.ercim.org/

Bert Westwood addresses the ERCIM delegates. Photo courtesy Keith Jeffery.

Le Village des Tortues du Senegal

Back in April, in a moment of madness, I applied for a fortnight's working holiday at the 'Tortoise Village' in Senegal, West Africa. And that's how come, in October (dosed up on anti-malaria pills) I set off to Heathrow airport to meet my fellow volunteers and to complete the first leg of my journey to Dakar. The holiday had been arranged through a tortoise organisation, SOPTOM, by the British Trust for Conservation Volunteers (BTCV) which is based in Wallingford. Other volunteers on the project included a London banker, a programmer for the RAF and a girl from Science Line (the national science-problem answering service) who remembered me from when I showed her round Titania earlier in the year!

On arrival in Dakar at 9pm we waited 5 hours to be collected by our hosts before finally giving up and checking into the Dakar airport hotel which luckily still had vacancies. Fortunately this was the only major misunderstanding during our stay; apparently they had turned up but failed to spot a group of nine white people!

The first day was spent visiting the Tortoise Village rehabilitation and breeding centre, set up in 1994 as a response to the dramatically declining tortoise population. Since it opened over 300 tortoises have been hatched, which at the age of 6-8 years are released back into the wild. The majority of the tortoises at the centre are the African spurred variety, the largest continental tortoise in the World. Living in deserts of the African Sahel, it can reach 100 kg and live for 150 years. In the last year or so more land had been purchased to create a larger visitor centre where the tortoises can roam freely. The new centre is a fairly ambitious project which includes building a visitor centre, accommodation for temporary staff, a nursery and two 30 ft bridges.

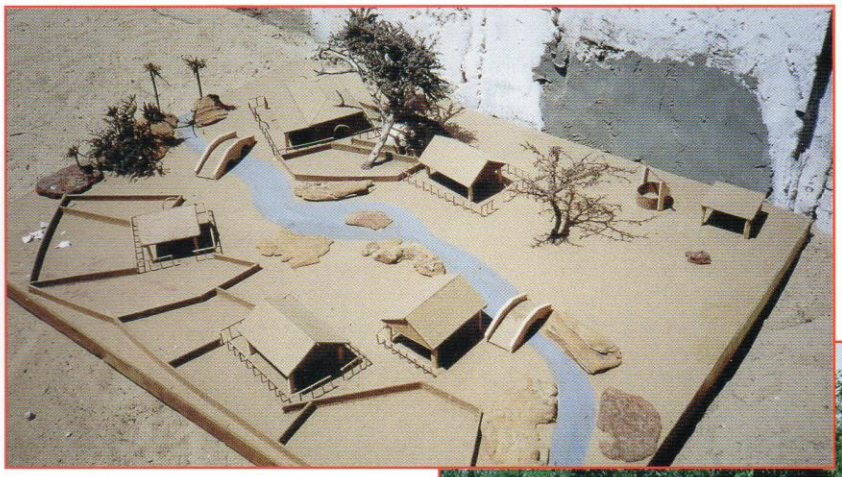
Our work was to assist at the centre by constructing the nursery viewing pit, clearing a visitors' path around the site and laying an electricity cable so that a pump could be used at the well to replace the two buckets made from car inner-tubes.

Building the viewing pit involved digging a trench 1m deep by 14m long, laying bricks along each side and making steps at each end. This involved a lot of sitting in the shade cooling down and watching the others sweating in the 30-40 degree temperature. Visitors will be able to walk though the trench with the nursery pens on either side bringing the tortoises closer to eye level.

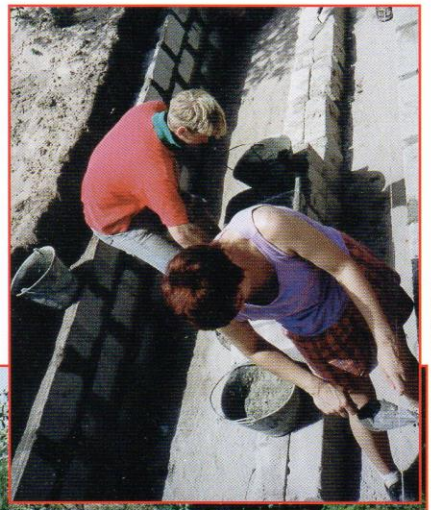
Work was supposed to start at 7am (I'm never usually up by then!) and finish at noon, but the bus never arrived before 7am so we started at 8am. This left the afternoons free for lounging on the beach which was just 50 m from the house! Other activities included a visit to a reserve and a trip round Goree Island. All in all an unforgettable experience and I hope to revisit the centre when it is fully open.

Edwin Divall

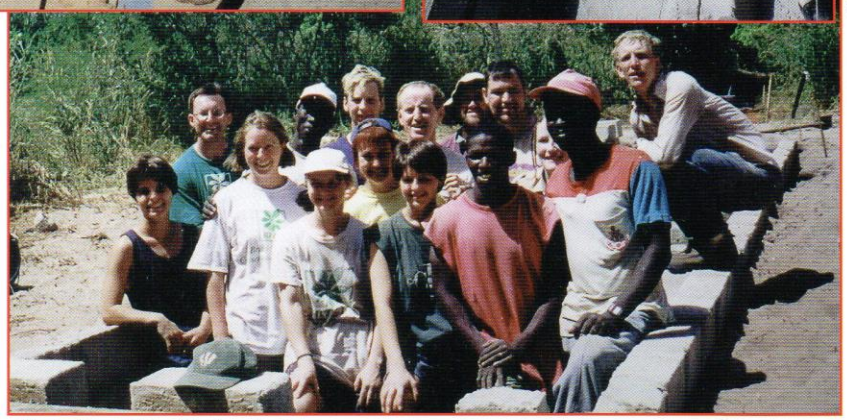
BTCV: http://www.btcv.org.uk/
The tortoise village:
http://gallery.uunet.be/FRD/



How the village will look



Constructing the walkway



Edwin (top right) with the volunteers

Training update

Programme of courses - Central Training Section

MANUAL HANDLING (DL), 8 DEC

DEALING WITH DIFFICULT PEOPLE (RAL), 9 DEC - a participative workshop which addresses the theories of dealing effectively with difficult people as well as the practice of dealing successfully with individuals.

OBJECT TECHNOLOGY TRAINING WITH UML (DL), 14 - 18 DEC

STRESS AWARENESS AND MANAGEMENT (DL), 6 JAN 1999 - a two hour seminar for all Admin staff outlining the signs of stress and some coping strategies.

FINANCE FOR NON FINANCIAL STAFF (DL), 6 JAN - a Civil Service College course giving an overview of government funding, budget management, accruals accounting and VAT.

MANUAL HANDLING (DL), 12 and 26 JAN

WRITING MINUTES OF MEETINGS (RAL), 13 JAN - to enable delegates to understand the principles of minute taking in a mainly technical environment.

DEALING WITH DIFFICULT PEOPLE (DL), 18 JAN - a participative workshop which addresses the theories of dealing effectively with difficult people as well as the practice of dealing successfully with individuals.

MANAGING PRIORITIES AND MEETING DEADLINES (RAL), 20 JAN - learn what it takes to get organised, achieve more and balance career goals, family needs and personal values as well as building positive relationships with bosses, colleagues and staff.

MICROPLANNER COURSE (DL), 25 - 26 JAN AND 8 - 9 FEB

SELECTION AND RECRUITMENT INTERVIEWING (DL), 28 - 29 JAN - a JTS course with opportunities to practise interviewing skills in mock interviews. Mandatory for anyone involved in interviewing.

MANUAL HANDLING (DL), 8 - 9 FEB

Further information on training courses can be found on the noticeboard or is available from the Training office.

Oxfordshire festival of science and innovation 16 January - 6 February

All events are free of charge and suitable for people aged 14 years and upwards. Some of the events are listed below. For further details and booking information contact Bridget Holligan at the Oxford Trust on 01865 728953, email <bridgeth@oxtrust.org.uk>

19 Jan, 6.30pm, The Cooper School, Bicester
Illegal engineering - the history of safe cracking

25 Jan, 7pm, Oxford Brookes University
Robots in space - from here to infinity

26 Jan, 6.30pm, Rutherford Appleton Laboratory - *The Innovation lecture*
Developing gene drugs: moving research into the marketplace
Professor Susan Kingsman, University of Oxford

3 Feb, 4.30pm, HR Wallingford
Design for the Millennium

4 Feb, 6.30pm, University Museum lecture theatre
Illusions of Perception - *The Festival lecture*
Professor Richard Gregory explains how perception forms the basis of all experience and knowledge and its study links art with science

RAL Computing Training

Changes to the office systems

Outlook 98 has been adopted as the federal email and calendar system for CLRC. If you do not have Outlook 98 yet you should contact CLEO Support (RAL ext. 5730, cleo@rl.ac.uk or DL ext. 3351, uig@dl.ac.uk) to arrange for it to be installed on your machine. The Outlook calendar feature will replace TaP in the new year. Priority is therefore being given to users who make active use of TaP. You should continue to use TaP for scheduling any meetings planned prior to the end of 1998. Meetings from January 1999, including conference room bookings should be scheduled using Outlook 98.

RAL Computing Training is providing courses for users of Outlook 98:

- Email with Outlook
- Converting to Outlook
- Going further with Outlook

There are also courses devoted exclusively to Outlook Calendar including one designed for Secretaries and a second directed at other users of the calendar facility.

Courses for 1999

January	
6	M/S Outlook calendar *(am and pm)*
7	M/S Outlook calendar *(am and pm)*
8	M/S Outlook calendar *(am and pm)*
11 - 15	Introduction to C
18 - 22	Perle
26	Excel for new users
27	Word for new users
28	PowerPoint

Microsoft Project

RAL Computing Training has now run two very successful Microsoft Project courses. We plan to hold another at the end of February, so if you are interested in attending please contact Susan Hilton (see below).

Computing Training Facility at RAL

Please remember that the RAL Computing Training room is available for use by departments for specialist training. We provide courses which cover most topics but departments do from time to time have a requirement to train staff on specialised software which is used by only a small number of people. If you are interested please contact me. It is always advisable to book well in advance as the training room is in great demand.

For all information about course outlines, dates, contacts and facilities please see the RAL Computing web pages:

http://admin-www.rl.ac.uk/admin/training/ral_computing

Susan C Hilton (Dr) Ext. 6154
Department for Computation and Information
Email s.c.hilton@rl.ac.uk

The spellchecker song

I have a spelling checker.
It came with my PC.
It plane lee marks four my revue
Miss steaks aye can knot see.

Eye ran this poem threw it.
Your sure real glad two no.
Its very polished in its weigh,
My checker tolled me sew.

A checker is a blessing.
It freeze yew lodes of thyme.
It helps me right awl stiles to reed,
And aides me when eye rime.

Each frays comes posed up an my screen
Eye trussed too bee a joule.
The checker pours o'er every word
To cheque sum spelling rule.

Bee fore a veiling checkers
Hour spelling mite decline.
And if we're laks oar have a laps,
We wood be maid to wine.

Butt now bee cause my spelling
Is checked with such grate flare,
There are know faults with in my cite,
Of nun eye am a wear.

Now spelling does not phase me,
It does knot bring a tier.
My pay purrs awl due glad den
With wrapped words fare as hear.

To rite with care is quite a feet
Of witch won should be proud,
And wee mussed dew the best wee can,
Sew flaws are knot aloud.

Sow ewe can sea why aye dew prays
Such soft wear four pea seas,
And why eye brake in two averse
Buy righting want too please.

Author unknown

Christmas TOY SHOP wordsearch

Try this festive wordsearch for fun.
Please circle the words below in the following grid.

CASPER	MANGER	SHOPPING
EPIPHANY	MYRRH	SNOWMEN
FRANKINCENSE	PUDDING	STAR
GARLAND	ROBIN	TEDDY BEAR
GEESE	ROCKING-HORSE	TOYS
MAGI	RUDOLPH	WHITE CHRISTMAS

SNIPPETS

Government websites

The Council for Science and Technology has set up its own website - **http://www.cst.gov.uk** The CST is 'the Government's premier advisory body on major science and technology issues of strategic importance to the United Kingdom, so contributing to the development of top level, longer term policy' - to quote from the website. This new website is probably worth looking at from time to time. You may also like to keep tabs on science policy by looking at the DTI website **http://www.dti.gov.uk/** and the homepage for the Office of Science and Technology (OST) **http://www.dti.gov.uk/ost/** - where you can take part in an 'independent survey'.

Congratulations...

.. Professor Chris Damerell has been made a Visiting Professor in the Department of Physics at the University of Liverpool for three years.

.. Professor Henry Hutchinson, Director Lasers, is among those who have been elected a fellow of the Institute of Physics. Being elected a Fellow 'indicates a high level of achievement and contribution to the profession' (quote from the IoP website). For anyone interested, the IoP homepage offers information on the many publications the IoP produce, along with information on events and a countdown to the 125th anniversary of the first meeting of the Physical Society, the forerunner of the Institute of Physics, held on 14 February 1874.
http://www.iop.org/

Salaries on the up for physicists

The results of the 1998 Institute of Physics remuneration survey show that salaries for physicists have risen again, with respondents employed in a wide range of sectors essential to the wealth creation of the country. The survey also reveals that the traditional image of physicists is changing - the number of women physicists is higher than ever, and young people make up the largest proportion of the membership.

The survey, which was published last month, questioned institute members on a number of issues including their views on career development, prospects and pay. Jobs in industry, particularly in the chemical and petrochemical fields, telecommunications and the electrical industry command the highest salaries. However, the majority of physicists who responded work in universities, with an increasing number working in growth industries such as electronics and IT.

With half of the respondents possessing a PhD, salary details show that extra study does pay. Many of them go on to secure top management positions. The many skills developed through studying physics are just one of the reasons why over 80% of those surveyed would recommend physics as a career. From health care to financial services, the broad range of careers pursued by physicists indicates that that their training produces very versatile employees.

Science budget

Peter Mandelson, Secretary of State for Trade and Industry, recently announced the allocation of the science budget, saying that as a result of the recent comprehensive spending review, an extra £700 million was to be allocated to science over the next three years - as 'solid evidence of this government's determination to reverse the recent decline is spending for science'. Of these additional funds, £300 million is the science budget contribution to a ground breaking £600 million partnership with the Welcome Trust to upgrade university research laboratories and equipment. A further £110 million has been allocated from the Wellcome Trust towards the cost of a new high intensity X-ray source and £35 million of the science budget has been reserved for this Diamond project. The research council allocations (in k pounds) for the next four years are:

	98/99	99/00	00/01	01/02
EPSRC	383.0	397.6	410.8	427.2
MRC	290.2	304.5	319.1	334.1
BBSRC	185.7	198.3	203.0	208.2
PPARC	194.2	196.3	200.7	204.2
NERC	168.8	178.5	181.8	187.5
ESRC	67.0	69.7	71.2	72.9
CCLRC *	1.5	2.0	2.0	2.0

** Direct vote only*

NOTICEBOARD

RAL Notices

RAL Christian Fellowship
December 1998
"For all the promises of God find their Yes in Him"

11 December
Carol Service (R22 Lecture Theatre)

17 December
Bible Theme: The promises of God

24 December
Open meeting

You are warmly invited to attend any of the meetings to share fellowship with us. All meetings start at 12.30pm in Conference Room 11, Building R3 unless otherwise stated. Please contact Jonathan Wheeler, R27, ext. 5189 for further information.

Lost items
Hewlett Packard plotter HP7475A, inventory number R41080, serial number 2541L48521. If you have any knowledge on the whereabouts of this item, please contact Len Pearce on ext. 6852 or email <l.j.pearce@rl.ac.uk>

Digital liquid helium level monitor 4016, label no. R41414, serial no. 0036. Last seen in R55. Please contact Mark Adams ext. 6157, email <maa@isise.rl.ac.uk>

Chipset personal computer, serial number 015004, inventory label number R45295. Last seen during Open Days when it was used on an exhibit in the main ISIS exhibition area. Please contact Stephen Cottrell, ext. 5352, email <s.p.cottrell@rl.ac.uk>

New circuit training class
A new class started on Wednesday 11 November, 12.30pm to 1.30pm in the Rec Soc sports hall to complement the exisiting Monday and Thursday exercise classes.

The cost is £2 - a special introductory rate until Xmas (the exact money would be most helpful).

You need suitable clothing for exercise, including comfortable and supportive trainers. The floor in the Rec Soc is very hard and cold. Exercise mats will be provided but you should bring some drinking water, either bottled or from the kitchen in the Rec Soc where there is a water dispenser and cups.

Please contact Kevin Smith (the instructor) k.m.smith@rl.ac.uk ext. 6475 for more information. If you are wondering what a circuit training class is like, why not go along and give it a try.

DL Notices

Daresbury lectures
All lectures will be held in the Merrison Lecture Theatre at 2pm.

11 January
Dr Richard Harrison, CLRC Rutherford Appleton Laboratory
When the lights go out: the Sun and the 1999 eclipse

1 February
Prof Sue Bayliss, De Montfort University Leicester
Prospects for Group IV nanoclusters

early March
Prof John Barker, University of Glasgow
Towards the nanocomputer age

Structural biology seminar series
All lectures will be held in the Merrison Lecture Theatre at 2pm.

16 December
An Extremely Acid-Stable Enzyme: Rusticyanin Structure and Activity
Ian Harvey, Daresbury Laboratory

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Articles, ideas and letters are very welcome!

Articles to the Editor or Correspondent by 15th of the month.