

NOTICEBOARD

CLRC Notices

Apprentice recruitment
CLRC will be recruiting engineering apprentices again this year. Recruitment is looking for prospective engineering apprentices in the mechanical and electrical trades. Each successful apprentice will train to NVQ level 3 and obtain the Modern Apprenticeship award as well as being expected to follow academic studies in either City and Guilds or BTEC National. Aptitude tests are currently scheduled for 18-20 May 1998 at RAL. DL dates to follow. Full details will be made available in the local press, school careers offices etc. and from the Recruitment Section, R71, RAL.

RAL Notices

All lectures are held in the Pickavance Lecture Theatre at 3pm.
30 April
Photonics in recording and displays
Prof R Brown, Sharp Laboratory, Oxford

CSMA

The Civil Service Motoring Association are holding a promotion on 19 and 20 May between 11am and 2pm in the R22 foyer.
Come along and find out about the many benefits that CSMA members are able to take advantage of.

- Britannia Rescue*
Savings on new and used cars and caravans
- Travel insurance and antique credit cards*
- Motor and home insurance and financial advice*
- Luxury hotels and leisure parks*
- Savings on other products and services*
- 'Motoring and Leisure' magazine*

Tennis

The 1998 season starts in April and current members will soon be receiving an application form. New members are always welcome. The yearly subscription remains at £3. Please contact David McPhail, R66, ext. 5212, e-mail djmcp@rl.ac.uk, for more information.

Time to get fit

Fancy getting fit this year or working off your executive stress? RAL has negotiated a special corporate rate for membership of the Images Fitness centre in the Old Gaiol in Abingdon. If you work at RAL, you (and your partner) are entitled to a rate of £180 for 12 months membership of the gym - a large saving on the normal price of £310. Membership includes the use of a comprehensive range of fitness equipment, sauna and Jacuzzi, fitness checks and a personalised programme, plus use of the 25 m indoor pool.

If you want to know more, contact Jeremy Curtis on ext. 6460 or arrange a visit with the Images manager, Sue Brenton, on 01235 522806 ext. 35.

Surviving the Year 2000

Ian Hugo, a member of the Y2K task force will be lecturing on the solution to the problems arising with computing equipment at the turn of the millennium. Free admission, 7.30pm, 5 May. Lloyd lecture theatre, Oxford Brooks University (Copsy Lane campus)

DL Notices

Structural biology seminar series
All lectures will be held in the Merrison Lecture Theatre at 2pm.
Wednesday 22 April
Per-Deterated Proteins
Serena Cooper, Daresbury Laboratory & Manchester University

Wednesday 6 May
Bluebell Lecture: A ligand to suit the occasion
Lisa Wright, John Moores University

Wednesday Wanderers
Lantern Pike, Rowarth and Cowm Edge
Just over seven miles of easy walking with some gentle hill climbs. Lunch at the Little Mill Inn, Rowarth.
When: Wednesday 6 May
Start: 11am
Maps: Landranger sheet 110
Meet: Lane off Moors Road opp. farm (map reference: 024910)

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Articles, ideas and letters are very welcome!
Articles to the Editor or Correspondent by 15th of the month.

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LAB NEWS

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Ceravision and CLRC - a pioneering partnership

Ceravision, a new company whose aim is to prototype and license affordable, flat panel display screens for the millennium, recently signed a three-year contract with CLRC which confirms their future partnership. In a pioneering move, as part of the partnership deal, CLRC has taken a stakeholding in Ceravision in return for access to clean room facilities, microtechnology equipment and collaborative expertise. The deal persuaded Ceravision to return to Britain from Silicon Valley in the USA.

This is a brilliant example of the UK attracting innovation from America's Silicon Valley", commented Dick Cooper, Ceravision's Managing Director. "I left Britain in 1982 because there were few opportunities for young, innovative companies to prosper. This new deal with CLRC represents a new commitment by the Government to help industry".

Ceravision aim to produce their screens by butting together four-inch ceramic tiles, each linked to its neighbour in a 'seamless' joint. "This is not rocket science - we're using existing technology in an



Top row: Ejaz Haq, Linda Barnes, Alison Reed and Ron Leavis with Tim Reynolds and Steve Light of Ceravision (09802113)

inspiring and novel way," commented Tim Reynolds, Director of Ceravision. "We have spent many years testing the theories and now that the technology has been proved, we are confidently predicting large, flat, affordable display screens before the millennium".

Ceravision is located at RAL and has access to the Central Microstructure Facility (CMF) clean rooms and the state-of-the-art equipment required for their prototype manufacture. CMF already has an international reputation in field emission science and technology, which is at the heart of Ceravision's novel display.

Equipment designed and commissioned by Ceravision, which is currently being built overseas, will be delivered to RAL in May, when further development will take place and the first prototype should be produced within twelve months.

"We are happy to work in partnership with young technology companies. This way, by combining our world-class expertise and facilities with their business ideas, we can provide a springboard for them into fast moving, global market places", explained Alison Reed, CLRC's Commercial Director. "We have been impressed by the way Ceravision have spent time testing the theories and developing their ideas. Now they need access to advanced microfabrication expertise and expensive clean rooms, which we can provide as part of this deal. We are pleased to have the opportunity to work in partnership with them", she added.

First joint ISIS-SRS magnetism meeting

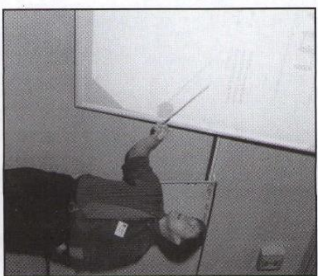
After a two-day CLRC workshop with an agenda more in keeping with a major international conference, the main conclusion was unanimous - this meeting would not be the last. Nearly fifty scientists from RAL and DL got together - some to compare notes and others simply to discover what all the fuss was about. Magnetism studies have never been more interesting or technologically important than they are today, with new classes of synthetic materials, new applications of, for example, data storage and microelectronics, and new experimental techniques being developed hand-in-hand. The scope of the work presented was so broad that everybody learnt something new and no one could fail to be impressed by the breadth and variety of modern techniques available within CLRC for studies of magnetic materials.

The meeting started with overviews of magnetism studies by Stephen Lovesey and Gerrit van der Laan, who showed that while we have made rapid strides towards new methods and materials, much of the underlying physics is remarkably common, and many apparently related processes are, in fact, closely related. To take full advantage of the limited time available, fourteen short talks were presented by enthusiastic SRS and ISIS staff, describing studies of scientifically and technologically important materials, developments in facilities, and some 'crystal-ball gazing' into the future.

Three classes of magnetic material were consistently highlighted during the meeting: thin-films and layers, giant magnetoresistance (GMR) perovskites and magnetic clusters. Neutron and X-ray reflectometry measurements reinforced the complementarity between the two techniques, and delegates learned about magnetic dichroism studies, including new methods for probing the microscopic origins of magneto-crystalline anisotropy, X-ray/neutron complementarity was again shown to be crucial for studies of GMR materials where, for example, neutrons have uncovered a diversity of magnetic structures and probed magnetic fluctuations, while photon beams have revealed subtle changes in electron density due to charge-ordering.

CLRC is a provider of far more than central experimental facilities, and this was reflected in presentations on theory and computational advances, including new ideas for experiments to determine hand-structures via X-ray fluorescence. Delegates were impressed by an introduction to the band-structure code, developed as part of the CCPJ project, which can, apparently, calculate everything!

While neutrons and magnetism have grown together from the start, synchrotron studies of magnetic materials clearly have much catching-up to do. Several talks described new X-ray techniques, including possibilities with third-generation synchrotron sources, such as the ESRF, and the planned third-generation replacement for the SRS - DIAMOND. The meeting was enjoyed by all - despite several headaches following the 'conference dinner' - and was closed by Stephen Lovesey who invited DL staff to attend the second CLRC magnetism meeting at ISIS next year.



Roger Eccleston describes some 'Astaxanthin moments on a ladder' (D1296/22/18)



Esther Dudzik (left) and Bridget Murphy take a well-earned break from a busy meeting (D1298/22/12)



To all those friends and colleagues I did not get to see before my retirement.
I wish you all the best for the future and hope to see you around the local area sometime soon. The occasional telephone call from time to time would be appreciated. Best wishes to all.
Ray Dance

Drama with the stars

In February, RAL hosted an unusual schools event called 'Drama with the stars'. Organised by The Oxford Trust and supported by a grant from PPARC, the aim of the day was for teams of GCSE drama students to develop short dramatic presentations based on aspects of particle physics, astronomy and space science.

The event involved input from both drama professionals and RAL scientists. The day began with a tour of some relevant RAL facilities and five RAL staff (John Bradford, Jeremy Curtis, Chris Davis, Norman Gee, David Miller) assisted the students by answering factual questions and offering creative ideas.

The students were generally successful in making the science a central theme of their drama, and the performances were varied and entertaining. They included Big Bang tv cookery with 'Ready, Steady, Bang', the life and death of stars with 'Shooting Stars' and a tour of the solar system with 'The Whistle-stop Tour'. The overall winners were students from St Mary's School in Wantage, who performed a piece about quarks and gluons called 'Quarkly Families'.

The students had been selected because of their interest in drama rather than science, yet student feedback from the day was positive, with 88% of students rating the event four or five (out of six) and 75% saying they would like to do it again. Although questionnaires were completed a month after the event, many students had remembered the science involved in their performance. Norman Gee who helped with the event said, "As a scientist of no thespian ability I was more than a little fearful before this event. However, the youngsters and the drama specialists were all very friendly and there was a steady trickle of science throughout the morning as different groups explored what it felt like to be a quark or a how to portray a decaying neutron. After the afternoon presentations, I was struck by how very appreciative the youngsters were. They had clearly had an enjoyable day, and I'm very happy that RAL was able to host this event. Hopefully some of the science will stick".

Thanks to Bridget Holligan of The Oxford Trust for contributing to this article - Ed.



The winning pupils from St Mary's, Wantage with RAL staff (from left to right) David, Norman, John and Jeremy (98MCI481)



Sue Measure from Floating Point theatre company helps some students with some ideas for their performance. (98MCI483)

Some excerpts from the questionnaires:

"We based it on the Ready Steady Cook show. One contestant was making the interview - using the idea it came from nothing. When heated (demonstrated in oven) it exploded!"

"We performed a piece on the life of quarks. One quark died so another was allowed to join the group. The dead quark became a gluon. We had charm, down, strange. They all split up and the gluons stuck them back together. We then did a dance with a song about protons and quarks"

"Our group topic was particle physics. It was called Deuteronomy's Dilemma, when an electron splits up a neutron and a proton. It is portrayed as a love story"

RAL Open Days 1998

A big thank you to everyone who submitted nominations for invitations to Open Days. We now have nearly 5000 names and addresses. These are currently being checked for duplicates and will form the basis of the mailing list. The invitations will be mailed shortly but if you have any more suggestions, please pass them through to your Director's secretary.



John Battle MD, Minister for Science, Energy and Industry, will be the keynote speaker at the special Industry Day (98RC1896)

Indoor sports day

CLRC did very well at this year's indoor sports day coming away with many of the trophies...



From left to right top row: Chris Robyn, Anne Southwell, Chris Seelig, Bottom row: Martin Stange and Matt Calman (98RC1981)

Plans for the week are well underway. A flyer has been produced to advertise the week's events which is available from Press and Public Relations at RAL. If you are visiting any companies or exhibitions or have contact with external people and would like to take some along, please let us know and we will send you some to hand out.

The week starts on **Friday 26 June**. Visitors will be invited to talk to staff and view our facilities. Press will have the opportunity to preview the week. VIs will be welcome on any day but will be specifically invited to tour and attend a reception hosted by Dr Westwood in the evening. Schools will have the opportunity to visit the Laboratory in the morning and see its facilities, visit an interactive exhibition about CLRC - its facilities and its work, and take part in a 'hands-on' workshop and a real experiment.

On **Saturday 27 June**, the Laboratory will open its doors to the general public and **Sunday 28 June** has been set aside for staff, family and friends.

Monday 29 June is an Industry Day which is being co-ordinated by the Commercial Office. John Battle MP has accepted the invitation to give the keynote address in the morning which will be followed by a round-table discussion on the benefits of partnership. Industrialists will be able to listen to seminars by staff on various topics throughout the day and will be able to tour our facilities in the afternoon.

Tuesday 30 June and Wednesday 1 July are aimed primarily at the university, research council and government research communities. A series of events for schools will also run on both days.

We will be looking for staff to help with various tasks throughout the week including manning reception, guiding school parties and stewarding. Any volunteers who are not already involved in the departmental exhibits are most welcome.

The latest information on Open Days can be found at: <http://www.clrc.ac.uk/OpenDays98/>

Natalie Bealing ext 5484
e-mail n.d.bealing@rl.ac.uk

'Together into the Millennium'

CLRc secretaries recently took part in a one day conference entitled 'Together into the Millennium'. The conference was highly participative including teamworking exercises, group discussion, formal tutor input and a question and answer session.

Peter Sharp gave the keynote address which explained why secretaries are important in CLRC, highlighted the implications for secretaries of Investors in People and looked at the changing role of the secretary within an organisation.

Peter's enthusiasm and encouragement set the tone for the event and this feeling was carried through the rest of the day. The morning sessions focused on how the secretarial role has changed and would continue to do so in the future. After lunch the sessions investigated all aspects of teamworking, considering the importance of teamworking, which

'teams' we were already part of and which new 'teams' we could be part of. The plenary discussion after a group exercise clearly showed the value of this session. Delegates were surprised at how much had been achieved working as teams and most agreed that they could not have got the same results working individually; clearly a valuable lesson to us all!

The final working session of the day considered personal development with valuable input from Charlotia Hicke, the Industrial Society Co-ordinator, and plenty of discussion. I believe we had all been stimulated throughout the day to react very positively to the ideas about personal development and I believe most of us will look enthusiastically for new challenges!

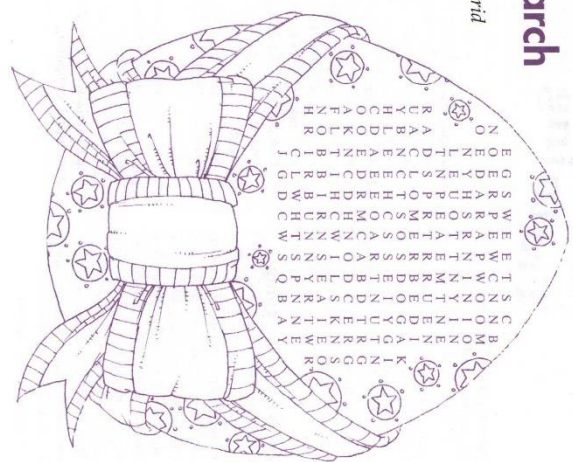
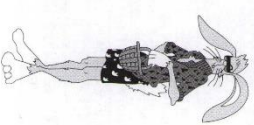
The day was rounded off with a question and answer session with some interesting questions on subjects including Investors in People, career structure, and use of the CLRC training resource. The 'prickly'

Rita Hollingson

Easter egg wordsearch

You must find the following words in the grid

- | | |
|-----------|------------|
| BONNET | DECORATION |
| BOW | EASTER EGG |
| BUNNY | FOIL |
| CHOCOLATE | HOT CROSS |
| CHURCH | BUN |
| | PARADE |
| | PRESENT |
| | RIBBON |
| | SPRING |
| | SUNDAY |
| | SWEETS |



Training update

Forthcoming courses

Customer Focus (DL), 20 Apr - This one day workshop is for all staff who interact with customers (internal as well as external) to improve the quality of service you provide.

Induction (RAL), 23 Apr - If you started work in the last few months and have not yet been invited to an induction course, please let Training section know. The day will give you an overview of CLRC and the work of personnel, the unions, travel, health and safety, procurement and others - a very informative day.

Selection and promotion Interviewing (RAL), 17 & 18 June - A vital course for anyone involved in interviewing. Also, coming soon, a one day refresher course for staff who did their training some years ago.

RAL Computing Training

Interested in Perl or IDL software?

A number of staff have expressed interest in courses in Perl and/or IDL software. If you have a need for training in either, please contact RAL Computing Training as they are trying to gauge the level of interest and identify suitable course content.

New NT course - going further with NT4

This course is non-technical in nature and is aimed at end-users who have a good working knowledge of the Windows NT4/95 environment. You will be introduced to techniques for managing files and applications and making them work together.

By the end of the course you will know how to share directories/folders with other users, link files across applications, install a printer.

Stress (RAL & DL), date TBA - How to recognise the signs of stress and when it begins to get to an unhealthy level. How to develop personal strategies, managing stress and how to support those you manage.

Investors in People (IIP)

A series of one day introductory workshops has been organised for IIP project managers and others who have wanted more details on what this is all about.

IIP project managers have now met for the first time and are beginning to think about what IIP will mean for each department.

Diane Tunnicliffe is visiting each project manager to identify the areas

where there may be gaps in the processes i.e. communication, planning, management effectiveness, managing performance and, of course, training and development.

There was an excellent return rate of questionnaires - a big thank you to everyone who completed it. It will help enormously. The external consultant has collated the results and forwarded them to our IIP advisor who is now writing up the diagnostic report to be presented to the LMB on the 20 April. A summary of the results will be available shortly afterwards.

Your IIP project manager will then formulate an action plan for your department.

April

16	Advanced Excel
15	Introductory PowerPoint
20	Introductory Word
21	Introductory Excel
22	Exchange
23	HTML
23	Introduction to PCs
24	Going further with NT4
27-29	Unit Administrators
30	Introduction to Exchange

May

1	Advanced Word
6-7	Introduction toAccess
8	NT Users
11-12	Microsoft Project Computer, My Briefcase, sharing folders, mapping drives.
13	Intermediate Word
14	Intermediate Excel
15	Introduction to PCs
18	Going further with NT4
18	Advanced Excel
19	Introductory PowerPoint
20	Introductory Word
21	Introductory Excel
22	Exchange
27-29	NT Administrators

See RAL Computing Training web pages for contacts and course details, dates and facilities:
http://admin-www.lac.uk/admin/training_ral_computing

SNIPPETS

Alliance
The Alliance programme, established in 1989, is jointly managed by the British Council and the Ministère des Affaires Étrangères in France. Its aim is to promote the development of Franco-British scientific co-operation between universities and public sector research institutes in France and the UK.

Applications are now invited for the 1999 programme in pure and applied sciences, technology and applied social sciences.

Priorities
Pure or applied sciences: no priority areas are defined. Applied social sciences: priority will be given to projects involving either a direct collaboration between researchers in the social sciences and the pure sciences looking at issues surrounding the development of a technique or a process, or the study of a problem resulting from a scientific and technical innovation.

Multi-disciplinary projects will therefore be particularly welcomed in this field.

Criteria for selection
Preference will be given to those projects showing most promise for the development of new cooperation between the two countries, impact and innovation of research, involvement of young researchers and potential for subsequent funding (e.g. EU or industry).

The closing date for new applications is 1 May 1998. Further details including finance and application procedure can be found at URIhttp://www.britain.org/france/finpoint.htm

Millennium awards
"If you have a science or engineering background and a good idea for involving your community in promoting awareness and understanding of science and technology, but you

need to acquire skills or resources to achieve it... then contact us, says the leaflet describing the Millennium Awards. The Millennium Commission has joined forces with the Royal Society and the British Association and are making awards from £1,000 to £10,000 for "building community partnerships through science, engineering and technology".

There are two more opportunities to make a proposal - closing dates are 30 June and 31 December this year. Get a copy of the leaflet from the PR office at RAL ext. 5789.

Nursery review
RAL's Little Stars Nursery "serves its community well" according to a recent report by the Office for Standards in Education (OFSTED). The nursery provides a good range of activities in a happy, relaxed and secure environment. The report also states that the quality of teaching and accommodation is good with a good range of activities available for the children. Language and literacy are developed to a high standard and mathematics is a strong area of learning.

The nursery is subject to OFSTED inspection because it participates in the Voucher Scheme for 4 year olds. Kinderquest have been asked to produce an action plan which addresses the two points where improvement is necessary - broadening children's experiences of cultural diversity and giving them a greater opportunity to use technology. On the latter the nursery has been looking for floor robots and programmable toys suitable for under-5s; suggestions or donations of toys that your child has outgrown are always welcome. Copies of the report are available from Carol Barnes, R71.

Retirements
Goodye and Good Luck to all those retiring in March - photos next month.

New Chair for Chamber science group
Allison Reed has been appointed to lead the Oxfordshire Chamber of Commerce and Industry forum for science and research companies - RESBIC.

RESBIC is one of six special interest groups run by the Chamber and a meeting point for those involved in science based businesses in Oxfordshire.



Ian Macpherson, Marketing Manager, Oxford Science Park and Bill McCandless, Director, Oxfordshire Chamber of Commerce with Allison Reed (98RC2122)

RESBIC diary dates

Raising capital for science based companies	Thursday 23 April 2.30 - 5pm
Managing the R&D process	Wednesday 10 June 5.30 - 7.30pm
Business planning	Wednesday 7 Oct 12.30 - 5pm
Marketing	Wednesday 18 Nov 5.30 - 7.30pm
Meetings are held at the Oxford Science Park. Further information on the Commercial Office noticeboard or by email < im@oxfordsp.com >	