

Spectrum

Latest staff news and events

May 2004

Historic synergy

How can you tell how a priceless museum piece was made without damaging it? How can you tell whether an archaeological find is fake or genuine? These and other questions can be answered at SRS and ISIS where Manolis Pantos and Winfried Kockelmann have been working together since 1998 to apply cutting edge technology to our cultural heritage.

The most recent piece on which they have worked is a 2700 year old Greek bronze helmet from The Manchester Museum. The Corinthian-type helmet has been called 'one of the great independent achievements of early Greek technology'. It was the standard issue helmet during the battles of Marathon and Thermopylae, where the future

Manolis Pantos (back) and Winfried Kockelmann prepare the helmet at ISIS.

course of history in Europe was decided. Like all body armour it was made to measure: this required exceptional skill on the part of the smith, but once discovered the design was so efficient that it was still being used in fifteenth-century Italy, more than 2000 years after its invention.

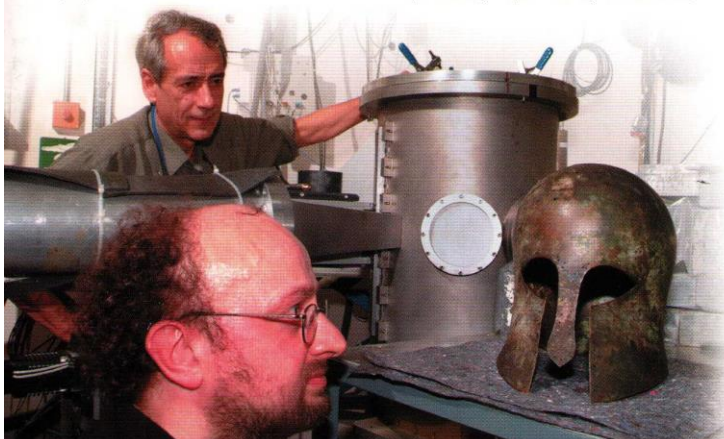
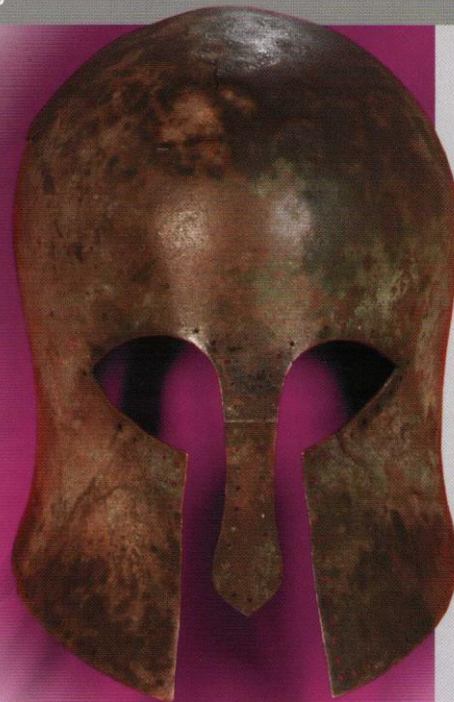
Neutron diffraction at ISIS has looked at the helmet's metallurgy. It has established that the nose guard is not original - it was probably repaired by an earlier,

Victorian owner. Infrared spectroscopy, X-ray diffraction and X-ray fluorescence at the SRS have been used to examine the corrosion products on the surface of the helmet. The results will help the museum conserve the helmet for future generations.

Manolis and Winfried also think that they know how the helmet was originally made. The smith probably started with a bronze skull cap which he gradually 'stretched' downwards into the final shape.

The helmet is on display at The Manchester Museum along with many other fascinating exhibits including Egyptian mummies and a reconstruction of one of the oldest shipwrecks ever found...

For more information,
Manolis Pantos ext. 3275
Winfried Kockelmann ext. 6731
<http://srs.dl.ac.uk/arch/>
<http://museum.man.ac.uk/>



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Retirement round-up

This work was carried out through two research proposals awarded to Dr John Prag, Keeper of Archaeology at The Manchester Museum, University of Manchester.



Management matters

Since becoming the new Director of the Daresbury Laboratory on 1 April 2004, I have had a somewhat eventful month. Along with John Wood, David Schildt and Mike Cruise, I represented the CCLRC at the recent House of Commons Science and Technology Committee review of the CCLRC's activities and future strategies.

Many of you will know already that I joined the CCLRC as the Director of Engineering in May 2003. Prior to that, I was Pro-Vice-Chancellor for Research at Sheffield University, after earlier research periods in the electronics industry and at RSRE (now QinetiQ) Malvern. In Yorkshire, I also chaired the White Rose Research Consortium (Leeds, Sheffield and York Universities), contributed very actively to Yorkshire Forward's RDA strategic planning processes, and also revamped Sheffield University's commercial exploitation activities.

As a result, I am now really looking forward to working very closely with DL staff and all the key regional stakeholders to progress the very exciting DL mixed-economy campus plans. After White Rose, I have gained much experience relating to the successful establishment of high added-value regional partnerships, and am also working very closely with CLIK to maximise the CCLRC's research exploitation opportunities.

During my first three weeks at DL, I have been delighted to be able to hold discussion sessions involving almost all DL staff. Those present will know that I have used these occasions to emphasise the real importance of high quality science, close teamwork, enthusiasm and communication in moving all the DL activities forward into the very exciting next phase.

Here we go!

Colin Whitehouse
Director Daresbury

Mine's a Guinness World Record

It's official - ISIS is the world's most powerful pulsed neutron spallation source and Vulcan is the world's highest-intensity focused laser!

In front of 200 members of staff from both departments, David Hawksett, Science & Technology Editor at Guinness World Records presented certificates to Ian Gardner (ISIS) and Colin Danson (CLF). Both records are featured in the 2004 edition of the Guinness World Records book.

Ian is one of the longest serving members of staff in ISIS. He was part of the team that took the ISIS synchrotron from design to operation more than 20 years ago.



(L to R) Ian Gardner (ISIS), David Hawksett (Guinness World Records) and Colin Danson (CLF).

Colin is group leader for the Vulcan Laser and received the certificate on behalf of the whole Vulcan team.

Henry Hutchinson and Andrew Taylor gave quick presentations to demonstrate why their facilities are the best in the world and both suggested that

there are plenty more records to come, especially with the development of the Astra laser and the building of the second target station at ISIS.

After the presentation of the certificates, the real celebrations began with champagne and cakes.

Staff changes

As many of you will already be aware, there have recently been some staff changes in the senior management team at the CCLRC.

Hywel Price has taken on new responsibilities as Director CCLRC Operations. Hywel will have responsibility for the development and implementation of a new organisational environment to enable CCLRC programmes to function alongside each other in an effective and efficient manner.

The new Director Daresbury is **Colin Whitehouse** (see *Management Matters* column). Taking over from Hywel, Colin will be working very closely with the north-west universities, the North West Development Agency and also important potential commercial partners to develop the DL campus and science park.

Mike Johnson has taken on Colin's role as head of the Engineering Department, in addition to the Instrumentation Department. Mike will combine the two departments over the coming months to build on the CCLRC's considerable expertise in both areas and maximise the effectiveness of CCLRC's innovative technology programmes.

These changes took effect on 1 April 2004.

RAL's top learner

RAL apprentice, Kevin Gray has been awarded the Abingdon and Witney College 'Learner of the Year 2004' Award for Work-Based Learning.

Kevin was selected as a student who has overcome barriers to learning and who has reached out to help others along the way.

Kevin is nearing completion of the Advanced Modern Apprenticeship in Engineering - a creditable achievement in anyone's book but he had to overcome initial problems of focusing on work, which threatened to prevent his success. He then decided to use his experiences to help other students who may be facing similar problems.

Kevin made a series of presentations at college to over a hundred potential trainees and parents, describing his experience as an apprentice and the support available. He was also involved in helping to set up a support group for

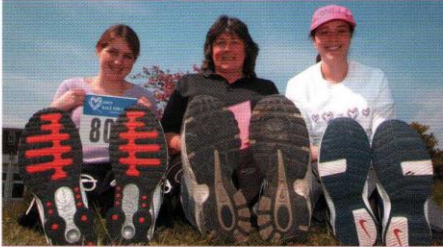
apprentices in the college and the workplace.

Kevin is thrilled with his award. He says "It was completely unexpected and it will encourage me to keep pushing the boundaries - perhaps to study for a degree or Higher National Diploma".



Race for Life

This summer 325,000 women will be walking, jogging or running 5km to raise £20 million to help cure cancer faster. RAL and DL will be well represented at Race for Life events around the country and all those taking part are looking for your support! Please contact them direct if you would like to support this good cause.



Putting their best feet forward for RAL: (L to r) Emma Gilgunn-Jones, Andrea Roberts and Lisa Robinson (JV Travel). Also taking part from RAL: Deb Greenaway, Katharine Horton, Andrea Strange (Diamond) and Sally Tosh (Diamond).



Ready to run - some of the DL team: (Back row, l to r) Susan Davis, Mary Highmore, Tracey Kelly, Mandy Todd, Suzanne Henshall. (Front row, l to r); Jane Bird, Nicky Elliott, Liz Kennedy, Kerstin Kleese-van-Dam. Also taking part from DL: Jane Binks, Jane Bird, Marion Bowler, Sue Laff, Tracey Pickthorne, Annabel Rigby, Jenny Varley, Sue Waller and Sue Williams.

Tiger Tamers triumph

Smashing four separate records, SSTD's football team has won the 2003-4 Harwell six-a-side league championship. The team achieved the highest number of goals scored in one game (19); the highest number of goals scored in a season (96); the highest number of points ever scored (45) and the highest crowd attendance of the season (75+)!

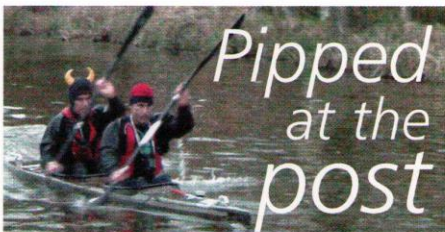
This is the first time a RAL team has won the competition and the Tiger Tamers were determined to improve on last season when they were unbeaten but finished runners-up on points.

The final match was an epic struggle against a team from campus neighbours, AEA Technology, in which the winner would take the championship. At half-time, the Tiger Tamers were ahead by a whisker but managed to increase their lead, and the end result was a convincing 8-3 victory.

Team captain, Matt Beardsley praised the team "Every member of the team gave 100% and the championship is a just reward. But thanks must also go to all our supporters who battled the elements throughout the season to cheer the team to victory."



The SSTD Tiger Tamers: (l to r) Luis Azcona, Dave Smart, Paul Smith, Matt Beardsley, Gary Burton, Wayne Robins, Jeremy Moor, Dave Wilsher, Joe O'Dell.



After posting the fastest times through every checkpoint in the 125 mile Devizes to Westminster (DW) canoeing marathon, James Treadgold (ISIS, and pictured front) and his team mate John Drummond had victory snatched from them by just 65 seconds.

This is the smallest margin of victory in the DW's 56 year history. The race is run as a

time trial and the eventual winners started after James and John and slowly closed in on victory knowing exactly what they had to do.

"Our time of 18 hours 35 minutes and 55 seconds is very close to what we hoped to achieve. We did what we could and it was almost enough to win. That it was so close is a real b*****!" said James.

The endurance event which takes place over the Easter weekend is a non-stop race where competitors must carry all their food and equipment with them in their boats. They must carry their boats around 77 obstacles such as locks or weirs. 100 teams took part in the race this year. As James has taken part 11 times he now feels enough is enough (probably)!

Dates for your diary

14 May (DL) 7pm - Public lecture*

'Forensic Science'

with Jon Ashton of Merseyside Police Scientific Support.

Follow the work of the forensic science team in helping to solve a murder from the discovery of the body through to the trial. (Age 12+)

Contact June Prince on ext. 3488 for more information.

16 May (River Thames, Abingdon) - Dragon Boat 2004

Come and support the RAL Rowers!

A great day out for all the family with stalls, refreshments and activities. **Racing starts 10am.**

26 May (RAL) - Open Afternoon

Instrumentation fully booked

Modern detectors designed and built in this department allow scientists to capture the spectrum of ultraviolet light transmitted by a protein as it unfolds, to image the X-ray emissions from the Sun and to detect the subtle pattern of neutrons diffracted from a high-temperature superconductor.

Contact Emma Gilgunn-Jones on ext. 5553 for more information.

25 June (DL) - Public lecture*

The Science of Ice Cream

by Dr Chris Clarke of Unilever.

Why do we eat ice cream? How do you make 100 tonnes of ice cream? What have Newton and Einstein got to do with ice cream? How do you cover ice cream in chocolate without melting it? This lecture will answer these and many more questions. (Age 11+)

Contact June Prince on ext. 3488 for more information.

*Please note:

- The public lectures at DL and RAL are oversubscribed. If you book a place and are then unable to attend, please contact the organiser so that your place can be offered to someone on the waiting list.
- The minimum age for each event ensures that every member of the audience will understand and enjoy the lecture. Younger children are likely to find the content of the lecture too complex.

Have you got an event that you would like included in 'Dates for your diary'?

Contact the editor with the details.

Say Hello to...

Graeme Finlan (RAL)
Programme Manager,
Directorate

Alistair McDermott (RAL)
Programme Manager,
Directorate

Barbara Montanari (RAL)
Research Scientist, CSE

Neil Pratt (RAL)
Programme Manager,
Directorate

Catherine Tomlinson (RAL)
Procurement Officer,
Finance

Arts & Crafts Exhibition 2004

The 15th Arts and Crafts Exhibition will be held at RAL from 21-23 September.

Previous exhibitions have featured displays that cover all areas of arts and crafts: paintings, photography, needlecraft, pottery, woodcraft, flower arranging, metal work, calligraphy, sculpture, instrument making, model-making, etc. In fact, most things are considered for this entertaining and fascinating event. Entries from colleagues at Chilbolton and Daresbury are also welcomed.

If you would like to take part in this popular event and share your interests with your colleagues, please contact David Farrell, ext. 5935 or email D.J.Farrell@rl.ac.uk

Have you got a story for Spectrum?

L&D News

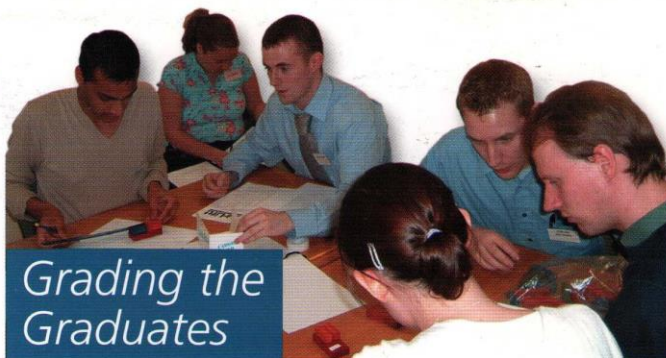
The next intake of graduate recruits were put through their paces at the annual CCLRC Graduate Assessment Centre.

Twenty-seven graduates and undergraduates from a range of science and engineering disciplines took part in two days of activities including psychometric tests, technical interviews, personality interviews and group exercises. Each participant had to deliver a presentation on a topic of their choice. They also enjoyed a tour of RAL and a dinner where they were able to meet senior managers and some of last year's graduate recruits.

Rosie Sherry, CCLRC Learning and Development Manager, explained further: "By exposing graduates to a variety of assessment methods we are able to gain a greater understanding of their capabilities and potential. We not only assess technical ability but also look at their broader skills in areas such as teamworking, communication and problem solving."

Eight of the participants have now been offered jobs and we look forward to welcoming them to the CCLRC in September.

All the observers and interviewers were CCLRC staff. If you would like to take part next year, please contact your local L&D team.



Potential recruits working together on one of the activities.

New Resources

Did you know that as well as providing all types of management development and associated courses, the Learning and Development department has a comprehensive library of books, videos and tapes covering a wide range of subjects? These resources are held in the R1 Resource Room (RAL) and Library, B Block Foyer (DL). They support the SME senior management programme and full details are available on the L&D internal website.

Recent additions to the library include a selection of pocketbooks on a variety of subjects such as networking, coaching, developing people, managing change and controlling absenteeism. We also have several books aimed at raising awareness of the different cultures and faiths within society - an

important topic for managers since the introduction of the Employment Equality Regulations late last year.

So, whatever your interest - effective writing, managing projects, time management, running meetings etc. - there is probably a book or video that you will find useful.

Coming up

27 May - DL Learning Lunch
Risk Assessment

9 June - RAL Learning Lunch
Tai Chi

If you would like to book a place at a Learning Lunch or wish to borrow one of our resources, contact your local L&D team who will be pleased to help.

DL Learning & Development
ext. 3720 or 3600 or 3869

RAL Learning & Development
ext. 6018 or 6052

Retirement round-up



Kevin Gannon - Rigger, SRD

John Manning writes: Kevin retired on 31 March after more than 28 years at DL. Throughout his time at the Lab, Kevin has been a key member of the Rigging Section and well respected by all those he has supported over the years, for his professionalism, care and enthusiasm. Kevin was also responsible for the statutory maintenance and inspection of all the lifting gear on the site and provided a first class interface with the external certification body. Kevin was presented with a range of DIY power tools from his friends and colleagues. He assured them that the tools would be put to very good use as he will be spending a lot of time refurbishing his daughter's house in Cornwall. All his friends and colleagues wish him a very happy retirement.



John Watson - Operations Manager, CMF

Ron Lawes writes: John has the distinction of being one of the longest serving members of RAL (43 years) having joined in 1961. He has seen Rutherford develop through all its phases from the National Institute for Research in Nuclear Science (NIRNS) to present day CCLRC and has served under all Directors to date.

As an electronics engineer, John has been in demand for many of the Laboratory's major projects. He started his career working for the high energy physics community, moved on to the Central Laser Facility and, in his final and most productive phase, joined the Central Microstructure Facility. At the CMF he worked on the development of a 50 KeV electron beam lithography machine and then a more advanced

100 KeV machine. With this latter project, he started one of the earliest collaborations with industry and John's skills (and patience!) contributed greatly to the success of this and subsequent industrial projects. Finally, his management skills were brought to bear on the operational needs of the CMF, supervising the introduction of ISO 9000 methodology and developing a firm and professional service for UK universities.

We wish John a happy retirement and understand that, as a keen model maker, he will soon be surrounded by even more advanced technology!

Bob Smith - Stores, RAL

Bob Smith retired on 31 March. Bob worked in Stores at RAL for many years and was a familiar face to many as he delivered parcels around the site in his yellow delivery van. Colleagues gathered in R56 to say farewell to Bob and to wish him a long and happy retirement - unfortunately we could not give him the van as a leaving present!

Contact the editor, Steph Presland on ext. 5398 or by email to s.presland@cclrc.ac.uk
The deadline for the next edition is 21 May 2004.