

Fourth Queen's Anniversary Prize for Loughborough

Loughborough has been presented with its fourth Queen's Anniversary Prize for Higher and Further Education. The award was made by Her Majesty The Queen on 19 February in recognition of the University's position as the country's premier institution for sports development, and its world leading role in sports research and education.

At the ceremony held at Buckingham Palace, Professor Stuart Biddle, Head of the School of Sport and Exercise Sciences, said, "This award is due recognition of the wider Loughborough sport experience over the past sixty years or so. While credit must be given to our current excellent staff, students and partner organisations, much credit must also be given to those who built, sustained and developed what is now the leading University in the world for the integration of sport development, education and research. Many of these people hold leadership positions in academia, some having made seminal contributions to knowledge, or are leaders in national and international sport-related organisations."

Director of sports development Rod Thorpe added, "Whilst inevitably different components of our work are judged separately, through the research assessment exercise, teaching assessment, sport performance and participation, and our work with many partners, it is really pleasing that such a prestigious award recognises the value of the inter-dependence of these parts."

Also attending the presentation were University Chancellor Sir Denis Rooke, the Vice Chancellor, Professor Clyde Williams, Athletic Union President Radha Balani, and



The Vice Chancellor and Rod Thorpe, Director of Sports Development, are presented with the award by Her Majesty The Queen and HRH The Duke of Edinburgh.

students Ross Weir, Jodie Swallow, David Broome and Richard Hung-Yu Liu.

Loughborough has been outstandingly successful in the Queen's Anniversary Prizes scheme, gaining four awards – an achievement bettered by no other institution. Awards are made biennially in recognition of outstanding educational achievement in areas of service and benefit to the nation.

The University received its first award in 1994 for its partnerships with the aerospace industry, particularly Rolls-Royce and BAE SYSTEMS. Its second award was received in 1998, in recognition of the Institute of Development Engineering's unique service to

developing countries, providing and managing sustainable infrastructure. Loughborough gained its third award in 2000, in recognition of the Optical Engineering Group's pioneering role in developing applications of modern optics and laser technologies to find practical solutions to real-world problems.



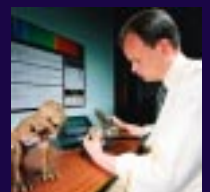
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BCA Films

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Annual Report 2001-02

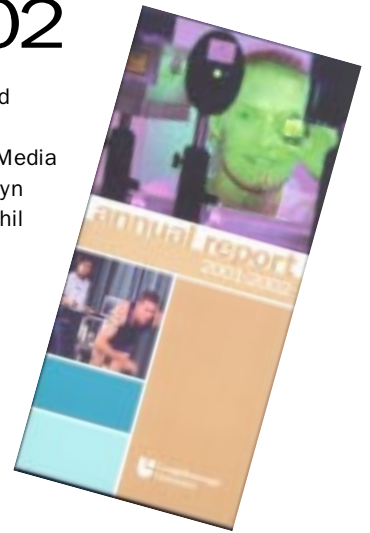
The University *Annual Report 2001-02* has now been published and was formally presented by the Vice Chancellor to the annual meeting of Court on 21 February.

Once again, the Report has been developed primarily for the Web, with the print publication presenting just a selection of the University's many successes. The online edition of the *Annual Report* can be found at www.lboro.ac.uk/report. Copies of the printed publication are currently being distributed to departments and sections.

This year's Report was written by freelance copywriter Eva Tyler, with text editing done by Hannah Baldwin of the Publicity Office. Design,

photography and production was undertaken by Media Services' Kathryn Knapman and Phil Wilson.

If you have not yet placed your order, or would like further copies of the Report, please contact Sue Rowbottom in the Publicity Office on ext 2238, email S.P.Rowbottom@lboro



£10.5 million for Loughborough Major injection of cash for research

Loughborough has been allocated a £10.5 million share in a £1 billion national investment in scientific excellence.



Steve Doherty

British Science is among the best and most cost-effective in the world. The injection of over £1 billion is the largest ever Government investment in our science research infrastructure and will ensure that UK science remains at the cutting edge."

The funding, under the Science Research Investment Fund (SRIF), was announced on 12 February by Science Minister Lord Sainsbury, who commented, "The research carried out in our laboratories is

the foundation for the new products, medicines and technologies of tomorrow.

The allocation of Loughborough's funding will be decided over the coming months.

Research institute announces new company name

ICE Ergonomics Ltd, the company associated with the Ergonomics and Safety Research Institute (ESRI), has been renamed ESRI Ltd, with effect from 1 February. This follows the merger of two of the University's renowned research centres – the Research Institute for Consumer Ergonomics (RICE) and HUSAT (the Human Sciences and Advanced Technology Research Institute) in August 2002 to form ESRI.

Magdalen Galley, managing director of ESRI Ltd, says, "We like to think that the two different perspectives really enhance what we do and give us a double benefit. Whilst research ideas frequently emerge from our consultancy work, real world solutions to our consultancy clients' problems develop out of our research activities. Having

this dual view helps us to deliver a service that is beneficial to both the University and industry, Government and commerce."

Like the Institute, the newly formed ESRI Ltd will have three centres carrying out applied research and consultancy in the discrete but overlapping areas of human focused design, transport

technology ergonomics, and vehicle safety.

ESRI and ESRI Ltd share a common pool of staff and are based in the Holywell Building, adjacent to the campus.



Sir John Jennings appointed as new Chancellor

Sir John Jennings, CBE, FRSE – former chairman of the Shell Transport and Trading Company plc – has been appointed by Court as the University's fourth Chancellor. Sir John will succeed Sir Denis Rooke, OM, CBE, who is to retire from the position in the summer, having served for fourteen years.

Born in 1937, Sir John Jennings was educated at Oldbury Grammar School and Birmingham and Edinburgh Universities, gaining a BSc in Geology in 1958 and a PhD three years later. He was also Sloan Fellow at the London Business School.

Sir John joined Shell in 1968, where he worked in a variety of posts in the UK and abroad, becoming Managing Director of Shell UK Exploration and Production Ltd in 1979 and Exploration and Production Coordinator for Shell International in 1984. He was Managing Director of the Royal Dutch Shell Group from 1987 to 1997 and Chairman of the Shell Transport and Trading Company plc from 1993 to 1997. Sir John was a Director of the company between 1987 and 2001.

He received an Honorary DSc from the universities of Edinburgh in 1991 and Birmingham in 1998, and has been a member of the governing bodies at the London Business School and the University of Exeter.

Sir John will take up the post of University Chancellor from 1 July this year.

At its February meeting, Court also agreed to appoint Alan Woods as University Treasurer and Richard Parry-Jones as a Pro-Chancellor.

Alan Woods is a former senior partner at Cooper Parry, one of the largest East Midlands-based firms of chartered accountants. Having joined the company in 1972, he worked his way up through the organisation, becoming Head of Corporate Finance in 1985 and senior partner in 1992, before retiring from the practice in April last year. He is a non-executive director of several companies, including Derbyshire Building Society, and also deputy lieutenant of Derbyshire.



Courtesy of Shell

Sir John Jennings.

As Group Vice President, Global Product Development and Chief Technical Officer at the Ford Motor Company, Richard Parry-Jones oversees product development activities for all Ford Motor Company vehicles worldwide, as well as the corporate design, research and vehicle technology functions. He heads Ford's global engineering organisation, including the Ford, Lincoln, Mercury, Jaguar, Volvo, Land Rover, and Aston Martin brands. He is also responsible for product safety and environmental initiatives, and is the senior technical advisor to Mazda. He was awarded an Honorary Doctorate in 1995 by Loughborough, and has been a Visiting Professor in the Department of Aeronautical and Automotive Engineering since 2001.

Media Services *imagebank*

Hundreds of high quality photographs at the click of a mouse!

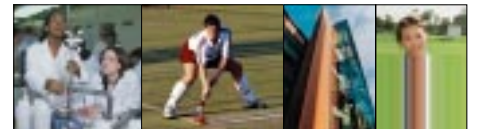
Selecting photos has never been easier, thanks to *imagebank* – a new, fully interactive online database of the University's most popular and relevant photographs.

Launched on 7 February by the Vice Chancellor, *imagebank* aims to provide the University with easier access to Media Services' photography archives. With

images from teaching and research activities in departments to campus views and buildings, Rag week to graduation, you can search for whatever you want, whenever you like.

"*imagebank* is so easy to use," says Media Services Alison Freer. "All you have to do is log on to <http://imagebank.lboro.ac.uk> and enter in a keyword search. Then once you've selected the images you'd like, just fill in your details on the right hand side and the photos will be emailed to you."

imagebank is the product of a project, led by photographer Jagjit Samra, to convert Media Services' photography archive into a digital format. For the project Jagjit had to evaluate several asset management software packages and hardware, and visit other establishments



Some of the hundreds of photos available on *imagebank*

running a similar service to ensure that an efficient and effective facility evolved for Loughborough.

Launching the service, the Vice Chancellor commended the partnership approach taken by Media Services in developing the facility. As well as involving their own staff, Media Services consulted with colleagues in the Library and Department of Information Science, to gain advice on archiving, cataloguing and metadata, and those staff around the campus who have a particular interest in using the resource for marketing.

"*imagebank* is expanding all the time," said Alison. "We're constantly reviewing stock and adding new images and would welcome staff feedback on this new service. If anyone would like new sections to be incorporated or if you are interested in adding your own images of the University to the database, please contact imagebank@lboro.ac.uk."



(L-R) Director of Media Services Dr Ann Mumford and photographer Phil Wilson show the Vice Chancellor the new *imagebank* facility.

Community Action – a chance to get involved

With its record-breaking fundraising for Rag and highly successful Community Action team, Loughborough students are renowned for their community commitment. Boasting over two hundred active volunteers, who willingly give up their time to participate in voluntary activities in the local community, Loughborough Students' Community Action is going from strength to strength, and, as Clare Hewitson, Community Action Chair, points out, staff can get involved too.

"We're running more and more special events each year, as well as the regular ones," she says. "This academic year, we held 'A Flick Down Memory Lane', when the Union auditorium was transformed into an old-style cinema and Loughborough's elderly community were treated to a showing of *Singing in the Rain* while being waited on hand and foot by a team of dedicated volunteers. The day was only slightly marred by the fire alarm going off, but as the event was being held on Remembrance Sunday, the visitors thought it was an air raid siren that we'd organised for added realism!"

"Of course we'll be holding our Tea Dance in March as usual, which is now an institution – I think we'd have a riot on our hands if we tried to cancel it! It provides a great source of entertainment for Loughborough's elderly



Community Action recruiting more student volunteers at the Freshers' Bazaar.

residents, and this year's dance will feature ballroom dancers, the regular swing band, and lots of sherry and endless cups of tea!" comments Clare.

Community Action will also be launching a new project, in

conjunction with the University Counselling Service. Called Student2Student, the project is designed to provide peer support for students on a range of issues and problems whilst providing information on other student support services such as counselling, careers and student advice.

Clare is keen to stress though that opportunities to volunteer are not just open to students.

"We have a range of staff volunteering opportunities available through Community Action, including the Right to Read project, which was run for the first time last year, and the Burleigh Community College mentoring scheme."

Right to Read is a national campaign supported locally by the Leicestershire Education Business Company (LEBC) and Leicestershire Cares. The aim of the scheme is for University staff and students to volunteer in a local school for one hour per week helping children with poor literacy levels in their reading practice. The Burleigh Community College scheme enables volunteers to mentor students over 16 years who lack motivation and time management skills.

Any staff interested in participating in either of these projects may be released from their regular duties for an hour and a half a week, with their line manager's agreement.

So if you fancy getting involved, contact Clare Hewitson, Community Action Chair, on ext 5041, or by email at action@lborosu.org.uk

Community warden scheme expanded

Loughborough's pioneering community warden scheme, introduced eighteen months ago to help improve communication between the University and those living in the Storer Road region, is to be extended to the Burleigh Road area of the town, following the success of the initial scheme.

The Community Warden's role is to liaise with the University, and between residents and students living in private accommodation, with the aim of helping the University to improve communication with local residents, and maintaining a good relationship between all the groups. The position also involves an element of welfare and pastoral work with the students, providing general support to those living in private accommodation.

Adrian Bailey, who was appointed as Community Warden for the Storer area in August 2001, welcomes the expansion of his remit. "There has been an overwhelmingly positive reaction to the community

wardenship in the Storer area from both permanent and temporary residents, and I hope that I can now also be of service to those living in the Burleigh area."

Loughborough graduate Adrian, who works in Human Sciences, has lived in the area since 1973 and has been a member of the Residents' Association for many years, as well as serving as its Chairman for a while.

He is supported in his work by the Community Subwarden for the Storer area, postgraduate researcher Jeanette Rasmussen. The University is now also seeking to appoint a Subwarden for the Burleigh region.

Salter's prize

Chemical Engineering finalist Richard Wilson has been awarded the Salters' Graduate Prize 2003 by the Salters' Institute. Richard is the seventh Loughborough student in succession to receive the prestigious award and the ninth student from the Department of Chemical Engineering to win an award in ten years.

The Prize is sponsored by the Salters' Institute of Industrial Chemistry and is awarded every year to the graduate students most likely to succeed in industry. "This award is a great credit to Richard. Everyone in the Department wishes him well in his future career," said Professor Wakeman, Head of the Department of Chemical Engineering.

Richard will be presented with his prize on 4 December 2003 at the Salters' Institute in London.

Tiberius triumphs in Robot Wars!

Tiberius III, Loughborough's robot entry in the popular BBC TV programme Robot Wars, has been crowned University Challenge Champion 2003, after defeating robots from universities across the UK. Imperial College London, Open University, University College London (UCL), University of Hertfordshire, University of Wales Aberystwyth, and Loughborough all took part in the UK's first Robot Wars University Challenge Award.

The brains behind Loughborough's winning design was Sam Smith, a second year Mechanical Engineering student. Along with his dad, Stuart Smith, and fellow students Carl and Craig Lawson, Sam took on house robots Sir Killalot, Growler, Matilda, Sergeant Bash and Shunt in what proved to be a very exciting series of battles.

Round One saw Tiberius effortlessly lift UCL's 'Fluffy' entry off the ground and dispose of it in the arena pit. Tiberius then took control of Open University's 'CV' entry, winning the judges' votes in Round



Tiberius

Two, before going head to head in the final round with the University of Wales Aberystwyth's entry 'Infinity'. Once again the judges awarded Tiberius their votes for style, control, damage and aggression, to give Tiberius the inaugural UK University Challenge award.

Steve Rothberg, Head of Mechanical and Manufacturing Engineering, said, "When I first met Sam he told me about his Robot Wars exploits and I was excited about supporting the design of Tiberius III. We are all delighted with his team's success."

Sam, a veteran in the Robot Wars competition, has already appeared in series four, five and six with earlier and quite different versions of Tiberius. Covered mainly in 5mm steel, Tiberius also has added strength areas made of high tensile steel and titanium for protection. As well as being highly manoeuvrable, Tiberius has a hydraulic crushing, piercing 'beak' that can provide over five tons of pressure, destroying the competition swiftly and effectively.

After winning the University Challenge title, Sam said, "We are delighted to have won the first ever University Challenge award. We've already started to make improvements to Tiberius which will hopefully enable us to hang on to the title in the future."

The competition was broadcast on BBC Choice on 30 January and will appear on BBC Two in the late spring.



The team.

Campus-wide license for National Instruments software

Following the announcement last year of the education and research partnership with National Instruments (NI), the University now has a campus-wide license for LabVIEW, Measurement Studio and all NI associated toolkits. This means that everyone on campus is licensed to use this software for both teaching and non-commercial research applications.

With LabVIEW you can rapidly create test, measurement, control, and automation applications using intuitive graphical development. Measurement Studio bridges the gap between standard

software development tools, virtual instrumentation needs, and test, measurement and automation applications. The toolkits include image acquisition and analysis, motion control, signal processing, sound and vibration, as well as others.

If you are interested in using any of this software, please email Nick Cope, Engineering Faculty IT Implementor, at N.J.Cope@lboro for further information.

If you need further information on NI products, please contact Katherine Robinson at National Instruments, email katherine.robinson@ni.com

In brief

The **Publicity Office's web pages** have been updated and redesigned. Located at www.lboro.ac.uk/service/publicity/index.html, the pages outline who's who in the office and their roles, as well as including lists of the latest press releases and media coverage and online versions of publications. The pages were designed by Steve Ashurst in Media Services.

This year's **sale of unclaimed found property**, held last month, raised a grand total of £659.60. All proceeds from the sale went towards the Students Distress Fund, which is maintained for students in financial difficulty.

Widening participation

Making education accessible

Encouraging students from a variety of backgrounds to enter into higher education is a top priority for today's HE institutions. Here at Loughborough we believe that everyone should be offered the opportunity to achieve their full potential, and so we are committed to Widening Participation within our student population.

Widening Participation means raising the aspirations and awareness of people who might not otherwise consider studying and giving them the opportunity to fulfil their potential. A great number of people across the country decide to drop out of education following their GCSEs or A Levels, not because they aren't capable, but simply because they haven't considered further study as they are unaware of the possibilities it offers. They may, for instance, come from a family who have not traditionally gone into further and higher education and are therefore not as confident about entering university.

"University students can come from all walks of life," explains Justine Sanders, the University's widening participation officer. "Straight from school after completing A levels, after following AVCEs at an FE College, or later in life as a mature student, for example. There is no rule governing who a 'Loughborough University Student' should be."

"However, we recognise that some groups are currently under-represented in higher education and we are focusing on working with other institutions both locally and nationally to re-dress this."

HEFCE has set universities a number of benchmarks linked to widening participation. In order to reach the benchmarks for Loughborough, the University is undertaking a number of initiatives, aimed at both internal and external audiences. The widening participation agenda is also reflected in the University's Strategic Plan, its Learning and Teaching Strategy and, of course, the Widening Participation Strategy, with a monitoring group established to supervise the progress of the plan.

"The first step is to raise potential students' awareness of the benefits of HE and particularly Loughborough, which we're doing through various initiatives both at a central and departmental level. For example, University representatives attend

HE fairs across the country, and we hold ACE days, where year 9 students spend a day at the University. We also run student shadowing schemes, where students in year 11 follow an undergraduate around for a day to experience student life, and we have e-mentoring in the Faculty of Engineering – a pilot scheme which puts Loughborough students in regular touch with year 8 pupils by email," Justine explains.

She continues, "Then at the admissions stage, applications from students from a 'widening participation' background are carefully considered to ensure that they are being offered the best possible chance to further their education, and of course once they're at the University, they're offered all the support they might need to help them through their time at Loughborough."

For more information on the University's widening participation initiatives see www.lboro.ac.uk/access or contact Justine on ext 2481, email J.Sanders@lboro

Burleigh Court – business is booming



Burleigh Court, Loughborough's purpose-built four-star training and conference centre, is enjoying a buoyant start to the year, producing higher than expected surpluses despite the present adverse economic climate, increased competition and uncertain times.

Sales are on target for the first six months, and are 4.7% above last year. The surplus to date is 35% above budget, costs have been substantially reduced, and a surplus of nearly £500,000 generated from the last financial year will be handed over this month to the University.

corridors and lobby area have been redecorated, and The Swift training room has been refurbished and fitted out with state of the art audio visual equipment.

With customer satisfaction a priority at Burleigh Court, a regular independent survey enables the venue to benchmark its performance against all the other respondents. Organisers of events held at Burleigh Court are asked to complete a detailed online questionnaire which is then forwarded to an independent body for assessment.

More courses have been organised this year by University departments with programmes run by, amongst others, the departments of Systems Engineering, CHaRM, AAE, Mechanical Engineering, LISU and IPTME. Many notable corporate companies and organisations, such as The Royal Bank of Scotland, Smith and Nephew, Marks and Spencer, and The Football Association, have also been attracted to Burleigh Court.

Extensive refurbishment at the venue over the past year has also received positive customer feedback. All bedrooms in the main building have been refurbished and upgraded with double beds, trouser presses, ironing boards and modern points; the bedroom

"I'm absolutely delighted," said chief executive Kay England of the results. "Our overall score of 102.9% proves that we consistently exceed customer expectations in our service delivery, this against a maximum score attained of 103.5%. As well as being a huge boost to staff morale, it provides us with a very accurate measurement tool in order to monitor our progress and improve our customer service."

For further information about Burleigh Court, contact Emma Boynton on ext 53002 or by emailing e.boynton@burleigh-court.co.uk



Spin out company takes lead in toy safety

University spin out company Laser Optical Engineering is playing a key role in toy safety, by testing for potentially harmful radiation levels from lasers and light emitting diodes (LEDs).

In today's demanding consumer environment, toys are increasingly becoming laden with electronic gadgets to keep pace with children's high expectations. As hundreds of new products feature lasers and LEDs, safety has become a major concern for both manufacturers and consumers. This is compounded by the move by manufacturers from radio controllers to infra-red LEDs due to concerns brought about by mobile phones.



While toy safety standards have been in place for many years, they are constantly being updated to ensure the burgeoning tide of new products does not pose health hazards to children. New EC directive BSEN 50088 Annex I states that electrical and battery-operated toys 'may not emit harmful radiation'.

Dr John Tyrer, Director of Laser Optical Engineering, welcomes

this new directive. "Product compliance testing for toys is a crucial measure for keeping within the law and ensuring children's safety," he says. "You simply can't issue guidelines on how children should play with toys. Flashing lights are fascinating. Children might peer at a light display closely, or even try to take a toy to pieces to satisfy their curiosity. This is why we must

ensure that laser and LED features on toys have low radiation levels."

The risk from higher radiation levels depends upon the wavelength (colour), power and duration of exposure to the light. Test regulations detailed in BSEN 60825 lay out

specific boundaries under which the light is considered safe. The concern is that if the boundaries are breached in children's toys short or long-term damage to eyesight may result.

In general most LEDs are safe, however advances in technology mean that more efficient intense high power LEDs are becoming more

predominate in such applications as lighting, and these could present a potential risk.

Testing involves determining the exact wavelength, power and illumination characteristics in such a manner that direct comparisons can be made to the potential damage caused by intense light.

Laser Optical Engineering has over 20 years' experience in product compliance, and provides certification of numerous consumer goods including toys to ensure that they comply with the latest European and world standards.

Dr Tyrer is an expert in the field of laser and LED testing. He acts as an advisor on LEDs and lasers and provides laser safety advice to governments, research bodies, companies, universities, local authorities, venues, media and hospitals.

Companies flock to Innovation Centre

Loughborough Innovation Centre, the region's largest business incubator unit, has exceeded its initial occupancy target less than six months after opening. Located on campus, the purpose-designed facility has attracted 22 new and growing companies from the East Midlands and further afield. The collective work force at the Centre now stands at just under one hundred.

The Innovation Centre opened in September 2002, following a successful £0.75 million funding bid to emda, the East Midlands Development Agency. £75,000 worth of subsequent donations have been secured from local businesses and private donors, and further funds are being sought to undertake the final phase of the refurbishment of the property, which will release another 1,000+ m² of space for let and create accommodation for up to ten new companies.

"We've been delighted by the speed at which innovative young companies have

flocked to join Loughborough Innovation Centre," says Anna Seddon, marketing and PR manager for Loughborough University Enterprises Ltd. "Tenants include spin out companies from within the University and growing businesses from the East Midlands region and beyond. Some of the tenants are setting up in business for the first time, such as Rapid Manufacturing, a Warwick University spin out, and Cow UK, a design consultancy set up by two of our current undergraduate students. Our larger, more established companies include Objectsoft, innovators in the much discussed arena of internet security, and Intelligent Energy, the UK's leading commercial developer of Proton Exchange Membrane (PEM) fuel cell technology, and one of the few developers of this technology in Europe."

The Innovation Centre offers communal reception areas, kitchens and meeting rooms, internet facilities, comprehensive office resources and round the clock access, with business mentoring offered to all tenants. The campus location enables tenants to strike up collaborations with

University academics engaged in cutting edge research for major international companies. Many of the tenants are settling into the Loughborough business community by attending free business support seminars hosted by Loughborough Enterprise Club and Loughborough Advanced Technology Initiative.



Aeronautical and Automotive Engineering

Website for Dissemination of Muscles Project

Dr J F Carrotte
£1,334 Rolls Royce

CFD Sprays Project for Duel Fuel

Prof J J Mcguirk and C W Jayatunga
£7,252 Rolls Royce

Pressure Survey Test & Support

Dr J F Carrotte
£15,000 Rolls Royce

Chemistry

Palladium Catalyzed Routes to the Tricyclic Core of the Stenine Group of Stemona Alkaloids

Dr G Pritchard
£21,000 Millennium Pharmaceuticals Research & Development Limited

Civil and Building Engineering

Capture and Reuse of Project Knowledge in Construction

Dr P Carrillo, Prof C J Anumba and Dr N M Bouchlaghem
£85,568 EPSRC (IMRC)

Competency Based Performance Management

Dr A Dainty
£26,910 EPSRC

Electronic and Electrical Engineering

Fast & Compact Flux Compression Driven Power Source

Prof I R Smith
£15,400 US Air Force

Multilayer Mesh Filters for Quasi Optical Beam Splitting Applications

Prof J C Vardaxoglou and Dr J A Flint
£133,593 EPSRC

Generic Process for Assessing Climate Change Impacts on the Electricity Supply Industry and Utilities

£681,472 EPSRC

Dr S J Watson
£186,388 EPSRC

An Exploding Wire Microwave Generator

Prof I R Smith
£10,553 DSTL

Mathematical Sciences

Overseas Travel Award

Dr C M Linton
£5,622 EPSRC

Mechanical and Manufacturing Engineering

Measurement of Frictional Characteristics

Dr H Rahnejat
£15,007 3M

Incorporation of Technology Capability Trajectories into Technology Road Mapping within the Electomechanical Domain

Mr P Palmer, Mr P P Conway and Prof R Summers
£185,926 EPSRC (IMRC)

POINTER 2

Prof N Burns and Prof C J Backhouse
£64,852 EPSRC (IMRC)

Physics

Royal Society/NATO Postdoctoral Fellowship

Prof S Alexandrov
£2,805 Royal Society

School of Sport and Exercise Sciences

Coaches and Athletes Perceptions of Rules in the Coach Athlete Relationship

Dr S Jowett
£9,892 Nuffield Foundation

Evaluation of the New Opportunities Fund for PE & Sport

Dr M Nevill, AJ Cebulla, L Almond, Prof B Houlihan, Dr K Armour and P Warmington
£998,853 New Opportunities Fund

Amendments and additions to the research grants and contracts listed in previous editions of the newsletter are listed as follows :

Civil and Building Engineering

Engineering Doctorate Centre: Centre for Innovative Construction Engineering

Prof C J Anumba, Prof A Thorpe and Prof R McCaffer
£681,472 EPSRC

Civil and Building Engineering

Manual Handling in Highway Kerb Laying

Mr A F Gibb
£50,000 Construction Health and Safety Group

Computer Sciences

Knowledge Mapping and Management at Rolls Royce Naval Marine Support

Dr T Jackson and R Dawson
£45,000 Rolls Royce

Study examines effects of medication on safety in the workplace

A new study examining how the drugs used to treat anxiety and depression affect performance and safety at work has been conducted by Loughborough's Health and Safety Ergonomics Unit together with the Department of Health and Social Care at Brunel University.

The research was commissioned by the Health and Safety Executive (HSE) in response to the increasing number of people suffering with anxiety and depression in recent years, which has led to widespread use of medication to treat these conditions. These drugs have known side effects that can include further anxiety, sleep disruption, tiredness, fatigue, nausea and headaches.

The study involved employees and employers from a wide range of work sectors, including health care, social services, education, manufacturing, engineering and retail.

The findings showed that:

- Anxiety, depression, and the medication prescribed by doctors to treat these conditions do appear to affect work performance. Sufferers described a variety of accidents and near misses believed to be due to their condition or the side effects of medication.
- Workers with responsibilities for others, such as teachers, doctors or managers, seem to present a particular risk to safety in the workplace. For example, doctors described situations in which they may have placed themselves and their patients at risk when carrying out medical procedures such as taking blood samples, and electricians and mechanics described how they had to repeatedly check their work, as they were aware that they could endanger lives.

A failure to take medication as prescribed was commonplace among those interviewed, because of the unpleasant side effects, lack of improvement of symptoms, or because the

medication made them feel worse at first. Individuals also indicated that they were often unprepared for the effects of their medication and would have welcomed better information from doctors and pharmacists.

The findings also indicate that mental health problems are not well understood by employers and managers, with little support in the workplace for individuals suffering from anxiety or depression.

"People suffering with anxiety and depression experience great difficulties at work managing their symptoms and dealing with unpleasant side effects of their medication," said former Loughborough Professor Cheryl Haslam, who led the research. "Many were unprepared for the fact that it can take two or three weeks before they see improvement in their symptoms after starting medication. Patients need more information from GPs about the medication and side effects, so they know what to expect."

New centre aims to make rail travel more appealing

A new centre for railway systems research, involving a consortium of twelve research groups from seven universities including Loughborough, could help to create a world-class rail system for the UK.

The £7 million centre, which will be based in Birmingham and was launched last month, is being set up by the EPSRC (Engineering and Physical Sciences Research Council) and will bring together researchers, representatives from industry and policymakers to concentrate on issues such as making rail travel more attractive for passengers and improving the safety, reliability and capacity of the network.

Peter Hedges, programme manager for infrastructure and environment at EPSRC,

said of the new research centre, "This exciting initiative will bring together top research teams who are involved in all aspects of the rail system from track to trains and passengers to policy for the future. We hope Rail Research UK will become a valued source of innovative thinking for the railway industry."

Other universities involved in the project, in addition to Loughborough, are Birmingham, Southampton, Leeds, Manchester Metropolitan, Sheffield and Imperial College.

Power station steel research could cut electricity bills

Pioneering materials research being undertaken by IPTME could ensure that consumers' electricity bills stay as low as possible in the future. Funded by the Engineering and Physical Sciences Research Council (EPSRC) and the power industry, the work is contributing to the development of steels that enable power to be generated with maximum efficiency – a key factor in minimising the cost of the electricity produced.

Modern power stations generate electricity using steam-powered turbines. To achieve maximum efficiency, steam temperatures need to be kept as high as possible for as long as possible, meaning that pipe work and other steam-carrying channels could be required to operate at temperatures of up to 650°C for up to 40 years. However it is currently impossible to check what happens to these steels after 40 to 50 years because most of the advanced steels now used in power stations have only been in service for up to 20 years. This also makes the development of better steels difficult.

To address this problem, the Loughborough research team, led by Professor Roy Faulkner, has devised mathematical models that show how power station steels behave at the nanoparticle level. The small changes that take place at this scale determine the strength of the steel, and therefore the models provide the only way in which designers of electricity generating plants can forecast the behaviour of different steels on this timescale.

The initiative involves studying the microstructure of steels after long-term exposure at various temperatures and using this information to verify the models' accuracy. The models can then be used to predict how a steel's properties could be changed using heat treatment or other techniques.

"Our work could have tangible benefits, in terms of improving power station operation and keeping down the price of the electricity we all use in so many aspects of our lives," said Professor Faulkner.

Loughborough's Professor Roger Goodall, from Electronic and Electrical Engineering, is part of the new research centre that will help to ensure a strong future for the country's rail system.

His research group – the Systems and Control Research Group – has been involved in many rail-related projects, which have helped to break new ground in the development of rail systems. One such scheme is an industrial research project in which a high-speed railway vehicle's wheelsets, consisting of two profiled wheels directly connected by an axle, have been actively controlled for the very first time.

Funded by Bombardier Transportation – a global leader in the rail equipment, manufacturing and servicing industry – the project is concerned with translating some of the ideas that have been developed during previous research studies into practice. Bombardier have modified a conventional railway bogie so that each wheelset can be separately controlled using electrical actuators, the objective being to produce practical control strategies that both steer the bogie properly through curves and provide stable operation for high speed running.

Together with Dr John Pearson, Professor Goodall and a truly multi-national and multi-disciplinary team – with contributors from Sweden, Switzerland, Germany and France – have proved the concept on a 'roller rig' in Munich, which accurately represents the vehicle running along the track, with stable operation for speeds of up to 330km/h (206mph) achieved.

"Conventional bogies are complex mechanical systems involving sophisticated mechanical design, often using cumbersome dampers between the bogie and the body of the vehicle," explains Professor Goodall. "But this has been replaced by two small electric motors that apply carefully-controlled forces to the axles resulting in a simpler mechanical system. The sophistication now appears in the electronics and software, and heralds a new generation of railway vehicle technology."

"There is of course much work to do to convert the experimental system into a commercial product, including integrating the stability control which has now been demonstrated with strategies by which the vehicle can be actively steered through tight curves," he continues.

Richard Schneider, Vice President of Engineering for the bogies business unit of Bombardier Transportation, said, "This ground-breaking achievement provides vital proof-of-concept and is of great importance to Bombardier. Mechatronic technology of this kind is likely to become increasingly accepted by the railway industry, and for this reason forms a key part of the company's future engineering strategy."

As Professor Goodall points out, "Railways in the UK don't currently have a very good name, but important technological achievements such as this will help to present a much more modern, go-ahead image of the industry."

Roll of honour

Ian Armiger, the University's Director of Swimming, has been named as 'Coach of the Year' at the Leicester Mercury Sports Awards. Beating off tough competition from Leicester City boss Micky Adams and Dean Richards, Leicester Tigers Director of Rugby, Ian clinched the title at a ceremony held on 18 February. He received the award in recognition of his swimmers' superb achievement at last year's Commonwealth Games, where they gained a Gold, two Silvers and a Bronze, and their success in gaining fifteen National Championship titles. Ian was delighted to win the award. "It's great to be acknowledged for what we have achieved. This award is not just

for me but for all of the coaching staff, swimmers and support staff at Loughborough University – they deserve a lot of the praise," he said.

Dr Mark Evans, a lecturer in Design and Technology, has received an invitation from Massachusetts Institute of Technology (MIT) to become an international scholar. He will be spending five months in the USA undertaking collaborative research with the Department of Mechanical Engineering.

Civil and Building's **Dr David Pitfield**, leader of the Transport Studies Group, has been

appointed as an Academician of the Academy of Learned Societies for the Social Sciences. The Academy represents the social sciences of the United Kingdom to government, research councils, business and international bodies.

Professor Richard Wilson of the Business School has been re-elected for a further two-year period as Chairman of the Committee of Heads of Accounting, which embraces those universities throughout the UK and the Republic of Ireland offering degrees in Accounting and Finance. His first task following his re-

election will be to set up a subject benchmarking group (SBG) to deal with Master's awards in Accounting and Finance. Professor Wilson has also just completed a second elected term of office as Branch President of the Chartered Institute of Management Accountants (CIMA) – with responsibility for CIMA's activities in Nottinghamshire, Derbyshire and Lincolnshire, and an active role both nationally and internationally. A CIMA spokesperson noted that "… ably guided branch events for the last two years and made a substantial impression on both local and area activities with his experience, knowledge and humour."

Obituary

Bettine Geary (Thurman)

It is with great sadness that we report the death of Bettine Geary (Thurman), formerly of the Security Section, after a courageous struggle with cancer.

Bett joined the University Security Section in June 1996, after serving for nearly twenty years with the Security Police at Castle Donington Airport. Only the second female officer ever appointed to Security, Bett was instrumental in leading the Section in its welfare and liaison with students and wardens and could be described as the 'mother figure' of the Section.

Bett made many friends while working here. Not only was she popular with her own work colleagues, but also across the whole of the campus, with staff and students alike.

In February 2002, Bett retired on medical grounds and married Graham the following month. They travelled to many parts of Europe, and crammed more into their short time together than most of us could only dream of.

Bett passed away peacefully in hospital on 15 February. She leaves behind Graham, her heartbroken widower, Julie and Xena, her two devoted daughters and her sons-in-law, and her beloved four grandchildren, as well as Graham's son, daughter and their families.

Bett was much loved by all who knew her. Her friendship and humour, especially her laughter, will be so very sadly missed.



From all of her many friends in Security



London marathon '03

This year's London Marathon is fast approaching, and once again Loughborough staff are doing their bit for charity.

Running in her first ever marathon – and possibly her last, depending on the experience, she claims! – Dawn Cole, who is systems manager in the Library, aims to raise a total of at least £1,000 in aid of the Muscular Dystrophy Campaign – a cause close to Dawn's heart.

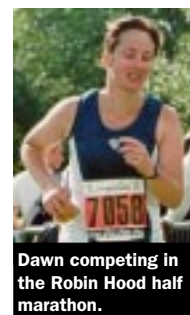
"My friend's son suffers from Duchenne Muscular Dystrophy, a form of MD which only affects boys," Dawn explains. "There are more than twenty types of Muscular Dystrophy in total, all of which cause progressive muscle weakness and some of which can be fatal in children. The Muscular Dystrophy Campaign is the only UK registered charity working to combat these conditions by leading

the search for cures and treatments, and providing expert medical care and information."

Ex Libris, suppliers of the Library's Management System, have donated £100, and three Library suppliers – Dell, Viglen and Kyocera – together with Burleigh Springs and Tesco, have given prizes for a raffle which will be held to try to help Dawn reach her £1,000 target. The Library Social Committee is also helping out with the fundraising effort. Anyone who would like to sponsor Dawn in the marathon,

should contact her on ext 2354 or by email at D.Cole@lboro.ac.uk

"I've also got a fundraising web page at www.justgiving.com/26miles2go through which people can donate direct to the Muscular Dystrophy Campaign," says Dawn.



Dawn competing in the Robin Hood half marathon.

Miscellaneous Sales

Laptop computer, Packard Bell, AMD-K6(III)550MGZ processor, 60MB RAM, CD Drive, Windows ME 2000, Microsoft Word 2000, MS Works, MS Money, MS Photo Editor, SPSS, AVG 6.0 Antivirus system. Under full coverplan til 11/2004 – £500 ono; Tel 07941 231173 or Email M.Kontogianni@lboro.ac.uk

Small chest **freezer** – £40; Tel 07985 575920 or ext 2721.

Computer chair in good condition – £8 ono; Tel 262730.

Sony Playstation 1 with 2 controllers, multitap and 3 memory cards, complete with 12 games – £60; Email V.S.Scothern@lboro.ac.uk

Miscellaneous wants

CD Player and **Digital Camera** wanted, in good condition, required asap; Email C.Milandu-02@student.lboro.ac.uk

Vehicles for sale

Toyota Corolla, 1.3GL, 1989 F reg, 5 door, 5 speed, metallic blue, MOT til Feb 2004, Tax til June 2003, radio cassette, excellent condition – £700 ono; Email T.Hassan@lboro.ac.uk or Tel 222602 or 07808 477551.

Vauxhall Carlton, 2.0 Auto, 1991, 4 door saloon, fuel injection, white – £500; Tel 07944 028703 or Email orebs1@yahoo.com

Houses for sale/rent

Loughborough, Rendell Street, room available from March til end June, in house sharing with 3 students. House completely refurbished, large kitchen, gch, dg, washing machine, microwave, quiet position – £42/wk; Marco Venturi, Tel 07958 008538 or email M.Venturi@lboro.ac.uk

Loughborough, Hudson Street, 4 bedrooms to let in fully furnished house, 2 toilets (1 bathroom) – £45/wk each room; Email H.Fung1-99@student.lboro.ac.uk

Loughborough, Big room available at Forest Court Hall, available from end June til end Sept; Email MSanchis-Amat3@lboro.ac.uk or Tel 0776 3846719.

Loughborough, 2 bedroom house to let, modern, clean, well furnished, dg, ch, off road parking, located in quiet area near to the University – £425 pcm; Tel 504977.

Loughborough, 1 bed house to let, purpose-built, modern, clean, well furnished, ch, off road parking, quiet area near to the University – £345 pcm; Tel 504977.

Miscellaneous services

Handyman, professional and reliable, household electrical, small brick work, garden maintenance, decorating and general DIY; Dave, Tel: 01530 458264 or 0793 1954 294.

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A more comprehensive 'What's On' diary is available on the University web site at www.lboro.ac.uk/

**Tuesday
11 March**

Royal Aeronautical Society/Inst of Logistics 7.30pm

Georgina Graham, Government Affairs Analyst, Virgin Atlantic Airways, tells the story of Virgin Atlantic and its place in today's competitive world. Room U.0.20 Brockington. Contact Goff Tearle, Tel 227260.

**Wednesday
12 March**

Weava Divas 4.00pm

Weava Divas: femininity, black stylisation and notions of belonging in magazines for minority ethnic women in France and the UK. Room A.2.04 Schofield. Contact Dr Maurice Fitzgerald, Tel 223659.

**Saturday
15 March**

Classical Indian Dance Company Treveni 7.30pm

World famous dance company perform 'Flames and Fire', Sir Robert Martin Theatre. Adults £6, Students £4, Concessions £5. *

**Tuesday
18 March**

Chaplaincy Annual Lecture 7.30pm

'Women Bishops? - Female Leadership in the Church'. Lecture by Dr Christina Baxter, Principal of St John's Theological College. CC.0.11 James France. Contact Don Quilty, Tel 223741.

National Youth Jazz Orchestra 7.30pm

This group of young jazz musicians make a return visit to Loughborough. Cope Auditorium. Adults £7, Students £5, Concessions £6. *

**Saturday
22 March**

The Charnwood Orchestra 7.45pm

Conducted by Nic Fallowfield. Cope Auditorium. Adults £6, Family ticket £15, Students £4, Concessions £4. Contact the Town Hall Box Office on Tel 231914.

**Wednesday
26 March**

Burleigh Club 8.00pm

Alan Murphy, Southwell Minister, Open Meeting. Senior Common Room, EHB. Contact Betty Cattell, Tel 233911.

**Tuesday
8 April**

Royal Aeronautical Society Lecture 7.30pm

Dick Collinson describes the development of Fly-by-Wire control of aircraft. Room U.0.20 Brockington. Contact Goff Tearle, Tel 227260.

**Tuesday
8 to 10 April**

15th Advances in Reliability Technology Symposium (ARTS) 7.30pm

International forum on recent advances in the general area of reliability, risk, availability and maintainability. Hosted by Professor John Andrews. Organised in collaboration with The Institution of Mechanical Engineers, The Safety and Reliability Society, and The Royal Statistical Society. Burleigh Court, Price TBA. Contact Jackie Baseley, Tel 223340.

**Monday
14 April**

Engineering Experience 12.00pm

Event giving lower 6th formers the ideal opportunity to discover the exciting choices in engineering. Faculty of Engineering. Students £35. Contact Gill Youngs, Tel 227509.

* Further information from the Arts Centre, 01509 222899

