£1 million to solve the problems of human computer interaction

A £1 million research project to make it easier for computer operators to cope with increasingly sophisticated computer visual interfaces, has been started by the University of Sussex in collaboration with two industrial companies.

The problems encountered by operators are believed to be the main reason why many computer systems fail to achieve widespread acceptance. Advances in software and hardware technology have outstripped the computer industry's understanding of what has become known as Human Computer Interaction (HCI).

A research consortium led by British Maritime Technology Ltd, in partnership with Integral Solutions Ltd and the School of Cognitive and Computing Sciences, will investigate the various issues and apply the results to the design and implementation of an operator's environment which is focused on the user. In particular, the project will support the rapid prototyping.

Badgers' country mansion

The largest badger sett ever discovered has been unearthed along the path of the Brighton by-pass.

Lecturer in Biology, Dr Tim Roper, who has been protecting badgers' interests during the construction of the by-pass, excavated the sett after moving its occupants to another sett nearby.

The home they left behind turned out to be a rambling country house, possibly more than a century old. It comprised nearly a kilometre of tunnels and had 198 entrances and 50 nest chambers. Many of the chambers contained bedding materials, usually dry grass, but some of the chambers had been neatly lined with plastic sacks and cardboard boxes, presumably scavenged from nearby fields and gardens. The sett itself was remarkably neat and orderly and was even equipped with latrines.

It is estimated that construction of the sett required the removal of about 70 tonnes of soil, which represents a considerable expense of effort. Yet, surprisingly, this vast and complex sett was home to only four badgers. So why did so few badgers need such spacious living quarters? According to Tim Roper there could be several explanations for what appeared, on the surface at least, to be a considerable waste of energy.

It may be, he says, that badgers simply have an over-riding compulsion to dig; so the older a sett is the larger it becomes. In other words, each generation automatically adds wings to the ancestral home regardless of need. Another possibility is that the occupants move their sleeping sites around in order to enjoy different microclimates at different times of year. Or it may be that in order to avoid the build-up of intolerable levels of infestation, badgers need to keep expanding their underground territory to escape from parasites such as fleas and ticks. The condition of their bedding certainly presented evidence for this.

Yet another motive might be the competition amongst females for the opportunity to breed. The dominant female is, apparently, extremely jealous of her own reproductive capacity and subordinate females might need to separate themselves in order to protect themselves and their offspring from attack.

However, Tim Roper doesn't feel any of the above explanations accounts adequately for the sett's size and complexity. That remains an enigma. Also mysterious is the social organisation of the sett. For although badgers spend considerably more than half their lives underground, very little is yet known about the home lives of these most private creatures. Tim hopes to have gained greater insight into this by the end of the winter, by tracking badgers' hidden movements through the use of radio collars.

What he has already discovered suggests that, indoors, badgers lead individualistic, separate lives, resembling privatized flat-dwellers rather than sociable members of a commune. For Tim Roper discovered no social space at all inside the enormous sett. And certainly nothing to sustain any fond images which may linger from childhood books of cozy domesticity, of a sett radiant with "all the glow and warmth of a large fire-lit kitchen". Maps of the sett are now on show at an exhibition on badgers at the Booth Museum in Dyke Road, Brighton, which runs until 5th January.
£1 million for Capability Initiative

The University has been selected to participate in the Training Agency programme of Enterprise in Higher Education and is likely to receive funding of nearly £1 million in order to expand its activities in the field of Education for Capability. The funding will start in October 1991.

Education for Capability is concerned with the principles of a well-balanced education in which the acquisition of knowledge and analytical skills, and excellence in using and communicating knowledge, are seen as equally important. The scheme encourages students to develop their abilities to collaborate, to plan their activities, to set achievable and relevant goals, to think critically and creatively and to take initiatives.

Particular emphasis will be placed on the opportunities generated by placements and project work carried out in conjunction with employers on or off the campus. A number of students have already benefited from collaboration of this sort with employers ranging from Southern Water to Glyndebourne Opera. These placements and projects have been advertised, with a distinctive logo, through the Careers Advisory Service.

The programme planned for 1991 will involve the expansion of placement and project opportunities, staff development and training, curriculum review, the extension of student evaluation of courses and the creation of a student register of interest in capability initiatives and projects.

The details of the programme proposal will be negotiated with the Training Agency over the next few months, but the initial plan anticipates expenditure of £1.9 million over a period of five years which includes contributions from outside employers to the value of nearly £0.7 million.

Anyone wanting more information, or copies of the submission to the Training Agency, should contact Ian Duncan, Chair of Curriculum Development for Capability, Arts C.

Car parking

The pressure on car parking places on campus is acknowledged, and every effort is being made to identify the cause of the excessive demand, and to find solutions that are acceptable to the University community.

Nearly 300 new car parking spaces are being provided as part of the new student housing schemes which will ease the pressure at the north end of campus. Over the past two years, re-marking of the Biology and the Boiler House car parks has resulted in an additional 40 or so places and a scheme is being drawn up to re-mark the Science car park where, it is hoped, an additional 50 or more places will be achieved.

These measures alone will increase the number of places on campus to around 2,200, but with surface car parking costing £1,000 per place, and multi-storey £3,000, and with the need to undertake environmental impact assessments, it must be appreciated that there are no quick and simple solutions to the current problem, or to providing parking where it is most convenient.

In order to assist us in ensuring that only those with a legitimate right to do so park on campus, the registration of motor vehicles by staff, students and others employed on campus will become compulsory from 1st January 1991, as will the requirement to display an official parking permit; special arrangements will be made for regular visitors, conference delegates, etc. Appropriate forms will be available prior to that date. Persons who persistently fail to register their vehicle(s) will run the risk of having their vehicle immobilised until the registration details are provided and a parking permit displayed.

Roadside parking throughout the campus is controlled by a Parking Order under the Road Traffic Acts, and considerable care was given to ensuring that parking was only restricted where to do otherwise would create an unacceptable safety hazard. Anyone parking on double yellow lines therefore incurs risks at best incurring a fixed penalty fine (now £16) and at worst having their vehicle towed away to the Police pound at Moulscomb with the associated recovery fee of £75 and the fixed penalty fine.

Inconsiderate parking on car parks in other areas cannot be tolerated where it creates a safety hazard or obstructs the free access of emergency and delivery vehicles, and offending vehicles will be towed away and immobilised until satisfactory arrangements have been made to pay the cost of towing away (between £23-£30).

The number 25 bus now runs through campus to the Refectory, and there are regular bus and train services between Lewes and Brighton and beyond. If you can use these services rather than bring your car on to campus, or if you can share a vehicle with a colleague, you will be helping to ease the existing problems. You will also be helping the University to avoid spending very large sums of money which it has not got in providing more car parking with the consequential environmental impact.

Estate Manager
ing of highly interactive user interfaces for applications based on personal computers and engineering workstations.

The University’s involvement in the User Interface Design Environment project is funded by the Science & Engineering Research Council to the tune of £199,306. The Department of Trade & Industry's Information Engineering Division is meeting over one-third of the costs of the industrial partners.

The Sussex part of the project is jointly led by Dr. Phil Husbands and Professor Aaron Sloman. Ian Rogers and Robert (James) Duncan are Research Fellows on the project.

The design environment will build upon existing work at Sussex and will incorporate the POPLOG interactive programming environment which contains a powerful object-oriented programming language. This will be used to create one or more demonstration prototype applications in domains suggested by industry.

In recent years, complex multimedia user interfaces have become common, particularly in applications accessing current information, such as dealing room systems, retailing and banking. As a result, production of these interfaces is an increasing proportion of development costs.

"POPLOG was used in some 30 Alvey projects, many of them in the HCI area," Professor Sloman commented.

"At Sussex, where we have users with widely varying expertise, we have always given high priority to usability of software. The project will build on Alvey and ESPRIT research, incorporate parallel research by psychologists and computer scientists, and benefit from feedback from academic and industrial POPLOG users worldwide."

The Vice-Chancellor (left) at last month’s official opening of the 24-hour reception point in York House. With him (from left) are: David Streeter; Pro-Vice-Chancellor (Science) with responsibility for welfare, Bob Saville; Students’ Union Vice-President (Finance), Glen Wilson; Relief Reception Porter (and ex-Brighton & Hove Albion footballer!); Peter Ansell, Security Supervisor; Neil Robinson, Students’ Union President; and Roger Bailey, Estates Manager.

The Autumn Statement

The Education Secretary, Kenneth Clarke, last week announced a rise of £690 million in his Department’s planned spending on education and science in 1991-92.

Plans allow for an increase of 10 per cent for the polytechnics and colleges, which includes capital funding of nearly £35 million a year more than previously planned; the increase for universities is just over nine per cent compared with earlier plans.

Additional funding overall for higher education comprises mainly an extra £175 million for the two Funding Councils, £42.5 million of which is for building improvements and equipment, and an extra £110 million for undergraduate tuition fees. Tuition fees are set to rise to £1,775 for non-laboratory and £2,650 for laboratory-based subjects.

‘Mastermind’ comes to Sussex

On 6th December the Southern Heat of the BBC TV programme Mastermind will be recorded in the Meeting House, for transmission sometime in February. The programme has been here once before — back in the mid 70s, when the Sportcentre was the venue.

Emergency telephones

Five emergency telephones have recently been installed at external locations round the campus. They are enclosed in yellow weatherproof boxes and can be used to contact Security staff via the internal telephone system on the University’s 24-hour emergency number — dial 3333. The locations are:

- Falmer House main entrance;
- Sussex House west entrance (by Barclays Bank);
- MAPS I undercroft by entrance to building;
- Arts A undercroft;
- EAPS I Common Room entrance.
Going green at IDS

An environmental advisory group set up last year at the Institute of Development Studies, has produced a series of recommendations to make IDS 'greener'. The group, representing academic and non-academic staff and students, was formed to make practical suggestions for reducing the harmful environmental effects of the day-to-day running of the Institute.

Papers on environmental problems, energy use (including travel to work), a paper recycling scheme and the use of recycled paper, were included in a report presented to IDS Executive Committee in April and, after consultations with staff, some of the ideas have been implemented:

* an in-house office paper recycling scheme which should raise some revenue is being set up;
* cycle loans on the lines of season ticket loans have been introduced and new cycle facilities provided;
* more recycled paper is in use and a 'green' noticeboard has been established.

Other suggestions, such as a campaign for better public transport services to campus and a more energy-efficient heating system, are campus-wide issues. The group would like to see the establishment of a similar body for the University as a whole, pooling resources and taking the Students' Union 'Green' Green Paper and the IDS report as a starting point for the development of an environmental programme. The IDS team will also be looking at the environmental impact of IDS domestic services.

On the academic side, a programme of seminars on environmental issues in development is underway as the prelude to new research and teaching initiatives.

*More information about the Environmental Advisory Group's work is available from its convenor, Debbie Beer (IDS Library, ext. 4068). The group would like to hear from anyone proposing or involved in similar initiatives. Copies of the EAG papers are available from Maureen Norman, IDS Directorate. For information on the proposed research and teaching programme contact Robin Mearns (rm. 256 IDS, ext. 4199) or Melissa Leach (rm. 260 IDS, ext. 4203).*

Christmas is coming .....  

Meeting House Christmas Appeal 1990

This year's appeal is for Children in Romania. In particular, the Tigre Mures Orphanage for children up to three years old, and the Brincovenesti Castle for mentally handicapped children of three to 16 years. Urgent help is needed. Any initiatives to raise money in your School, unit or area would be appreciated. Cakes, biscuits, mince pies for resale or prizes for a raffle are welcome. Donations to: Barbara Barber, Room 3, The Meeting House. Cheques should be made payable to 'The University of Sussex'.

Carol Service

The University Carol Service by candlelight will be held in the Meeting House Chapel at 6 pm on Sunday, 9th December. The service will be followed by mulled wine and mince pies — proceeds to the Appeal.

Refectory Christmas menus

The Refectory Christmas lunch in the Scramble will be available on Monday, 10th, and Wednesday, 12th December from 12.15 to 2.15 pm. Roast turkey with stuffed bacon roll, bread sauce, garden peas and roast potatoes: £3.00; homemade Christmas pudding and Rum sauce: 70p; wine — Fleur de Lys: 60p (glass). A limited number of tables can be reserved for large parties.

Christmas lunches and dinners in the Private Dining Rooms in the Refectory will be available from Monday, 3rd December to lunchtime on Wednesday, 19th December. Choice of three courses, plus coffee and mince pie, and glass of port: £8.50 lunchtime, £10.00 evening.

Made to order: if you want to cut down on the Christmas cooking, why not order from the Refectory? Among the items that can be made to order are: Christmas pudding (1lb): £1.50; Christmas cake (1.5lb): £5.95; mince pies: £2.20 dozen; sausage rolls (large): £2.76 dozen; savoury flan (6/8 portions): £2.20.

To find out what else is on order (and the closing dates for orders) or to book your table, ring Pat or Jennifer on 8221.

Nice to know .....  

Pat Young, a freelance medical journalist and a former mature student who graduated from the School of English and American Studies this year, recently wrote of her time at Sussex in *Nursing the Elderly*. Among the comments she made were: 'The dons at Sussex University who took me on and gave me the benefit, not only of their brilliant minds but also of their unfailing kindness and encouragement, have my undying devotion. It can't be easy teaching a know-all journalist who is old enough to be your mother, but they all treated me like just another student, which was the perfect answer: age simply didn't enter into it.'

Are you going to the *GiG*?

Mandela Hall, Palmer House, tomorrow, Wednesday, 21st November, 10.30 am to 3.30 pm. *GiG* (that's Graduates in Government to you and me) is the new name for a band that has consistently delivered top career opportunities in recent years.

Wednesday's line-up is impressive and includes the Dept of Trade and Industry, the Foreign and Commonwealth Office, the Employment Department Group, the Department of Health, the National Audit Office, AWE and HM Immigration Service, to name but a few.

More of a careers fair than a concert really but still plenty of seriously seductive sounds.

International Students Christmas Party

Thursday, 13th December

All our overseas and European students are cordially invited to a Christmas Party on Thursday, 13th December, from 8.00 pm to midnight in the Senior Common Room.

There will be a free glass of mulled wine, lots of tasty food, and a disco (from 9.00 pm) to get you in the party mood in time for all the coming Christmas festivities.

Price £2.00

Tickets will be limited, so apply early to the International Office. No tickets sold at the door, so don't forget to bring yours with you.
Quantum physics at large

Over the last few years the Quantum Circuits Group in the School of Mathematical and Physical Sciences has been investigating the feasibility of creating large quantum objects, roughly on a human scale, which behave in a way we would ordinarily associate with microscopic objects such as atoms and electrons. By a combination of extremely sophisticated electron measurement techniques and novel theoretical developments the Group appears to have achieved its goal.

The large object in question is a thick superconducting ring (roughly one centimetre across) wrapped around what is termed a superconducting weak link — usually a constriction in the ring roughly one tenth of a micrometre across. What the weak link allows us to do in terms of our everyday lives is almost unimaginable. Take going home from work in your car. The car may have two doors (or even four) but when you get in the car you only use one of them. If we wanted to use fancy language we could say that you irreversibly open and then shut one door out a range of doors. Now rerun the scene according to quantum physics. In quantum language the car offers you the choice of getting in via two (or four) routes. You have all these options. In a quantum situation (you plus the car in our example), all the options are taken. Literally, you would be in a superposition of taking all routes into the car, all at the same time. There is one proviso; nobody (no 'observer') must watch you do it. Of course, this is a joke situation but the thread of the argument still holds for real macroscopic quantum objects.

The superconducting weak link rings we have referred to also have options available to them, but now the rules of quantum physics operate. Think of the current that can be carried by the ring. This can run in a clockwise or anticlockwise direction. How does this look from a quantum viewpoint? If both options are available then the ring takes up both — it is in a superposition of the same superconducting electric charges flowing in opposite directions (clockwise and counterclockwise) in the ring at exactly the same time, providing nobody looks to see what the actual direction of flow is. This is no small beer. To put it another way, with roughly $10^{18}$ conduction electrons involved in the superposition we can think of a nanogramme of matter ($10^{-9}$ gms, just about the mass of an ordinary human tissue cell) moving in opposite directions in space at the same time.

Put simply, what the Sussex Quantum Circuits Group has managed to do is to find a way of monitoring a superconducting weak link ring in a quantum superposition of clockwise and counterclockwise current flows without actually looking at the current state in the ring. To use an analogy, we have discovered a way to look at the ring by its reflection in a kind of mirror without collapsing the superposition of states of current flow. Remember in ancient Greek mythology Perseus did this in reverse. He had to figure out how to deal with the Medusa without being turned to stone. His answer was to use a mirror. In the quantum case the "mirror" stops the ring setting rigid in one current state or the other.

Quantum mechanics is without doubt the most successful and wide-reaching physical theory ever devised and its interpretation has led to the deepest of philosophical debates, lasting now for over 60 years. There is no doubt that new approaches to these old problems are demanded and the new findings of the Sussex Group (reported in Nature, 27th September this year) may have opened up one route. Whatever else, the Sussex work will almost certainly lead to the creation of a revolutionary new electronic technology based on superconducting quantum circuits.

The Quantum Circuits Group has been awarded over £150,000 by the Science and Engineering Research Council for a three-year project, which commenced last month, on the investigation of macroscopic quantum phenomena in superconducting microbridge and tunnel junction circuits.

This award will fund equipment and a postdoctoral position to allow the group to extend its world-beating experimental and theoretical work on superconducting weak link circuits from point contact device circuits to those incorporating thin film weak links.

This latest SERC funding brings the total level of grants currently held by the group to £1.3 million including overheads.
News from the Gardner Centre

From Country & Western to Alice in Wonderland

A host of talented performers and new productions round off the Gardner Centre’s autumn season.

The original cowboy rocker, Hank Wangford, saddles up and rides into the Gardner Centre tomorrow (21st November) for an evening of gritty, witty country music. And a British premiere arrives at the Centre from the 22nd to 24th. Theatro-technis presents Samuel Beckett’s highly acclaimed double bill Theatre 1 and Theatre 2. Talented actors Michael Bennett and David Taggart deftly bring out the comedy in this pair of short, sharp, two-handers which brilliantly evoke the despair, hope and absurdity of Beckett’s characters.

Mark Killmurry and Debbie Isitt in Femme Fatale

More drama, this time an ‘everyday’ story of betrayal, passion and murder, is performed on the 27th. Award-winning theatre company Snarling Beauties bring the play which scooped all the accolades at this year’s Edinburgh Festival — Femme Fatale, the story of a transvestite. Married, with a good job and devastatingly attractive, Jessica should be fairly satisfied — but she has a problem ..... she is a he who has managed to keep his ‘alter-ego’ hidden from his wife for 10 years. Now the strain is beginning to show and ‘Jessica’ keeps making unscheduled appearances!

On the 28th the Gardner is proud to host the British debut concert of Romanian violin protege Alexandru Tomescu. Only 14 years old but already the winner of nine international awards, Alexandru will be playing pieces from Tchaikovsky, Paganini and Enescu as well as giving the first performance in this country of works by a contemporary Romanian composer. All proceeds from this concert will go to the Romanian children’s appeal.

On the 29th and 30th, the ladies of the Farndale Avenue Housing Estate Townswomen’s Guild Dramatic Society stage their new production. Just when you thought it was safe to go back into the theatre, this fictitious but enthusiastic group of accident prone actresses have been tempted out of retirement by the Moving Theatre Company for an evening of forgotten lines, broken props, tardy lighting and missed cues!

More music and another British premiere to begin December — American band Oregon arrive at the Gardner on the 1st as part of their first British tour. The band are celebrating 20 years as one of America’s finest pioneer fusion bands blending African, Indian, jazz and classical traditions. The band members, including Ralph Towner, are also highly acclaimed solo artists in their own right so don’t miss this opportunity to hear such talent playing together.

On the 2nd, the Regency Opera, conducted by Simon Gray, perform their 10th Anniversary Gala Concert with full orchestra, chorus and soloists Paxline Tinley and Sally Ann Howes. The talents of the University Drama Society are displayed from the 5th to 8th when Sarah Daniels’ new play Masterpieces is performed and the Gardner Centre’s autumn season is rounded off by the spectacular Christmas show Alice in Wonderland.

Adapted into a magical musical by local school teacher Mike Carter, the classic children’s story promises to be just as successful as previous years’ Christmas shows, with colourful and crazy sets which shrink and grow, outrageous costumes and catchy, memorable tunes. All the children’s favourite characters will be there including the absurd Mad Hatter, the enigmatic Cheshire cat, the ferocious Queen of Hearts and of course Alice. The show opens on the 12th December and runs through until 5th January, but hurry and book your tickets now as many of the 38 performances are already sold out.

Edinburgh International Science Festival

The 1991 International Science Festival — the only one of its kind in the world — will be held in Edinburgh from April 1 to 14. Now in its third year, this lively celebration of all the sciences, from astronomy to zoology, is geared as much to those who are merely curious or concerned about the world, as it is to the serious scientist.

The 1991 Festival will focus on the Human Body, but many other topics as diverse as wildlife and artificial intelligence, and biotechnology and electronics will be covered in the extensive programme of demonstrations, debates, exhibitions, films, workshops, walks and talks.

The organisers are always on the look-out for new events and ideas for future festivals and would be interested to discuss ideas which might benefit from a ‘platform’ at the Science Festival. The Festival’s primary objective is to popularise science with the long-term aim of encouraging more youngsters to take up careers in science, technology and engineering.

Further details, and a full programme of the 1991 Festival, are available from: Edinburgh Science Festival Ltd, 20 Torphichen Street, Edinburgh, EH3 8JB.

News from the Library

— Several measures of ‘business’ in the Library this term record increases of more than five per cent as compared with the same period last year. Staff numbers are unchanged overall, please remember this when standing in one of the queues!

— Books issued from the Reserve collection for overnight use, and due for return at 1030, may now be handed in at the foyer between 0845 and normal opening at 0900. This facility has been introduced following representations from borrowers affected by the new teaching timetable.

— It appears necessary to remind users that bicycles may NOT be left in the foyer or in the Barlow Gallery corridor, and to ask car owners, however desperate, NOT to leave unauthorised vehicles in the loading bay, where space is reserved for service engineers calling to help keep equipment like the copiers running.

Healthy eating

A research project is being run at the Institute of Optimum Nutrition in London looking at healthy eating in relation to female illness. A number of well women are needed to act as a control group in this six month project, beginning in January 1991. For further details please contact: G. J. Mills, MAPS 3C11; tel. 8094.
Tralfof Centre tor Medical Research
Professor Clifford Riley
Professor Clifford Riley, Honorary Visiting Professor and a founder member of the Centre for Medical Research, died on 9th October.
Professor Riley was head of the Clinical Biochemistry Department at Brighton for more than 30 years, and before that he was Director of Provincial Laboratories in Cape Breton.
Clifford Riley's great passion was engineering and it was the unique fusion of medical and engineering skills which enabled him to contribute so much to analytical biochemistry and biomedical engineering. Mostly Professor Riley will be remembered for his invention and development of the Vickers M-300 analyser. This analyser could process more than 3,000 tests per hour and was marketed worldwide and used in countries as far away as Japan and Australia.
In the last few years he had applied his engineering skills to constructing a most beautiful spinnet, an example of his intense sense of purpose and boundless energy. A man of wide interests and great breadth of vision he was an inspiration to many and encouraged others to develop their talents to the full. He had a highly successful career which brought him world-wide recognition. In spite of all this he remained a homely, modest man. Our sympathy and condolences go to his wife Margaret and son Peter.
We shall all remember Clifford in our own ways and are enriched from knowing him.

☐ Fellowships and Awards

The Royal Society
Royal Society Leverhulme Trust
Senior Research Fellowships
Applications are invited from scientists in any subject for five appointments from 1st October 1991. Application forms should be obtained by 1st February 1991; closing date for applications: 15th February.
Royal Society University Research Fellowships
Applications are invited for about 30 fellowships tenable in the first instance for five years from 1st October 1991. Apply for application forms by 1st February; closing date for applications: 15th February.
Marine Sciences Research Grants
Applications are invited from qualified research workers for personal grants from three funds for marine sciences — Browne Research Fund, Maurice Hill Research Fund and Marshall and Orr Bequest. Closing date for applications: 15th December.
John Murray Travelling Studentship in Oceanography and Limnology
Closing date for applications: 15th December.
Further details and application forms for the above are available from: Mrs. U. M. A. Tokle, The Royal Society, 6 Carlton House Terrace, London, SW1Y 5AG.
Travel Bursaries to Israel 1991
Applications are invited from graduates and undergraduates for a 1990-91 Bessy Emanuel Education Trust Israel travel grant. One or two bursaries, each worth up to £500 are offered to students interested in pursuing a research project in Israel. Closing date: 15th March. Further details and application forms from Mrs. P. Springett, Astras, Arts C.
ASG Bursaries 1990-91
Twelve travel bursaries to enable scholars to visit Israel are offered. Applications to 15th D.L. Levy, Director ASG, 25 Lyndale Avenue, London, NW2 2QB, Tel: 071 435 6803.

The Ninth Hitachi Lecture

Education, Training, and Competitive Advantage

With the issues of education and training firmly on the political agenda the Ninth Hitachi Lecture on 22nd November on the theme of 'Education, Training and Competitive Advantage' is timely. Despite the improvements in productivity recorded in manufacturing industry during the 1980s, skill shortages and a spate of reports suggest that many British companies look ill-prepared for the race to enter higher value-added markets in the 1990s. The government and opposition parties have been canvassing various options.
Sir John Cassells CB, this year's Hitachi lecturer, has been able to observe closely the issues affecting economic performance for he was at the centre of discussions between government, employers and unions as Director-General of the National Economic Development Office (NEDO) from 1983 to 1988. He was secretary to the path-breaking and influential Royal Commission on Trade Unions and Employers' Organisations (the Donovan Commission 1965-68) and Director of the Manpower Services Commission, 1973-81. And he is becoming more familiar with the Sussex campus in his role of President of the Council of the Institute of Manpower Studies.
As a Distinguished Visiting Fellow at the Policy Studies Institute (1989-90) he has published a report on Britain's Real Skill Shortage. Those attending the lecture can look forward to a clear insight into our problems. However, we can expect more for his report is subtitled — and what to do about it.
During the 1980s, the annual Hitachi Lectures charted some of the major issues and trends affecting British industrial relations. The lectures provided an opportunity for practitioners in industrial relations drawn from management, unions and academia to stand back from the everyday business of industrial relations to look at trends, to see where they were taking us, and how we ought to respond to them.
Past lecture themes and lecturers have included: participation and industrial democracy (Sir Peter Parker); the role of law in industrial relations (Professor Sir John Wood); new patterns of work and company organisation (Sir Adrian Cadbury); incomes policy (Ron Todd); money incentives and labour productivity (Professor William Brown); new patterns of work organisation and their implications for unions (Peter Wickens); and collective bargaining in Europe beyond 1992 (Bill Callaghan).
The lecture will be held at 6.15 pm on Thursday, 22nd November, in the Refectory Terrace Room. Admission free. No tickets required.

☐ The Joseph Rowntree Foundation

The Joseph Rowntree Foundation has published a new edition of the booklet describing its current research and development programme. This consists of about 200 projects within the broad fields of housing, social policy, social care, disability and local/central government relations. This booklet also gives details on how to set about proposing projects to the Foundation, which spends approximately £5 million on research and development each year. It is now the largest independent funder of social research whose resources do not derive from public funds.
Free copies are available from the Information Office, the Joseph Rowntree Foundation, The Homestead, 40 Water End, York, YO3 6LP (tel. 0904 629241).
Noticeboard

Recent Books
Recent publications by Sussex authors include:
The Creative Mind: Myths and Mechanisms by Margaret A. Boden. Weidenfeld & Nicholson. £2.50.
The Imaginary War. An Interpretation of the East-West Conflict in Europe by Mary Kaldor. Blackwell. £1.95.
All books obtainable from Sussex University Bookshop

Vacancies
The Personnel Office has issued the following summary of posts to be filled. Advertisements for these vacancies have been placed in local and, where appropriate, national newspapers, as well as being circulated to the relevant Section Heads and Union representatives for circulation to staff and noticeboards. Copies of these advertisements and further particulars, if available, as well as application forms, are available from the Personnel Office, Room 227, Sussex House. This list was compiled on 8th November and is subject to revision.

Teaching Faculty
Chair in Psychology
Lectureship in Animal Cell Biotechnology, BIOLS
Temporary Lectureship in Economics, EURO
Lectureship: Science in North America

Other Faculty
Purchasing Officer
Admin Asst/Asst Secretary, Administration
Computer Systems Manager, COGS

Secretarial, Clerical and Related
Asst Buildings Surveyor, full-time, grade 5/6
Asst Services Engineer, ft, grade 5/6
Executive Asst, Administration, ft, grade 5
Secretary, EURO, ft, grade 3/4
Secretary, MA Office, ICAFE, ft, grade 3

Clerk Typist, P/G Exams Office, ft, grade 3
Clerk, Estates, ft, grade 3
Alumni Computer Records Clerk, Registry, ft, grade 3
Clerk Typist, Admissions, part-time (afternoons), grade 2
Shop/Office Asst, University Bookshop, ft, grade 1/2

Technical Staff
Computer Technician, ICAFE, ft, grade C/D
Research Technician, BIOLS, temporary, ft, grade D. [Please contact Lab Manager, BIOLS, direct.]

Manual and Ancillary Staff
Security, Estates, ft, grade 3
Porter, Palmer House, ft, grade 2
Snack Bar Asst, SCS, temp, p/t, grade 2

Catering Services
Apply to Philip Cassmann, ext. 8221:
Trainee Chef, ft
Chef de Partie, ft
Kitchen Porter, ft
Catering Asst, p/t (10.30 am - 2.30 pm, Mon - Fri)

To all animal lovers
Please spare a thought for less fortunate pets this Christmas. Peter and Terry in the Refectory Porters Office are collecting non-perishable pet foods (no money, please) which will be donated to a pet charity.

Lunchtime music
Recital Room, Room 120, Falmer House
Tuesday, 20th November, 1.15 pm: The Guildhall Piano Quartet — Brahms Piano Quartet in C minor op 60
Tuesday, 4th December, 1.15 pm: Richard Fox (saxophone) and Paul Hudson (piano)
Tuesday, 11th December, 1.15 pm: Composers Concert — music by Sussex student composers

Meeting House Chapel
Tuesday, 20th November, 1.15 pm: John Birch (organ)
Tuesday, 27th November, 1.15 pm: Gavin Ashenden and Matthew Bright (flutes) — Vivaldi Double Flute Concerto
Tuesday, 4th December, 1.15 pm: John Birch (organ)

Student helpers
The Admissions Officer needs a number of Student Helpers starting in January 1991 for six months in the first instance.
It is anticipated that each helper will work an average ten hours per week according to the demands of the Office.
The work will include arranging campus tours on Interview Days, reception desk duties, and attending University Open Days and Higher Education conventions in various parts of the country.
If you are interested in applying, please pick up an application form from the Admissions Office, Sussex House.
Closing date for applications is Wednesday, 5th December.

The Bulletin is published every three weeks during term. The next edition, and the last for this term, will appear on Tuesday, 11th December. Copy for this issue must be received by Jenny Payne, Internal Communications Officer, Room 230, Sussex House, by no later than 4.00 pm on Monday, 3rd December. If you have any news items or ideas for feature articles, she would be pleased to hear from you (ext. 8208).

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