

## MAJOR BREAKTHROUGH IN CARBON CHEMISTRY

Recent discoveries made at Sussex have opened up a whole new area of Carbon Chemistry.

Members of the School of Chemistry and Molecular Sciences have achieved a major breakthrough by producing pure samples of the third form of carbon — C<sub>60</sub> Buckminsterfullerene.

Diamond and graphite are the two well-known forms of carbon and, until recently, it was considered most unlikely that a third, highly stable form of the element might exist. The new achievement confirms conclusions drawn from some earlier joint Sussex-Texas discoveries which suggested that this molecule plays a shadowy, but important, role in chemistry.

Jonathan Hare, Harry Kroto, Ala'a Abdul-Sada and Roger Taylor have succeeded in isolating C<sub>60</sub> and have proved that, as suspected, it has a football-like structure. A German-USA group has also obtained samples of the new material and shown that it has the expected characteristics.

The story has its origins in the mid-70s when Harry Kroto and David Walton, together with Anthony Alexander (then an undergraduate on the Chemistry by Thesis course) prepared the first long carbon cyanopolyne chain, HC≡C-C≡C-C≡N, in the laboratory and measured its radio spectrum. Then, together with Takeshi Oka and Canadian astronomers, a series of these



The Sussex Carbon Football team: from left, seated, Harry Kroto, Roger Taylor, David Walton, and standing, Ala'a Abdul-Sada and Jonathan Hare.

chain compounds (HC<sub>5</sub>N, HC<sub>7</sub>N and HC<sub>9</sub>N) was detected in interstellar space.

In 1985, in an attempt to explain the occurrence of these chains, Harry Kroto initiated an experiment with Bob Curl, Richard Smalley and two graduate students, Jim Heath and Sean O'Brien, at Rice University (Texas) to simulate the atmospheres of carbon-rich red giant stars by laser vapourising graphite. During this work the ultra-stable C<sub>60</sub> molecule formed spontaneously: an extraordinary discovery.

The Sussex-Rice team suggested that this observation

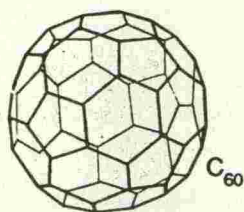
could be explained if the molecule were to possess the truncated icosahedral structure shown in the diagram on page 2, similar to that of geodesic domes and named after their inventor, the architect Buckminster-Fuller. This structure has the same symmetry as the modern football. Since that time, many groups have sought bulk samples in order to confirm the structure.

It was found at Sussex that discharge-processed graphite yielded soluble material from which Roger Taylor succeeded in chromatographically

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## MAJOR BREAKTHROUGH IN CARBON CHEMISTRY

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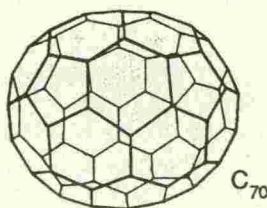
*C<sub>60</sub> Buckminsterfullerene has the same shape as a football*

separating out pure samples of *C<sub>60</sub>* and *C<sub>70</sub>*. That *C<sub>60</sub>* has the Buckminsterfullerene structure was proven in a manner as elegant as it is simple. The method chosen was <sup>13</sup>C nuclear magnetic resonance (nmr) spectroscopy — an analytical technique which gives a unique signal for each set of equivalent carbon atoms. As all 60 carbons in Buckminsterfullerene are equivalent, the molecule should exhibit only *one* peak, which it does!

*C<sub>70</sub>* contains five different types of carbon atom, in the ratio: 10:10:20:20:10, and the nmr spectrum agrees perfectly with this structure. It is elongated, more like a rugby ball (see

diagram below).

The discoveries confirm Harry Kroto's earlier conjecture that an entirely new *family* of



*C<sub>70</sub> (Falmerene) is elongated and more like a rugby ball*

molecules, composed solely of carbon — the Fullerenes — exists in nature. Harry Kroto, Roger Taylor and David Walton and their students are now vigorously probing the material properties of the Fullerenes. They may well turn out to be excellent high temperature lubricants because of their exceptional stability.

Research at Sussex shows that *C<sub>60</sub>* Buckminsterfullerene not only pervades vast tracts of space and can be found in red giant stars, but that it also forms wherever there is a fire.

## People

Congratulations to Sussex student and member of the University Court **David Bellotti** on his victory in the Eastbourne by-election. Mr. Bellotti, a member of East Sussex County Council, is the Liberal Democrat's 20th MP. He is a part-time postgraduate in Education, taking the MA in Educational Policies and Decision Making.

**Professor Willie Lamont** has been appointed Chairman of the British Academy Postgraduate Studentships Panel (History and Theology).

**Emeritus Professor Sir William McCrea** has been elected a Foreign member of the Turin Academy of Sciences.

**Simon Maxwell**, Head of the Institute of Development Studies' Food Security Unit, has become a member of the UN's Advisory Group on Nutrition.

The **Vice-Chancellor** has been elected to the House of Laity of the General Synod of the Church of England. He will represent Chichester Diocese for a five-year period.

**Sue Yates** has been appointed as the new Information Officer. Sue, a Sussex graduate, joined the University administration in 1979. She is currently based in Sussex House, Room 323, and can be contacted on ext. 3826.

**Yvette Ashby** and **Yvonne Wood** wish to thank all those who organised and attended their retirement parties and contributed so generously to their presents.

### Management Studies

A new group has been established by the Planning Committee to co-ordinate all management studies activities and proposals undertaken by or in the name of the University.

The group has been established under the Senior Pro-Vice-Chancellor and consists of a nominee from each of the Science Deans, the Arts Deans, the Management and Professional Development Unit, and the Science Policy Research Unit.

### Does someone know something we don't know?

A letter has been received from the Registrar's Division, University College London, addressed to:

Ms. M. S.....  
Univ of Sussex  
Wivenhoe Park  
Leicester

(Wivenhoe Park is the address of the University of Essex at Colchester.)

### Fellowships and Awards

#### Wellcome Travelling Research Fellowships 1990-92

Applications are invited from postdoctoral workers to undertake research projects in any branch of the natural and clinical sciences which has a bearing on human or animal medicine (except cancer). Two schemes are available. One is for our own staff, particularly new doctorates, to visit Europe, for a period of three months to two years. The other is for European researchers to visit our University.

#### The Royal Society Esso Energy Award 1991

This award is given for outstanding contributions to the advancement of science or engineering or technology, demonstrably leading to the more efficient mobilization, use or conservation of energy resources, and consists of a gold medal and a prize of £2,000. The closing date is 18th January 1991.

**Illinois State University**  
The College of Arts and Sciences, Illi-

nois State University has announced a competition for graduate study for non-US citizens. Up to 10 awards may be given. These awards may possibly be renewed for one year at Master's level and two years at doctoral level.

*Details of the above are available for consultation in the Information Office, Sussex House.*

#### The Royal Society — Scientific Exchanges with Africa, Asia and Latin America

The Royal Society offers grants to British scientists wishing to visit countries in Africa, Latin America, the Indian Sub-Continent and the newly industrialised countries of S.E. Asia. There are two categories of visits: Study Visits of 2 to 4 weeks, and Fellowships of 6 to 12 months. Details are available from The Executive Secretary (ref. FGM), The Royal Society, 6 Carlton House Terrace, London, SW1Y 5AG. Tel. 071-839 5561 (ext. 258).

## □ ESRC: Development of New Research Initiatives for 1992-93

The Economic and Social Research Council's Human Behaviour and Development Group, one of its four research development groups, is in the process of developing ideas for new research initiatives, which, if funded will start in Autumn 1992/Spring 1993.

To this end the Human Behaviour and Development Group would like to canvass the research community for what they feel will be the most important issues in the social sciences in the 1990s and which ESRC should be considering. It is particularly interested in the areas of education (higher and tertiary), personal/social welfare, social work interventions, the family, child development, socialisation, and finally language and linguistics.

If you would like to make a contribution to the development of the ESRC's research portfolio please write to Peter Linthwaite, Secretary to the Human Behaviour and Development Group, Economic and Social Research Council, Cherry Orchard East, Kembrey Park, Swindon, SN2 6UQ by the end of November. The Group will be meeting in December to discuss these ideas.

## Gerontology comes of age

A forum for those concerned with services to older people in the region — the Sussex Gerontology Network (SGN) — has got off to a healthy start since its launch in March.

Last month, a group of doctors, community service managers, policy makers and academics from the Centre Pluridisciplinaire de Gerontologie at the University of Grenoble visited Sussex as part of a fact-finding mission to the south of England. Here at the University they joined academics and professional colleagues from the SGN for a round-table discussion on services for older adults.

The SGN is based at the University and was founded by Dr. Dorothy Jerrome, who chairs its steering group. It provides a forum for academics and workers in the statutory health and social services, in the private sector and in the field of voluntary work. Its central concern is to foster the kind of inter-agency co-operation in the delivery of care demanded by current social policy.

"The development of the network is seen as a way of promoting the interests of older people in Sussex and indirectly in Britain as a whole: the age distribution here is likely to be reflected in other parts of the country by the turn of the century. This

## Funding in disarray

The Committee of Vice-Chancellors and Principals is to hold an emergency meeting to consider how to act following the announcement by the Universities Funding Council that it is to postpone indefinitely decisions on the four-year planning exercise for university expansion started a year ago.

The UFC's announcement was made in a letter sent to all Vice-Chancellors on 23rd October. The letter from the Secretary of the UFC says:

*I am writing to let you know the position reached on the Funding and Planning Exercise.*

*The total number of student places offered by universities is consistent with DES projections and the Council's own planning assumptions. However, although universities bid for expansion, the Council was disappointed by the scale of economy offered by universities' bids over the 4-year period. The Council is unable to accept this position. The Council is committed to increasingly effective and efficient use of resources and wishes to consider the options further.*

*The Council is mindful that universities would not welcome delay in the announcement of grant for 1991-92 and has concluded that, as its first priority, it should take all practicable steps, following the public expenditure announcement in November, to secure the despatch of grant letters in February. The Council has therefore decided to concentrate at this stage on 1991-92 and the February letter will be confined to that year. Decisions about the Council's approach to the remainder of the planning period will be taken later.*



Members of the French party and the Sussex Gerontology Network pictured during their visit to the University on 14th September. Second from the left in the front row is Dr. Dorothy Jerrome, who founded the Network.

makes Sussex a test case in the creation of appropriate services," Dr. Jerrome comments.

A number of meetings have been held so far. The last one attracted a capacity audience to hear Sir Roy Griffiths, adviser to the government on the NHS and author of the report *Community Care: an Agenda for Action*. He was joined by the social anthropologist Dr. Jean Collins who

completed her doctorate at Sussex earlier this year and whose research findings were used in the deliberations of the Select Committee on the Social Services.

Plans for the future of the Network include strengthening the link with European colleagues in Grenoble through an exchange programme, and hosting a major conference at the University in 1992.

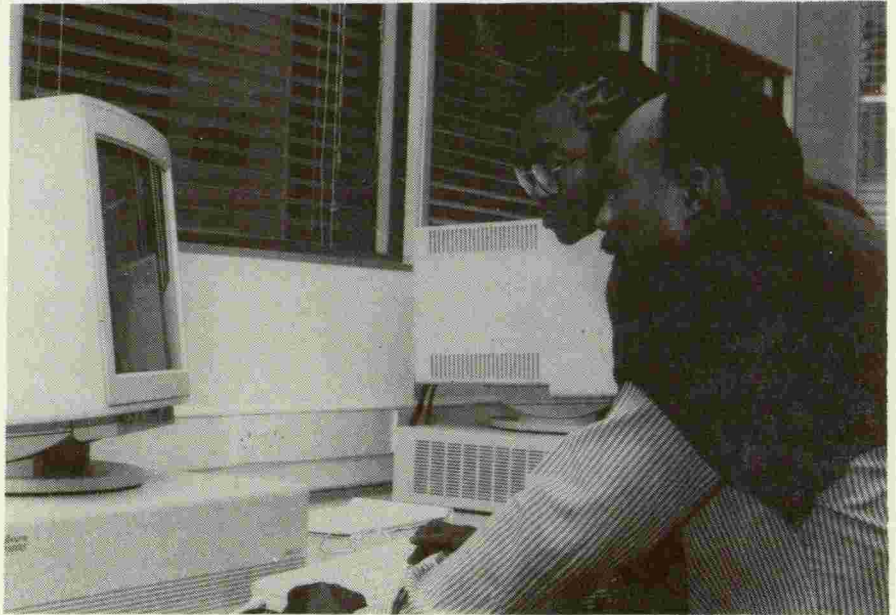
# New computing systems for teaching

Members of the Computing Service have a busy year ahead following the procurement of new computing systems for teaching and research. The equipment was obtained at the much-discounted price of £1.25 million. Roger Discombe, Computing Service Information Officer, writes below on the tasks involved in getting the new systems up and running, and describes what will be available to users.

The new equipment has been funded by the Computer Board for Universities and Research Councils and will provide a much more distributed, user-friendly service than before. In addition to a substantial enhancement of the large-scale services there will be 200 personal computers (PCs) and 50 powerful workstations.

Contracts were signed in the middle of August and deliveries began in mid-September. Installation is unlikely to be completed before Easter 1991. To start with, some 1,000 crates have to be unpacked, new wiring installed, and new furniture for the devices to sit on has to be assembled. Once these jobs have been completed, the installation of hardware, the mounting of software, the testing and (it is hoped) contractual acceptance of so much equipment, will represent a mammoth task — at least by the standards of a service which has only two technicians.

The contractors are Research Machines Ltd (RM) and Computer International Ltd (CIL). RM have delivered 200 IBM-compatible PCs of their own design and manufacture. CIL are supplying the 50 workstations and the large central system, all based on the Sun SPARC archi-



tecture and all running, under licence, an enhanced version of the Sun Operating System (SunOS). Further technical details of the configurations are given at the end of this article.

CIL are agents of Solbourne, a new US company launched by former employees of Sun Systems and owned 48% by its founding employees and 52% by Matsushita (who trade in the UK as Panasonic). RM were founded in 1973 and launched their first microcomputer in 1977. They have been a major presence in the education market for some years now.

The procurement process began in the academic year 1988-89 with statements by all units in the University of their computing requirements. These were then collated and incorporated in a strategy document which was presented to the Computer Board for Universities and Research Councils in April 1989.

Following the Board's decision to fund an upgrade, and on the basis of further consultations within the University, an Operational Requirement was issued

to potential suppliers on 15th March 1990. The Best and Final Offers received from them were evaluated, topic by topic, by a set of Working Groups consisting of Computing Service staff and other members of the University. On the basis of these analyses the University Computing Committee submitted recommendations for approval by the Computer Board.

## Central System

The central system will be based on a Solbourne 5E/905-128 multi-processor machine running SunOS4. SunOS is widely considered to be the most robust available implementation of the UNIX operating system (which had been specified by the University as a minimum requirement).

This installation will greatly increase the available power, memory and filestore. Compared to VAX4 the new system will have about 40 times the Mips power and 20 times the floating point power. The new system is configured to support at least 200 simultaneous users compiling and running pro-

## and research

grams, using applications packages and carrying out editing. In addition to benefiting those who already rely on central multi-user facilities, this new equipment will act as a central file server and mail server for users of networked systems.

The central system will eventually be located in the Computer Room which is to be created near the new Computing Service public area in MOLS 1. A location for this (currently in use as the MOLS School Library) has been identified and allocated, but work has yet to commence on the building modifications which are required. As this new equipment will be on site before the new Computer Room is available it will be initially installed in the existing Computer Room (in MAPS 3) and will be moved to the new room later.

### Workstations

Fifty new Solbourne S4000 stations will be delivered during the remainder of the current calendar year. The workstations use a leading-edge SPARC-based design running SunOS4, produced under the licensing arrangements through which Sun Microsystems are promoting the development of a Sun-clone market.

Some of the workstations will have dedicated tasks, e.g. one will be a mail server and others will act as file servers.

The majority will be located in four clusters, some permanently on open access, others bookable for class teaching through the Room Bookings Office (Sussex House) but open to individual access when not so booked. At the time of writing it seems likely that the locations will be the Computing Centre (MOLS 1), MAPS 3, EAPS 1 and Arts C. A small number of workstations have been dedicated to specific research areas.

Each workstation will have about six times the Mips power and three times the floating point power of VAX4.

### Personal Computers

RM will be supplying 200 of their M-series PC-386 microcomputers, based on the Intel 80386SX processor. Each will be provided with Microsoft Windows 3, a graphical user interface (GUI) which provides the kind of WIMPS (Windows, Icons, Mouse, Pull-down menus and Scroll bars) environment which has been popularised by the Apple Macintosh.

The PCs will be widely distributed, mainly in public locations, with clusters in most academic buildings as well as in the Computing Centre and — for ready accessibility — in the University Library. As with the workstations, some will be bookable for class teaching but many will be open to individual access.

For effective maintenance of software, most of the PCs will be in clusters, each with its own server. In addition, however, all will have access to the campus network and thus to the central filestore and to external connections.

### Additional Hardware

Both CIL and RM have agreed to supply similar equipment at the same heavily-discounted prices to interested Schools and units. Those wishing to discuss this possibility should contact the Computing Service Manager, Mr Ken Lewis (telephone 8091, VAX email ccfa6, SYMA email kenl).

### Existing Equipment

The Computing Service currently has two multi-access systems: the Digital Equipment VAX/VMS Cluster and a

Sequent Symmetry S81 (SYMA) which will both be retained for at least two years. However, due to their high maintenance costs, the VAX 11/780s (VAX1 and VAX2), which were installed in 1981, will be withdrawn from the VAX Cluster and disposed of as soon as is reasonably possible. The more powerful 8530 (VAX4), together with the microVAXs (VAXA, VAXB, VAXC and VAXD), will be retained for at least two further years. This equipment and SYMA will have to be moved to the new Computer Room when the latter becomes available.

### Technical Details

The central system will be based on a Solbourne 5E/905-128 multi-processor machine running SunOS4. Some of the more pertinent hardware features are:

- 128MB memory
- 15GB filestore
- 30GB magneto-optical archive
- ~124 Mips
- ~38 Mwhets
- ~17 Mflops

The main hardware features of the Solbourne S4000 Technical Workstations are:

- 8MB memory
- 250MB local disk
- 18 Mips per machine
- 6.2 Mwhets
- 2.7 Mflops
- All with high-density floppy disk drives
- All with 16" colour screens

The 200 RM M-series PC-386 microcomputers which are based on the Intel 80386SX processor have the following features:

- 2MB memory
- Eighty with 30MB hard disk
- All with high-density floppy disk drives
- All with 14" colour, multi-sync., screens
- All with Ethernet

RM will also be supplying ten 486-based cluster servers.

## News from the Gardner Centre

### November at the Gardner

Another month of exciting drama, top class dance, side-splitting humour and the best in music is waiting for you at the Gardner Centre.

A major drama production from the Edinburgh Festival begins the entertainment. The Red Shift Theatre Company present *The Lulu Plays* from 1st to 3rd November, adapted from Frank Wedekind's *Earth Spirit* and *Pandora's Box*. Darkness and humour combine in this thrilling double-bill which tells the story of a girl whose open and natural sensuality is distorted and censored by a society so ill-equipped to deal with it that destruction inevitably follows.

For the younger audience, Sunday the 4th sees the return of the Playboard Puppets with more exciting adventures from *Mr. Spoon on Button Moon*. Join the Spoon family as they travel through Blanket Sky meeting all the children's favourite characters and ending with a special puppet pantomime *Cinders and the Magic Bean*.

Music is well represented this month, starting with the ever popular Chilinginian String Quartet. On the 6th they will perform their new autumn programme with pieces from Mozart, Schubert and Beethoven. More music on the 7th, but this time combined with dance. Shobana Jeyasingh returns to the Gardner with a new full-length dance opera entitled *Correspondences*. The piece has been inspired by the imaginative life and work of Indian mathematician Srinivasa Ramanujan and is set to the distinctive and compelling music of composer Kevin Volans.

On the 8th, Edwardians Unlimited present an Old Time Music Hall — an evening of extraordinary extravaganza brought to you at ..... Enormous Expense! A variety of multi-talented performers will be paraded in front of your eyes led by star of the show Roy Hudd, but in the tradition of all the best Old Time Musicals remember to have your songsheets at the ready.

Classical music from South India is the influence behind the distinctive sounds of Karnataka performing at the Gardner on the 9th. Exuberant rhythms and soaring lyricism combine in the music of these three virtuoso percussionists and singer Ramamani. Karnataka have toured the world working with top jazz musicians and this concert will be no exception — joining them on stage will be top British saxophonist Iain Ballamy.

Another star from the Edinburgh Festival arrives at the Gardner on the



14th. Taking a break from the successful *Fascinating Aida*, Dillie Keane (pictured above) performs her first one-woman show *Dillie Keane is Single Again*. The headline has got shorter and the voice deeper but the songs remain just as funny and heart-breaking as before.

The second of our major drama productions is presented by the Shared Experience Theatre Company. In this, Harold Pinter's 60th year, we will be holding his *Birthday Party* from the 15th to 17th. This classic play, written in 1957, firmly established Pinter in the forefront of 20th century British drama and this production, directed by Nancy Meckler, has been specially sanctioned by Pinter himself.

On the 21st, music country and western style, when Hank Wangford (a gynaecologist by day, the original cowboy rocker by night), and his band perform. From the man who gave us such classics as *Never Wear Mascara When You Love A Married Man* — an evening of gritty, witty country music.

The chance to see the rarely performed but much acclaimed *Theatre 1 and Theatre 2* comes your way from the 22nd to 24th. Samuel Beckett's excellent double-bill has been revived for this, its British premiere tour by Focus Productions and it is already receiving rave reviews. The plays successfully combine the despair and laconic humour which have become Beckett's trademark.

For further information and tickets ring the Box Office on 685861, or why not drop in to the Gardner? Two new exhibitions begin this month, in the Gallery *Rituals and Relics*, prints and drawings by talented artist Carolyn Trant, and in the Studio, *Young Artists of the South East*. Don't forget catering has now re-opened and the bar is open all day — so why not pop in for a drink, browse through the exhibitions and Buy Your Tickets!

## Small ads

**WANTED:** Temporary furnished accommodation desperately needed for a few weeks by faculty member, wife and child. Any period from 3 days to 3 months welcome. Please contact Adrian Woolley, ext. 2952.

**FOR SALE:** Mahogany-type dining table. Good condition. 1 yr. old. Cost £180. Accept £60 ono. Pair of dark brown velvet curtains. 94 ins. long. £35 ono. Six dining chairs (G Plan), covered in brown velvet. £20 ono. Tel. 8238.

**CAR FOR SALE:** Austin Maestro 1.3L. A reg, taxed and long MOT, full *Caffyns service record*, radio cassette, eclipse blue, v. good condition. £1,350. Tel. Brenda on 2563.

**VISITING US academic family seeks 3 bed furnished house to rent, January-June 1991 inclusive.** Brighton, Hove or Lewes areas. Contact Peter Smith, internal 2338 or 473210 evenings.

**FRENCH houses for sale.** Choice of large or small properties in beautiful part of Southern France, an hour away from the Mediterranean but in completely unspoilt rural surroundings. Call ext. 2078 or Brighton 681268 or write Dr. S. Freeman, Arts A.

**HOUSE FOR SALE:** 3/4 double bedrooms. Regency terraced cottage. Extensive, sympathetic renovation. Immaculate throughout. FGCH. Convenient for University, station, town. Reduced by £15,000 for quick sale, £89,950. Brighton 683354.

**BRIGHTON FESTIVAL CHORUS** open rehearsal (*Messiah*). Everyone welcome to take part and enjoy a glass of wine. 4-6 pm, 4th November, Asa Briggs Hall, Brighton Polytechnic (Falmer).

**'STRESS BUSTER'** — massage treatments. Having a hard time? Help is at hand. Available every Thursday in the Sportcentre, noon to 5 pm.

If you're experiencing stress or need to unwind then massage is one of the finest ways to provide an immediate sense of well-being. It is especially effective for muscular pain, discomfort in the neck, back and shoulders. This deeply relaxing treatment is given by one of Brighton's top practitioners, Steve Bird, who has seven years experience of massage treatment.

Rates: staff — £6.00 per half hour; students — £5.00 per half hour. Please bring a towel. Payment must be made at time of booking.

Also available by Steve Bird — **THE VITALITY BREAK** — this is a 15 minute treatment given right in your office. No need to take off any clothes. The key to this treatment is a specially designed chair. The treatment is based on Shiatsu massage which follows the same principle as acupuncture, but uses touch and pressure instead of needles. If you would like to try the Vitality Break then contact Steve Bird direct on 558327. He is offering a 50% discount to University members.

If you want to try a massage call in at the Sportcentre to make an appointment.

*Teaching space and timetabling*

After the discussion at Senate in June, a working group consisting currently of the Dean of MAPS, Dr. J.W.P. Hirschfeld (Chairman), the Dean of SOCS, Dr. J.N. Dearlove, and Stephen Richard, V-P Education, was set up. With the current and future expansions of the University there is a need to create more teaching time and/or space. This group intends to put definite proposals to Senate in December. We welcome any contribution from members of the University. Please let us have your ideas as soon as possible.

J.W.P.H.

*Lunchtime music*

**Recital Room, Room 120, Falmer House**

Tuesday, 30th October, 1.15 pm  
48:38 — a group of three performer/composers led by Tim Steiner play their own music

Tuesday, 13th November, 1.15 pm  
Paul Hudson (baritone)

Tuesday, 20th November, 1.15 pm  
Guildhall Piano Quartet

**Meeting House Chapel**

Tuesday, 6th November, 1.15 pm  
John Birch (organ)

Tuesday, 13th November, 1.15 pm  
Christopher Stormont (organ)

Tuesday, 20th November, 1.15 pm  
John Birch (organ)

*AUT*

University of Sussex Association of University Teachers General Meeting, Thursday, 1st November, 1990, 1-2 pm, Arts Lecture Theatre A2. Please note different venue. There will be a report from the special Council meeting held on 19th October on pay.

*Catering*

Don't forget that the Level 2 Restaurant in the Refectory is open from 5 to 7 pm, Monday to Friday, and from noon to 2.00 pm at weekends. Look out for chef's specials. Vegetarian dishes are also available.

## The Centre for Urban and Regional Research

In 1988, the Centre for Urban and Regional Research (CURR) was established to further our understanding of urban problems and regional development in Britain and Europe. It provides a coherent research environment for teaching faculty, research fellows and postgraduate students. The Centre has attracted visiting research fellows from Japan, Australia and Sweden.

Research at CURR draws on expertise across a number of academic disciplines including geography, sociology, economics and political science. In addition to work funded by the Research Councils, members of the Centre have jointly undertaken a review of urban and regional research for the Department of the Environment.

New research projects are described below.

### *How to provide low cost housing*

Dr. James Barlow, together with Dr. David Chambers of Thames Polytechnic, have been awarded £39,000 by the Rowntree Foundation to study the provision of low cost housing through local authority planning agreements.

During the 1980s, 'affordability' became a much discussed aspect of housing provision in Britain. In the search for alternative methods of providing low cost housing, various initiatives have been tried, including the use of planning agreements between local authorities and private developers. But there is little knowledge of the extent to which these agreements are used and the implications for 'social' housing provision. Dr. Barlow and Dr. Chambers will be studying these issues.

### *The politics of growth in rapidly expanding areas of Europe — or the NIMBY factor*

There is now mounting pressure against new development in many parts of Britain, but also a continued need for new housebuilding in 'greenfield' areas. Next year, with a grant of £40,000 from the Economic and Social Research Council, Dr. James Barlow, Dr. Peter Ambrose and Dr. Simon Duncan will be researching the ways in which different planning and local government arrangements result in different forms of participation in the development process.

The main aim of this project is to



examine why we find NIMBY-type (Not In My Back Yard) protest against new development in some areas but not in others. Protest against growth is much less prevalent in France and Sweden, than in Great Britain, despite similar amounts of new building in certain 'greenfield' areas. In some parts of France there is *pro-growth* political mobilisation. The question is why are there these differences, and what are the implications?

### *Men's and women's career patterns and the demographic time-bomb*

The differences between men's and women's career patterns in banking, nursing and local authorities are to be studied with a grant of £42,000 from the ESRC. The changing position of women in the workforce is particularly important given current debates about the 'demographic time-bomb'. The study will be carried out by Susan Halford, Mike Savage (Keele University) and Anne Witz (Birmingham University).

The questions they will be asking include: are labour shortages improving women's access to paid work? What strategies are employers using to attract or retain women workers? Are women being promoted more? And are women entering traditionally male occupations? The researchers intend to pursue these questions in two case-study areas (provisionally Crawley and Birmingham), in each case looking at nursing, banking and local authority employers.

For further details of the work taking place in CURR, ring ext. 2225.

# Noticeboard

## News from the Library

### Fine Rates

Fine rates have been revised, and from Thursday, 1st November, will be as follows:

#### Short Loan Collection:

50p per book, per day, for the first two days overdue

25p per book, per day, thereafter to a maximum of £3.50 per book

#### Reserve Collection:

50p per book, per hour, for the first two hours overdue

30p per book, per hour, thereafter to a maximum of £2.80 per book

### Overseas Students

If any overseas students, either as individuals or in small groups, would welcome an additional orientation session, or would like to discuss problems encountered in using the Library, please ring Jenny Marshman (tel. 3496).

### Visits to Eastern Europe

Dorothy Sheridan has been invited to visit Berlin, Warsaw and Budapest to talk about her work in the Mass-Observation Archive. The invitations have come from researchers at the Humbolt University, the Institute of Sociology at the University of Warsaw and the Institute of Sociology at the Hungarian Academy of Sciences where work is taking place on the impact of the recent social and political transformations on the lives of women. The visits are to be funded by the Foreign Office (Know How Fund) which was set up to support visits to Eastern Europe by UK specialists.

## Open Lectures

### Tuesday, 6th November

6.30 pm MOLS Lecture Theatre

Seventh Adam Weiler Lecture

*Professor Susan Strange of the European University Institute, Florence*  
TRADE WARS: ARE THEY EVER SERIOUS?

### Wednesday, 14th November

6.00 pm MOLS Lecture Theatre

*Patrick J. Gillam, Chairman, ICC United Kingdom*

GLOBAL WARMING — A BUSINESS VIEW

### Thursday, 22nd November

6.15 pm Terrace Room, Refectory Building

Ninth Hitachi Lecture

*Sir John Cassels, Former Director General of the National Economic Development Office*

EDUCATION, TRAINING AND COMPETITIVE ADVANTAGE

Admission free. No tickets required.

## 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 papers, 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 22nd October and is subject to revision.

### Teaching Faculty

Chair in Psychology

Senior Lectureship in Italian in EURO

Lectureship in Animal Cell Biotechnology in BIOLS

Lectureship in English in AFRAS

Temporary Lectureship in Economics in EURO

Lectureship: Science in N. America

### Other Faculty

Admin. Asst./Asst. Secretary, Administration

Computer Systems Manager, COGS

Aids Co-ordinator

### Secretarial, Clerical and Related

Asst. Buildings Surveyor, full-time, grade 5/6

Asst. Services Engineer, f/t, grade 5/6  
Control Clerk, Admin. Comput. Operations, f/t, grade 4/5

Room Bookings & Timetabling Clerk, Registry, f/t, grade 3

Secretary, EURO, f/t, grade 3/4

Cashier, Financial Accts, f/t, grade 3

Alumni Computer Records Clerk, Registry, f/t, grade 3

Secretary, Admissions Office, f/t, grade 3

Secretary, International Office, f/t, grade 3

Shop/Office Asst., University Bookshop, f/t, grade 1/2

### Technical Staff

Technician in Animal Cell Biotechnology, BIOLS, f/t, grade C

Computer Technician, ICAPE, f/t, grade C/D

Research Technician, BIOLS, temporary, f/t, grade D

### Manual and Ancillary Staff

Cleaner, MAPS, temporary, part-time, grade 1

Night Porter, p/t, grade 3

### University Library

Library Porter/Security Assistant

Please apply to Librarian's Secretary, ext. 8158

### Catering Services

Trainee Chef, f/t

Chef de Partie, f/t

Catering Asst., 11.30 am - 8.00 pm

Bar Person, f/t, 3.00 pm - 11.00 pm, 5 days per week

Please apply to Philip Gassmann, Refectory, ext. 8221

## Recent books

Recent publications by Sussex authors include:

*Hindu Nationalism and Indian Politics. The origins and development of the Bharatiya Jana Sangh* by Bruce Graham. Cambridge University Press. £27.50.

*The Economies of Small. Appropriate Technology in a Changing World* by Raphael Kaplinsky. Intermediate Technology Publications. Paperback, £6.95.

*The Social Psychology of the Primary School* by Colin Rogers and Peter Kutnick. Routledge. £35.00.

*Management Theory and Practice, Third Edition* by Gerald Cole. D. P. Publications. Paperback, £8.95.

*Joseph Conrad: 'Heart of Darkness' and Other Tales.* Edited with an introduction by Cedric Watts. In the Oxford University Press World Classics series. Paperback, £2.95.

*Joseph Conrad: Nostromo* by Cedric Watts. In the Penguin Critical Studies series. Paperback, £3.99.

All obtainable from Sussex University Bookshop

## Self defence course for women staff

This term's basic self defence course for women staff will take place on Tuesday lunchtimes (1-2 pm), commencing on 13th November for four weeks. Maria Ragusa will again be the course tutor and the sessions are free. The group's size is limited to 20 women. For full details contact Richard Price, Staff Welfare Officer (ext. 3598), as soon as possible. The closing date is 7th November.

## Bulletin

The *Bulletin* is published every three weeks during term. The next edition will appear on Tuesday, 20th November. 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, 12th November. If you have any news items or ideas for feature articles, she would be pleased to hear from you (ext. 8208). There will also be a *Bulletin* on 11th December (copy date 3rd December).

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