Imperial suffers in HEFCE allocations

On Thursday, 2 March 1995, the Higher Education Funding Council for England (HEFCE) announced the allocations of grant for the 1995-96 academic year.

Imperial was awarded only a modest increase in its grant for teaching, up by 0.5 per cent on the current year. Imperial's overall HEFCE grant will increase by 1.2 per cent, as compared to the national average of 4.5 per cent. Setting funding partly depended on performance in terms of research volume, Imperial's share has been affected, despite the fact that the research volume here is already high: The University of Manchester, which also has a strong research base, suffered similar cut.

However, there is one bright spot, Rodney said: the college's contribution to the University of London will be lower next year.

Public sector MBA course

In October 1994, the Management School was amongst 16 business schools invited by the Cabinet Office to tender for a new public sector MBA programme aimed specifically at civil servants.

Several months, presentations and interviews later, Mr Robert Hughes, former Junior Public Service Minister, announced that the Management School had won the contract, along with a consortia made up of Cranfield School of Management, Manchester Business School and the Civil Service College.

The public sector MBA programme was launched on Wednesday 1 March 1995, at the Cabinet Office in Whitehall. The initial agreements with Imperial and the consortium will be for three years.

Up to 60 civil servants will join either the full-time or Executive MBA course at Imperial. The target group for the programme will be staff at middle management level who are expected to fill senior posts later in their careers. They will study alongside other MBA students making up the core of the programme, and will also take a public sector specialisation.

"We believe that our experience working in partnership with industry, commerce and the public sector qualifies us particularly well for this role," said Professor David Norburn, Director of the Management School. "The Management School seeks to promote the best management practice, regardless of whether it originates the public and private sectors have much to learn from each other."

Short-term contracts spark controversy

Carrie Golis investigates

"I have never been so excited," said Professor David Norburn, Director of the Management School, at the launch of the new public sector MBA course. "This is an enormous opportunity for us to work with the Civil Service, and to provide them with the skills and knowledge they need to succeed in their roles."

However, not all staff members are as enthusiastic about the new contracts. According to Rob Letham, Senior Personnel Manager, "The new contracts are a departure from the traditional fixed-term contracts, and many staff are concerned about the implications for their future careers."

"We are aware of the concerns, and are working closely with the management to ensure that all staff members feel valued and supported," said Rob. "We hope that the new contracts will provide a more flexible and dynamic working environment for all staff members."

GETSET 95

Search for mentors

The two-day event will be held at College on 28-29 March, to encourage 13-year-old girls to consider a career in science, engineering and technology, prior to selecting their GCSE options.

GETSET aims to show that working in science, engineering and technology can be fun. This message is reinforced not only with the help of TV personalities, such as Johnny Ball and Kate Bellingham, but also through the promotion of mentors' young female role models who will work with small teams of girls over the two days.

"We hope that the event will inspire young women to pursue science, engineering and technology as a career option," said GETSET's溢cant, Melanie Thodey, Schools Liaison Officer.

BMS building funds

Virginia Bottomley, Secretary of State for Health, announced to the House of Commons (22 February 1995) that she is "preparing in principle to commit a substantial capital contribution" to the building of a medical school on the IC campus at South Kensington.

The Deputy Managing Director, Rodney Eastwood, is encouraged by the announcement. He explained, "This is a significant and welcome step forward as it is the first time a public statement has been made to this effect." He continued, "Nothing is definite until the cheque has been cleared, but the chances of Government funding are now much higher than before."

Final approval by the Department of Health and the Treasury is expected shortly after the Higher Education Funding Council's decision, which will be made by the end of this month.

IN BRIEF

New dean for RSM

Professor Rees Rawlings, Department of Materials, has been appointed Dean of the Royal School of Mines for the period 1 September 1995 to 31 August 1998.

BA 2000

Imperial College is expected to host the British Association Festival of Science 2000. The BA annual meeting is the foremost event in the UK scientific calendar, attracting thousands of participants each year. The Rector said he is "delighted" with the proposal. The BA annual meetings are usually held outside London, except on very special occasions, such as the millennium.

RA wins fellowship

Christina Young, a research assistant in the Department of Mechanical Engineering, is the first winner of the Gerry Holley Research Fellowship. This is awarded by the Courtauld Institute of Art, and funded by the Pilgrim Trust, the Geet Museum and trustees of the Courtauld Institute. The Fellowship aims to further the research, begun by Gerry Holley (an IC alum- nus), into the mechanical properties of paintings. Understanding these properties has direct relevance to the way in which paintings should be displayed, stored and transported.

Judd Prize

Zhou-Yin Song has been awarded the Judd Prize. This is awarded annually to a graduate student for original work undertaken in the Department of Geology within five years of obtaining their first degree.

ICU election results

The election results for the Students' Union officials are as follows:

Sarah White - President
Matthew Crompton - Deputy President (Finance and Services)
Tim Townsend - Deputy President (Clubs and Societies)
Rachel Walters - Felix Editor
Media mentions

Racial discrimination at medical schools

A study led by Professor Chris McManus and Professor Peter Richards from St Mary's Hospital Medical School in London has shown that applicants to medical courses may be subject to racial discrimination. The report, published in the British Medical Journal, looked at the application forms of almost 7,000 students, and found that in 12 out of 28 schools applicants with non-European surnames were significantly less likely to be accepted.

Newspapers reporting on the study were The Independent, The Guardian, the Evening Standard, and The Daily Telegraph (24 February).

Russell Group advised to disbanded

The Independent reported on 1 March that the Chief Executive of the Higher Education Funding Council for England, Professor Greg Wise, had advised the elite band of 17 universities, known as the Russell Group, to disband. The group includes Imperial College and is named after the street where it meets; Professor Davies said: "There has been a lot of in-fighting which has not been as constructive.

Computer hacker arrested

Arthur Spindler from the Center for Computing Services discussed the arrest of a leading American computer hacker on Radio 4, The Big Bang on 23 February.

Management School MBAs

Under a new initiative announced last year by the National Audit Office, government employees will develop their business skills by spending time at a management school. The Financial Times reported on 2 March that Imperial's Management School was chosen from 15 other business schools as one of the providers of the new public sector Master of Business Administration degree.

Gene patenting

Dr John Normarnson from IMPEL was interviewed on BBC Radio World's Science in Action on 26 February about gene patenting. In the interview Dr Normarnson said that patenting would ensure the official disclosure of information to interested parties.

Electromagnetic pollution

On Radio 4, The Big Bang (1 March) Dr John Freeman from the Department of Electrical and Electronic Engineering discussed electromagnetic pollution and the many sources of radio waves.

The view from the tower by don

"...his forthcoming viggie is about money paid to external examiners - not enough of it. It's a terribly old chestnut but a recent event made me stand up and take notice. A university way north of here invited me to examine a PhD thesis, offering a fee of £200. In the small print it said that I was invited to travel first class. Great, I thought. I can spread out, take my laptop, get that paper finished in comfort! I cheerfully paid the best part of £200 for the return ticket, then realised the university was paying BUV over three times more than it was paying me. The theory behind the reluctance of universities to pay proper fees for examining is that it is 'part of the job' and the fees are nominal. In this merely a expedient for collusion between institutions to keep costs down. Clearly, I would rather get the £200 and travel on a cheap ticket. There is no reason why both the fee and the first class travel should not happen without breaking the bank."

IC might score by being the first to start paying proper fees for external examining. It would have an immediate effect on the quality of our examiners and the attention that the process receives. A proper fee would make this a worthwhile request rather than begging a favour.

There are also agencies outside the universities who prey on our kindness, such as the British Council. They will happily send a don halfway across the world without the slightest thought of how the university might be compensated for the loss. Reimbursement jet-lagged and out of pocket due to spurious cover from the sending organisation, the joy of travel rapidly vanish.

Nevertheless, comfortable travel is wonderful. I probably get more done on long train journeys than in any other environment. Perhaps departments should set funds aside for sending each of their members on a long train journey once a year. It could have a fantastic effect on research productivity and marking."

Defective Pentium chip

Dr Dan Moore explains what went wrong

In October 1994 Professor Thomas Nicely of Lynchburg College, Virginia emailed a colleague to say he was getting different results between his Intel 486-based computer and the new Intel Pentium-based computer he had bought for his research. His new computer did not calculate 1/25625702441 correctly. When his colleague confirmed his machine made the same error, Professor Nicely posted his findings on the Internet, inviting other scientists to check if this was a widespread problem.

The result was a £300 million loss and a public relations disaster for Intel Corporation. As word spread on the Internet, it became apparent that this flaw was in all Pentium chips.

Intel Corporation played down the significance of the bug at first, saying it occurred only once in every 10,000,000,000,000 instructions. The average user would encounter it only once in 27,000 years. They decided to replace only those Pentium chips where the machine was used in 'critical calculators' or 'decision that Intel, out the Pentium owner, would make'. Intel reversed this policy after a month of media backlash, opened the Intel correspondence press, a world wide Internet cam-aign of unprecedented proportions and announcements by several companies (most notably IBM) that they were dropping the Pentium chip from their product line until it was fixed Intel announced that it would replace defective chips for free on request (when defect free chips became available) and posted a revised specification listing the corporate profits for 1994 to cover its losses.

What went wrong? According to the software model, the Pentium chip does long division much wrong. It does it wrong with a pencil and paper. It 'guesses' trial divisors by a table look up using an algebraic algorithm, as two Imperial College researchers in 1986. Intel mini-wired the table look up in that same way the grading device is accepted. Continued on page three.
Space - the final frontier
Professor Bill Wakeham examines Imperial's estate

Having recently become Shadow Director of the College’s Development Division, I have found myself grappling with the intricacies of everything from the provision of electrical switchgear to sports fields. Within the ambit of Estates, the areas currently receiving only dimly glimpsed by most College staff.

The Index of the problem
The value of the South Kensington campus is difficult to ascertain, but the insured value for rebuilding purposes is £600 million. The latest Property Report suggests that £3 million on maintenance is a sum which represents 20 per cent of the total annual expenditure on the College. Heat, lighting and power cost about £3 million a year.

These sums make the budget of even some large academic departments look small.

Research and development expenditures by even a small fraction could have a dramatic effect on the College’s budget. For example, a saving of just one per cent on energy costs would free £370,000 per year, enough for about ten more academic staff.

The issues
It may seem odd to think that the substantial expenditure on maintenance, buildings and grounds is a poor state of repair. To a large extent this is a result of earlier economies. The net effect is that academic buildings are in too good a condition to withstand the standards of ventilation, heating and illumination.

There is only a small scope for further construction beyond the proposed Basic Medical Sciences building, but even then the planning consent is unlikely to allow much. However, many departments have areas which are insufficiently used. Sometimes special facilities are no longer needed, or it costs too much to convert the area into something useful; or terrorism and tradition are involved.

Over 7,000 students could be seated simultaneously in lecture and tutorial spaces within the College. Is follows that the College could accommodate much of its planned future development within existing buildings. However, such actions would require an investment once the space had been made clear.

Another difficult issue is accommodation, which is relatively old, in too poor a condition and covering a poor image of the College to prospective students. Unfortu- nately, there are no grants and savings limit college options. For example, it is not possible to tear down Southside and start again because the College in its infinite wisdom has determined that Southside has special architectural merit. It is described as a

REVIEWS
Women and power
Dr Rosalind Miles talks to the Women of Imperial Review by Louise McIvor

The first Women of Imperial Lunch of 1995 took place at 170 Queen’s Gate on 22 February. The speaker was Dr Rosalind Miles, a psychologist who delivered the lecture The Intelligence of Women and Power. Dr Miles is the author of Intelligence, a highly acclaimed novel recreating the life and times of the Queen.

Elizabeth 1 was an ‘almost self-created woman’, Dr Miles said. She had to overcome a traumatic childhood (including the execution of her mother, Anne Boleyn) to hold a position of such power. Dr Miles described Elizabeth 1 as ‘not beautiful’ but as able to ‘command women’ - as well being a powerful figure, she had a collection of 3,000 dresses.

Dr Miles also mentioned her book A Woman’s History of the World, which集结 the ‘greatest story never told’.

The talk was most informative and a lovely question and answer session followed, when Dr Miles spoke of such issues as the difficulties of juggling career and motherhood. In reply to a question about feminism, she talked about how feminism grew towards ‘complementarity’ of the sexes.

Please contact the HUB Office on 48740 or 48741 if you would like more information on the Women of Imperial College. There will be another lunch on 3 May (speaker to be announced).

Louise McIvor is Publications Assistant to the Personal Division

Inaugural lecture
‘Defence and Dystrophy - Douse Models For Human Disease’ Professor Steve Brown

In his inaugural lecture on Wednesday 15 February, Professor Steve Brown, Director of the Centre of Experimen- tal Genetics, reported recent work by his group on the discovery of genes for deafness.

This work is being carried out in collaboration with the MRC Institute of Hearing Research in Nottingham.

Studies of mice that carry mutations causing deafness have led them to unravel a gene necessary for hearing. The gene codes for a large protein, and it is especially significant in that the same gene in humans is responsible for Usher syndrome type Ib - a condition that causes children to be born deaf and progressively lose their sight. Around 1,500 people are affected in the UK.

Professor Brown hopes the findings will help pave the way for better understanding of all the factors leading to genetic deafness.

Continued from page two
Pentumichip

Pentumichip

One in every 100,000 numerators and one in every 100,000 denominators can cause the fault so indeed they can occur once every 10,000 million divisions. However, the Intel Pentum chip can do 2,000,000 divisions a second and 10 million additions, subtractions or multiplications every second. In a calculation where ten per cent of the arithmetic instructions should occur once every four hours, the Pentum chip can run for days on a work-station. The existence of this divide flaw points to the possibility that the program ran on this chip. Some of the numbers where this flaw occurs are 186573.59813, 3366595863, 5451865186. The Windows calculator on my Pentium based computer reveals 4256425922, 1025502922. As HP pocket calculator gives 333333289 for this ratio. Such 'branded integers' are common place on computers, hence the decision of several companies to drop the chip until the flaw is cured. Machines with this bug removed arrived at IC in the middle of February.

Three of us with defective machines are now going through the paper work necessary to get funded to supply replacement chips - a very frustrating process. Are there other flaws in this chip? Probably, but now the Pentum chip floating point unit is the most widely tested bit of silicon in existence. The silence on the Internet about other Pentum bugs suggests that no further errors have been found. Intel have just announced the release of their Pentium II, which is now due next year.

Dr Danes wrote a reader in the Department of Mathematics

continued from page one
Short-term contracts
ICATL meeting, this note indicated that the waiver scheme has been discussed with the College trade unions - a viewpoint which he implied AUTF’s support - when in fact the union was strongly critical.

The letter also stated, ‘To ensure that there is no delay in salary payments, it is therefore imperative that the copy of the contract of employment is signed promptly’ - a statement which no doubt many staff had interpreted as a veil threat.

Head departments as well as the Management and Planning Group had discussed the policy. Rob Leham said ‘The AUTF were consulted on the proposals and accepted the new arrangements. If they did not reluctantly I would understand, because it would not have been an easy decision for them. The decision of seven years was ‘about the break- even point’, where increased benefits for long-term staff would be balanced by not paying statutory redundancy for short-term staff, he said.

A small number of staff members have asked to be re-employed on the basis of the previous employment contracts and been allowed to do so. They would then be wholly protected in any future. If they were before and suffer no detriment, retaining their rights to statutory redundancy for the entire time at the College. It would be unfair, however, on those long-term staff who were allowed to no staff who had not signed waivers to have access to the enhanced compensation, should their contracts take them beyond seven years,’ Rob said.

Julian Berrill was concerned that departments might implement i’s (glass ceiling) of six years employment, so that they would not have to offer redundancy pay. ‘Departments will be under pres- sure not to employ the cheaper person, but to employ the cheapest person,’ Julian said.

Those present at the ICATL meeting expressed their support for a formal proposal to Personnel based on the following:

1. No member of staff should have to sign any waiver.

2. Improvements for one group of staff should not come at the expense of another group.

3. Redundancy pay should be financed centrally, not through departments, as is currently the case.

4. Contract research staff should have the same rights to redundan- cy pay as permanent staff.

5. Members of staff who have already signed waivers should be allowed the same access to the new old contracts. This point was added after one member of the audience explained that they were on a one Arm contract and now regretting doing so.

Many people were under the impression that employees were just starting out in their careers, Adrienne Aria told the meeting, the reasons for signing by students nationally for such staff was ‘late thirties,’ she said, ‘while many are over forty.’ Rob spoke of the situation nationally Personnel showed the average age of short-term research contract staff at Imperial to be 32.

Carrie Cohan is the Media Liaison Officer in the Press Office
Thursday 15 March

**Lectures**

Tuesday 14 March

Inaugural lecture
- "Mud Matrices and Megabytes" by David Jetté, Professor of Analytical Soil Mechanics. To be held in the Clore Lecture Theatre, Hurley Building at 17.30.

Wednesday 22 March

Inaugural lecture
- "Seeing the Light: Good Practice in Photon Management" by Brian Morgan, Professor of Physics. To be held in the Buskey Laboratory Theatre at 17.30.

Thursday 16 March

Department of Chemistry seminar
- "The Synthesis and Structure of Polyynes" by Professor Frank Tipler. To be held in the Clore Lecture Theatre, Hurley Building at 13:00.

Development
- Further information available from Professor Coward, extension 46400.

29 - 31 March

Biology 2002 - a series of lectures, demonstrations, and visits designed for first year A level biology students. Organised by the Department of Biology with support from ZEBOCA. Professor Graham Wilson of Belsto will lecture on "Theology from Dr Ava Yeo, extension 45375.

**Conferences**

20 - 21 April

T.H. Hurley: Victorian Science and Culture: To be held in the Hurley Building. Booking forms available from Dr David Edgerton, extension 49351.

**Notice Board**

Central Library
A small PC cluster has been set up on level 2 of the Central Library. The cluster has general software, access to networked library and information databases, and wide area network connections. There is no booking procedure.

You now need a barcoded library card to go through the turnstiles in the entrance to the Central Library. This procedure has been introduced to improve security and provide more statistics on use of the library by different departments.

Leonardo Society

Art Exhibition 1995
The Exhibition will be on display from 17 May to 16 June. Staff and students are invited to bring their work for exhibit to Shepherd ante room or to the Student's Union ante room by Friday 12 May from 15:00 - 16:30. Please contact the Leonardo Society if this time is inconvenient. For further information please write to JOLI, SCAB, or email leonardo@kcl.ac.uk.

Royal Society
The Royal Society invites applications for four vacant professorships tenable from 1 October 1995. Application details are available from Mr K Wyde. The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG. Tel: 0171-930 2170. All applications must be received before 16:00 on 7 April 1995.

**Letters to the Editor**

**Colleges Mail**

Dear Don,

There is a system of quality control in operation to check the amount of time it takes for internal post to go through the system. Approximately every month over 100 test letters are sent to heads of departments, centres and administrative divisions and SDSs. The time they take to be delivered to and returned from, the addressee is logged. Some delays are down to us and we are always trying to improve, but letters that are incorrectly addressed or illegible can prevent our service from being as efficient as we would like.

The newly combined Post and Distribution Office, located on the ground floor of Shepherd's Hill, handles 72 sacks of mail per day. Each sack contains up to 1000 items of mail, internal and external. They try to provide a first class service, but need College help.

All you need to do is print the addressee's full name and department clearly on the envelope, and remember to tell the Post and Distribution Supervisor, Sheila Blist (extension 49908), when staff move or move department.

Any suggestions on how the service could be improved are always welcome.

Yours sincerely,
Val Straw
Facilities Manager

**Research student supervision**

Dear Editor,

I am glad to know that you read Board of Studies papers. I agree that good practice in this (and other matters) should be discussed widely.

Let me help the process by pointing out that the later MPhD to PhD transfer examination, which you seem to favour is fine for a good student, well-supervised on a suitable subject. Even here, however, the student must do his best to pass. And in my short time in my present job, I have come across too many examples where a department has postponed an embarrassing decision for too long.

Humanity and other considerations require that, on the rare occasions when research students have to be told that a PhD is not for them, they should be told in the evidence for the decision is clear.

Yours sincerely,
Alan Swanson
Pro-Recto (Educational Quality)

**Environmental policy**

Dear Editor,

I was encouraged to read that the College is considering the development of an environmental policy statement and action plan (College goes green! Issue 2). Perhaps this plan could include a significant reduction in the number of car parking spaces provided by the College and their replacement with secure bicycle parking, or even with more green spaces.

This principled action would demonstrate a real commitment to improving the quality of our shared urban environment.

Yours sincerely,
David Evans
Department of Computing.

**IC Reporter**

IC Reporter is published fortnightly during term time. This is the last issue of the spring term.

The next issue publication date is Tuesday 25 April.

Contributions and letters for this issue should be received by Friday 7 April.

These can be sent to Victoria Brownion via email (vbrownion) or internal post (Room 546), Shepherd's Hill, London SW7 2BN, Fax 46697 Fax 0171-594 6700.

Please note the editor reserves the right to cut or amend the letters as necessary. Information correct at time of going to press.