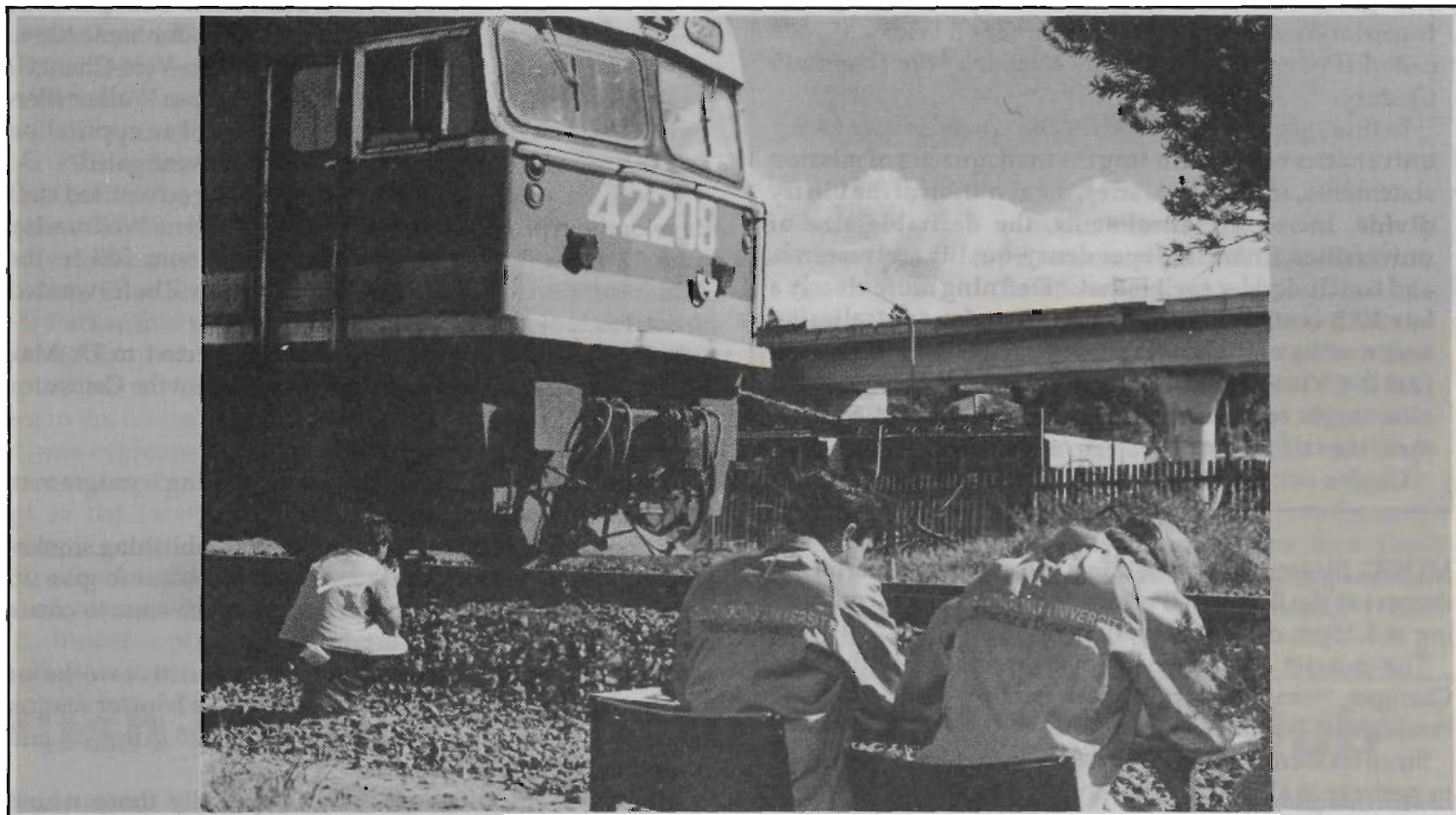




**BHP gives
\$300,000 to
environment
studies**

BHP will fund a new Chair of Environmental Science at the University. The Chair, to be known as the BHP Chair of Environmental Science, will be funded by a commitment of \$300,000 from BHP over three years.

FULL STORY PAGE THREE



NO, the University of Wollongong has not taken over the State Rail Authority, the students pictured are actually on the right track towards saving the trees.

Students in the Department of Civil and Mining Engineering, supervised by Dr Richard Kohoutek, are testing the effects of interspersing concrete sleepers with the traditional timber ones.

It is widely acknowledged that fully concrete sleepers track can be maintained for a fraction of the cost of timber sleepers track, however, the huge capital required to attain this standard has restricted concrete sleepers to high density lines.

Trials conducted by Dr Kohoutek and his team with intermixed concrete and timber sleepers indicate that the change

On the right track to saving trees

over may be possible over several cycles of interspersal, resulting in lower overall costs.

The project is all the more urgent because of the dramatic reduction, over the last few years, of durable timber of a suitable size for cutting into sleepers.

With the co-operation of the State Rail Authority and AMATEK who manufactured the concrete sleepers, tests were initially carried out on a special trial section of track in Taree, but recently a section of track at Unanderra

has been made available on the weekends.

Students measure the strains on the concrete and timber sleepers and on the rail above the sleepers. Both static load produced by a stationary train and trains passing at full speed are measured.

This project gives students the opportunity for practical experience in Civil Engineering as well as having the potential to produce results of economic and environmental significance.

Brief News

THE New Literatures Research Centre gratefully acknowledges the generous financial support for the first annual film festival, *Feast on Film*, of the following:

The New Zealand Government, BHP Stainless Products, The University of Wollongong Students Representative Council, The Friends of the University, The Australian Film Institute, Ronin Films, Quarry Crafts, Kiama, Mr Harry N. Rock and the artistic contribution and help of Simone Rose and John Bowyer in designing the Poster and Programme for *Feast on Film*.

Local newspapers, radio stations and TV have been very supportive and enthusiastic.

Feast on Film was held from May 31 to June 2 in the Music Auditorium on Campus. Twenty-three films were shown over the weekend.

Wickham appear by courtesy of the Sydney Symphony Orchestra.

Bookings for the concert may be made with the Illawarra Performing Arts Centre, tel. (042) 26 3366.

THE Centre for Staff Development in conjunction with the Vice-Chancellor's Unit is offering a workshop to assist academic staff plan study leave programs.

Entitled Effective Planning of Study Leave the workshop is designed to help staff understand the substance and process of compiling a suitable proposal.

It is directed towards academics who expect to make their first application for study leave within the next few years and those who have experienced difficulties with previous proposals, or have not made an application for some time.

This workshop will be presented by the Pro-Vice-Chancellor, Professor Lauchlan Chipman and Mr Ross Walker (Personnel Services) so that both the substance of an application and the process for submitting it will be investigated.

The course will be added to the previously advertised staff development programme and will be offered on Wednesday June 12 from 9.30am until 12.30pm in Room 303 in the Administration Building. Enrolment forms will be forwarded to academic staff very soon.

In the meantime, enquiries may be directed to Dr Max Gillett (ext. 4101) or Ms Jan James (ext. 3946) at the Centre for Staff Development.

THE Centre for Staff Development is offering a program to help staff give up smoking.

In line with the University's policy of establishing smoke-free buildings on campus, those staff who want to give up smoking may undertake this program which aims to create a healthier and happier lifestyle.

The course runs for five weeks: four consecutive weeks for two hours on the same day each week then a booster session one month later. The dates are: July 18 and 25, August 1 and 8, and September 5.

All employees who smoke, but especially those whose work environment is smoke-free, are encouraged to attend. A minimum of 10 staff members must apply before the course will run.

The expected program outcomes include a reduction in the costs and risks of smokers in regards the health and well-being of themselves, others and the shared work environment. The presenter is Employee Assistance Co-ordinator, Industrial Program Service, Michelle Spillane.

Because of the cost to run this course, and the notion that a particular group size is essential for group support, a firm commitment from interested staff is required at least one month before the advertised starting date. Please forward your nomination form to Jan James, at the Centre for Staff Development.

THE British Council travelling book exhibition – *Graham Greene and his contemporaries* – and the literary poster exhibition – *Grahame Greene* – will be on display in the Library foyer until Friday June 7.

THE Vice-Chancellor, Professor Ken McKinnon, gave an address to the University of Sydney Professorial Association Annual Dinner on Friday May 24 called *Universities in the last Decade of the Twentieth Century*.

In this speech he touched on the crucial issues facing universities today including the inadequacies of mission statements, academic salaries, the abolition of the binary divide, increasing enrolments, the desirable size of universities, financial dependency, quality and research, and concluded by saying that: "Defining more clearly a late 20th century idea of a university, for Australia, is a task worthy of the whole professoriate of Australia, not just the Vice-Chancellors. I commend it to you. What other topic so neatly embraces high idealism and immediate self-interest?"

Copies are available from Gillian Curtis, ext. 3926

MUSIC Illawarra is presenting the Novalis Quartet in a concert at the Illawarra Performing Arts Centre, commencing at 8.15pm on Saturday, June 8.

The quartet is a newly-formed ensemble, with Jeanell Carrigan (piano), Goetz Richter (violin), Justine Marsden (viola), and David Wickham (cello).

Since its formation, the Novalis Quartet has been invited to perform in all Australian capital cities, as well as country centres, and will appear as Artists in Residence at the Araluen Arts Centre in Alice Springs.

The quartet will present a programme of Mozart, Schubert and Brahms. Goetz Richter, Justine Marsden and David

Campus News is published weekly on Tuesday during Autumn and Spring sessions

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Deadline for copy is noon on Monday of the week before that of publication

Material for *Campus News* should be sent by Microsoft Mail to Gillian Curtis, or left, preferably, on a Macintosh-formatted floppy disk, or on hard copy in the *Campus News* tray in Planning and Marketing Branch, Administration Building.

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BHP gives \$300,000 boost to environment studies at University

THE Group General Manager of Port Kembla Steelworks, Grahame Parker, and the Vice-Chancellor of the University of Wollongong, Professor Ken McKinnon, made a joint announcement last week of the establishment of a new Chair of Environmental Science at the University.

The Chair, to be known as the BHP Chair of Environmental Science, will be funded by a commitment of \$300,000 from BHP over three years.

This, together with staff and funds provided by the University, will enable the University's already strong environment science program to become one of the nation's leading programs.

Mr Parker visited the University presented a cheque for \$100,000 to Professor McKinnon, representing the first instalment of the three-year contribution.

Mr Parker said the Chair's establishment would mean a significant boost to responsible environmental management in the Illawarra and South Coast, and was evidence that BHP wished to ensure that environmental matters were kept to the forefront of community debate.

"The Steelworks is totally committed to environmental improvement as part of its business plan, and is spending



BHP's Grahame Parker presents a cheque for \$100,000 to Professor Ken McKinnon to establish the new Chair of Environmental Science

\$60 million on new environment protection measures over the current five-year plan as well as \$44 million a year – about \$100 a minute – on maintaining existing pollution controls and updating necessary technology to match today's standards," Mr Parker said.

"We are also committed to maintaining activities in the community and educational structure which are important over the long term.

"Environmental issues are often complex and involve significant com-

munication and educational problems."

Professor McKinnon said: "The University has already allocated substantial resources to environmental science.

"The establishment of the BHP Chair in Environmental Sciences will enable the University further to develop courses and research and to establish stronger links with industries and community organisations thus promoting more effective and responsible approaches to environmental problems."

Push to launch Illawarra Quota Club

JAN James and Noeline Kyle were invited to speak at a fund raising evening of the proposed Quota Club of Illawarra recently.

The function was held to support a hearing-impaired woman from Ulladulla, who is in her first year of studies toward a BA at Armidale. She will then train to become a teacher of the deaf.

Noeline and Jan spoke about the range of facilities and improved access for disabled students now in place at the University of Wollongong, our access policy and the Equal Opportunity Sub-Committee which oversees services and the development of new policy initiatives.

Jan and Noeline spoke about the experience of our first hearing-impaired student to finish a degree and train in the Graduate Diploma in Education in 1988.

With the full support and encouragement of senior management the Faculty of Education was able to facilitate the practice teaching and other compulsory courses which are an integral part of training to be a teacher.

This Wollongong graduate was the first learning-impaired adult to gain a teaching qualification in the NSW. She subsequently moved into the required specialist program on offer at Nepean.

Both Noeline and Jan were involved in the organisation of the student's teaching program and negotiated with the Department of School Education to provide more appropriate methods for a student with a hearing impairment.

The proposed Quota Club of Illawarra will maintain as a major activity concern and support for hearing-impaired people.

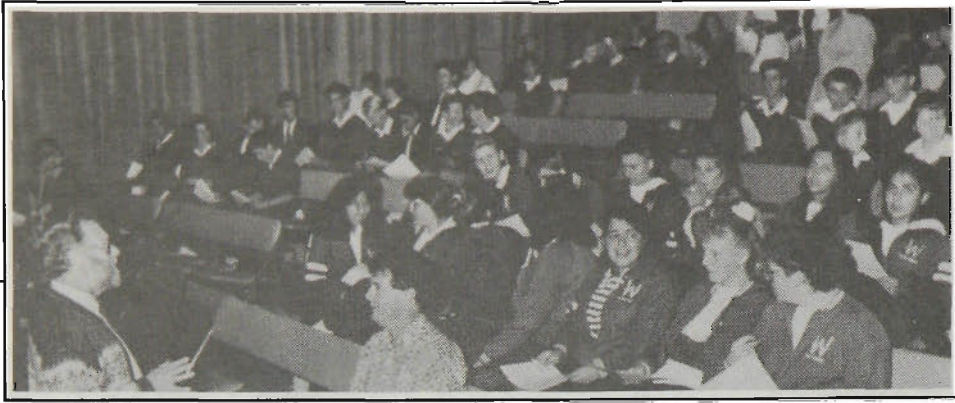
Each Quotarians through their Foundation, present the Deaf Woman of the Year Award to a hearing-impaired woman for her significant capabilities and achievements.

RETURN THANKS

To my many friends and colleagues at the University of Wollongong. Please accept our most sincere thanks for your thoughts and generosity after the recent tragic death of our 3 years old son, Christopher.

Your compassion and support have made our grief far more bearable. Christopher will always live on in our hearts and memories, as will your kindness. Once again, many thanks.

With love,
Chris and Rosemarie Hadley



Professor Brian Maloney, Head of the Department of Languages, opened the Schools Day program. In the front row is Mr Geoff Galagher, President, Modern Languages Teachers' Association, and Head, Language Department, The Illawarra Grammar School.

Learning languages - compulsory by '96

IN LINE with the NSW Government's recent announcement that by 1996 all school children must have undertaken some studies in another language before they can sit for the Higher School Certificate, the University of Wollongong, in conjunction with the Modern Language Teachers' association, has arranged Language Days to stimulate an interest in learning languages.

On Friday May 10 in the University's Music Auditorium, Year 10 students from Illawarra heard talks on 'why study languages' and attended workshops to become familiar with modern techniques used to teach languages.

A second day followed on May 24 for Year 12 students.

New teaching resource for Engineering

THE Department of Civil and Mining Engineering has been presented with a steel connection model by the Australian Institute of Steel Construction (AISC).

AISC Senior Engineer Jose Zaragoza presented the model to Professor Yen Wen Wong on April 29.

The model was built by Miller TAFE with steel donated by Union Steel, and blasted and painted by Transfield, as part of an AISC program to support the teaching of structural steel design.

Mr Zaragoza said that he welcomed the opportunity of further developing the excellent relationship that exists between the steel industry and the University of Wollongong.

Senior AISC technical staff provide lectures to tertiary students on practical steelwork construction and fabrication.

AISC also presented the University with a comprehensive steel design teaching pack late last year.

New energies at the Science Centre

THE Electricity Commission has sponsored the University of Wollongong's Science Centre for \$15,000 for two new exhibits to illustrate alternative methods of energy production and to display how electricity is generated.

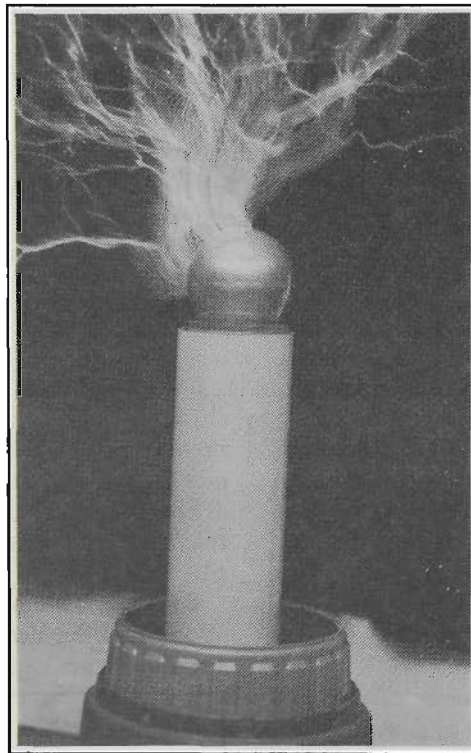
The Science Centre is moving into stage two of its development and the energy exhibit is a major part of this stage.

\$10,000 of the funding is towards the construction of an outdoor energy display that will compare water, solar and wind energy generation using waterwheels, solar panels and windmills.

The display on electricity generation will come from the rest of the money and will involve a tesla coil that creates bolts of lightning.

Elcom sees its sponsorship as a gift to the community. This demonstrates the Science Centre's role as a vehicle to introduce industry and its technology to the community.

The sponsorship from Elcom provides a start for the exhibit. Local company O'Donnell Griffin rewired part of the centre for the exhibit and Wattyl Australia provided paint for the renovations.



A Tesla coil - on show at the Science Centre

This exhibit is important because it demonstrates the relationship between the environment and energy and shows that energy generation does not necessarily mean the destruction of the envi-

ronment.

The aim of the Science Centre is to make science more understandable and relevant and to demonstrate the application of science in industry and everyday life.

Its success is demonstrated by the number of school visits to the centre that have been booked solidly for the past year.

The centre is looking for sponsors who want to be involved and to show off their technology.

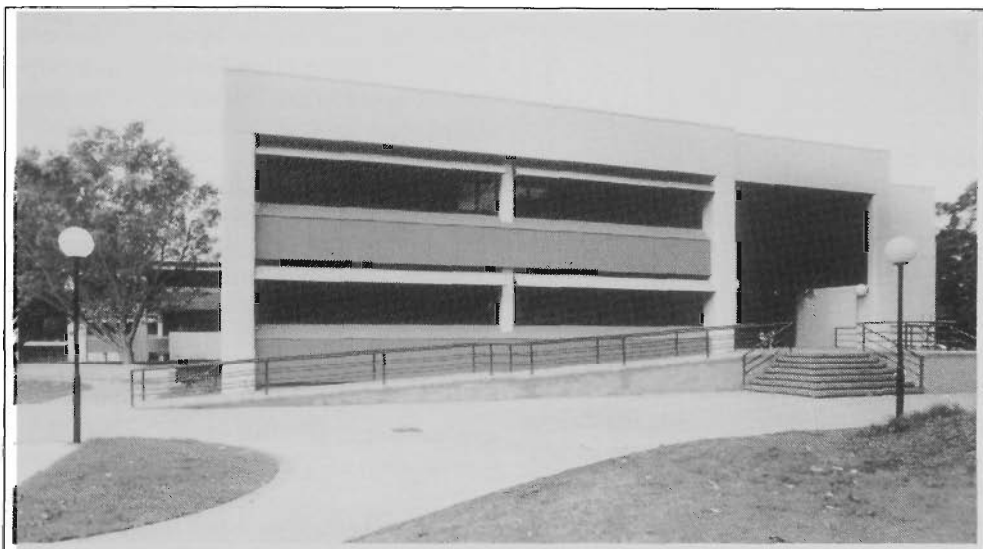
The Science Centre was established with a \$30,000 Challenge Grant from the University of Wollongong, but is now self-supporting, depending on industry and community sponsorship, admission fees and sales from its shop.

There has already been an enormous breadth of corporate support and the centre is looking towards expanding this by developing a membership program which will offer incentives for businesses and individuals to become involved with the centre.

Voluntary help also keeps the centre going. More than 30 'explainers' guide school groups and visitors around the centre on request. Contact Glen Moore (042) 21 3521 for further information.

Expansion of the Illawarra Technology Centre

A comprehensive provider of services that delivers the goods



Stage III of the Technology Centre is nearing completion, with some rooms already in use and landscaping well under way. Total floor space in the Centre is now 6352 sq m with 1543 sq m allocated for seminar and teaching rooms. Conference and meeting rooms account for a further 213 sq m

Aboriginal Foundation Studies Program

Through its Training and Professional Development Services Division, ITC proposes to establish an Aboriginal Foundation Studies Program. As a first step, the Aboriginal Business Technology and Education Consultancy Centre (ABTEC) has been established. Director of the Program is Mr Trevor Maher.

The Aboriginal Foundation Studies Program would be designed to meet the specific educational and training needs of Aboriginal and Torres Strait Islander people, with the target of raising the standard of general education to a minimum of 2 unit HSC level, thereby enhancing the ability of the participants to undertake tertiary study. The ABTEC Centre would have primary responsibility

continues on page 2

ITC - a blend of expertise and research facilities second to none

The Illawarra Technology Corporation Limited (ITC) represents a comprehensive service enterprise which will deliver quality products and services to clients, on time, and in a thoroughly professional style.

It does this through the experience, skill, enthusiasm and dedication of its own resources for applied or pure research, prototype development systems, integration and industrial training, as well as through its unique access to the acknowledged scientific and academic skills, and resources, of the University of Wollongong.

There are few if any organisations in Australia so formidably equipped to address the vital issues of the marketplace in today's highly competitive and challenging environment.

ITC's technology and capability areas include (but are not limited to):

- Information Technology
- Waste Processing Technology
- Effluent Analysis
- Automated Equipment Technology
- Sensor Technology
- Technology Strategic Planning
- Bulk Materials Handling
- Training and Professional Development

The Illawarra Technology Corporation is a comprehensive service provider - in no way 'just another University business company'.

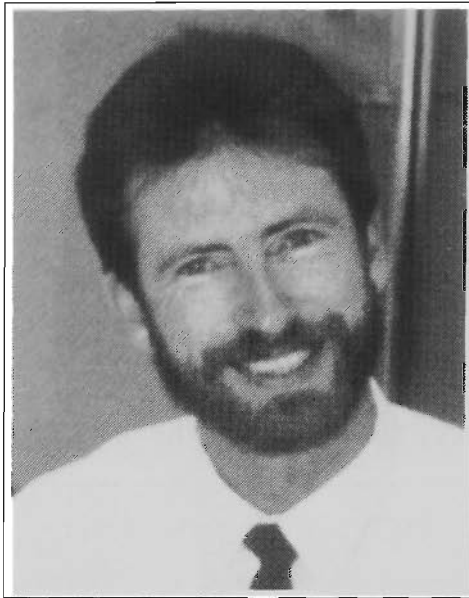
Our highly professional staff have extensive experience from a multitude of professional sectors, as well as from virtually every key industry sector.

The transfer of technology between industry sectors is a key element of ITC's service and a fundamental reason why so many clients seek out ITC for its professional involvement.

Employment effects of new technologies

As part of a number of studies examining the impact of new technologies in the workplace, TASC staff member Laurie Stevenson presented a paper at the ACTU 'Job Redesign Conference' held in February. The paper examined the employment effects of new technologies in the financial sector, and attracted considerable interest. Further enquiries have been received concerning the work being carried out by TASC in the banking and finance sector.

Further information: Laurie Stevenson (042) 268866



Laurie Stevenson

Additionally, during 1991, a number of organisations, including the Australian Tax Office, and the Engineering Business Unit of OTC, engaged Barbara Lepani to undertake strategic reframing of their business in response to the pace and scope of change in their business environment. Participants at the Centre for Strategic Leaders in Queensland, a mixture of private and public sector organisations, have indicated an interest in Barbara's expertise in this area.

Further information: Barbara Lepani (042) 268866.

Study of land transport options

The Centre for Transport Policy Analysis is currently involved in an intensive study of land transport options for the New South Wales coal industry. In particular it is assessing the cost impact of the proposed Inter-State Commission policy on road user charges. It is expected that this will be one of the most detailed reports on transport costs of coal carried out in Australia for some considerable time.

Further information: Ross Robinson (042) 268915

Aboriginal Foundation Studies Program

from page 1

ity for the delivery of appropriate programs, and student support and counselling would be provided by the Aboriginal Education Unit, which is located within the University.

Further information: Trevor Maher (042) 268984.

Banking and finance conference

Following an established contract for the Australian Bank Employees' Union (ABEU) in the banking and finance area, the Centre for Technology and Social Change (TASC), within the Policy and Management Division, has been commissioned by the ABEU to prepare a conference paper for presentation at the International Federation of Commercial, Clerical, Professional and Technical Employees (FIET). The Conference is to be held in San Francisco in August 1991. The paper will examine contemporary issues confronting banking unions such as financial sector deregulation, economic globalisation, internationalisation of organisations, new technologies, labour force trends and employment conditions.

Further information: Laurie Stevenson (042) 268866

Donation of equipment for Resources Division

The Resources Division has received a significant donation from Bradken Consolidated, a Division of the ANI Group, which operates a major foundry in Newcastle. Bradken will provide two electric arc furnaces, one with a capacity of 60 kilograms, and the second with a capacity of 250 kilograms, which will allow large scale laboratory to small scale industrial size smelting research to be undertaken by the staff at the Microwave Applications Research Centre (MARC). This equipment has an estimated value

in excess of \$200,000, and has been donated without encumbrance.

It is anticipated that the furnaces will be used for other smelting research, in addition to the waste iron bath smelting operations, and the team at MARC are already looking for new areas where these furnaces can be utilised.

Telecom Support Centre

Mr John Hannaford, NSW Minister for State Development, officially opened, by video conference from Sydney, Telecom's new \$1 million Suppliers Interface Support Centre in the Illawarra Technology Centre on 30 April.

The new Centre, an Australian first, will help Telecom suppliers conquer domestic and overseas markets by giving the use of Telecom's world-class network systems for product testing. Australian telephone consumers will be the ultimate beneficiaries, with the introduction of a wider choice of customer equipment and value-added services.

Resources Division – strategies for the future

As part of the development of a strategy plan to assist its activities over the next three to five years, the Resources Division has commissioned a technology study.

A Workshop held in conjunction with the strategy involved representatives from industry and government, identified areas for future business opportunities. In addition to the Division's acknowledged expertise in the waste-management and processing areas, the Division will also concentrate on a number of key enabling technologies, which have broad range application in a number of industry sectors. Three of these are bulk materials handling, microwave processing, and materials technology.

It is anticipated that the combination of the focus on waste and in environment, together with the enabling technologies, will provide a major stimulus and challenge for the Division in the next few years.

Further information: Paul Howlett (042) 268827

NSW projects for mining industry

In conjunction with the Faculty of Engineering at the University of Wollongong, ITC has received support from industry (the NSW Coal Association and the United Mineworkers Federation of Australia) and the State Government via the NSW Education and Training Foundation (ETF), for the development of innovative state of the art computerised training mediums for the coal mining industry.

Support has been provided for two separate projects, which aim to:

i) develop a real time simulation of a coal mine operation in graphic form (animated), whereby an operator can access, load and control his/her driving of a mine personnel car within a mine, thus enabling self-paced training to be undertaken in remote mining locations,

ii) develop a latent image module on the coal mining industry, to provide interactive training with built-in assessment, to enhance training and career path development for mine workers.

The support for these projects, from both industry and government sources, is in the vicinity of \$800,000.

Further Information: Associate Professor Bill Upfold (042) 213040 or Aapo Skorulis (042) 268999.

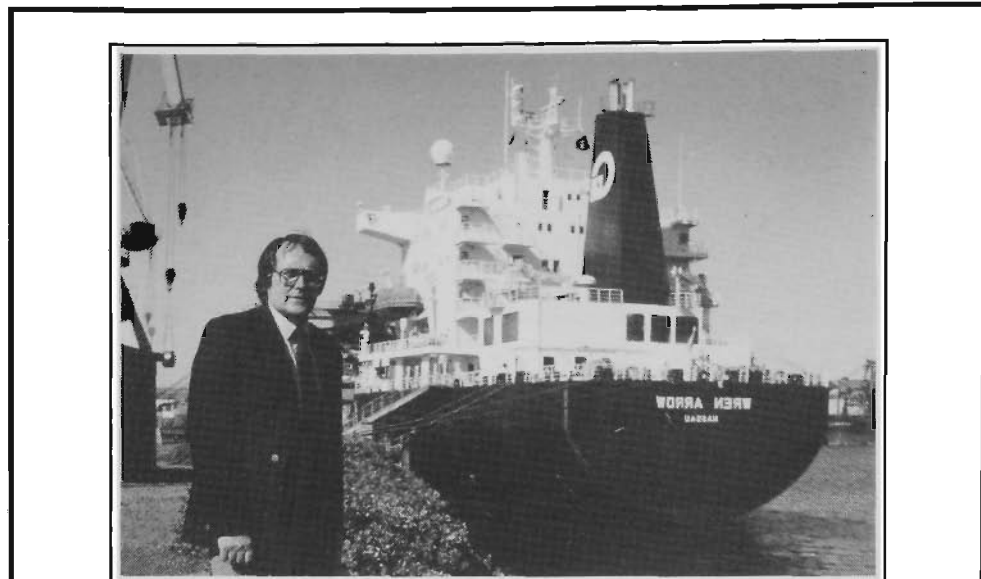
Parking study computer software

In February the Centre for Transport Policy Analysis, in conjunction with the Wollongong City Council, made public its recently developed traffic and parking study computer software package, MICROPARK. The package has been designed to assist engineers and planners in providing for city parking and monitoring city traffic flows.

Further information: Ross Robinson (042) 268915

Modular program of Open Systems training courses

The Informatics Institute of ITC and leading consultancy Softway Pty Ltd have combined their expertise to meet the changing demands in information technology training, and have launched a modular program of OPEN SYSTEMS



Dr Ross Robinson, Director, Centre for Transport Policy Analysis

Review of port pricing policy

During February, the Centre for Transport Policy Analysis was invited to review port pricing by the port of Melbourne under its new pricing scheme. The Centre was one of three organisations approached to provide its comments, and reflects the significant standing in which the Centre is held in the port and maritime industries in Australia. The Port of Melbourne Authority has wel-

comed the study, which is expected to be important in further revisions of the port's prices.

As part of its Executive Development Program, the Centre will hold seminars in both Sydney and Melbourne to outline the Centre's recent research findings in relation to port pricing.

Further information: Ross Robinson (042) 268915

training courses capable of being tailored to individual requirements.

The training program, heralded as opening the door to the workforce of the future, was launched at Sydney's Powerhouse Museum on 18 April 1991, with an audience composed of prominent figures in the computer industry, as well as the fields of politics, education and computing skills training.

The UNIX-based OPEN SYSTEMS technology provides the common denominator in the diverse computer environment, and can provide a workforce trained in skills that will be relevant for a decade.

The NSW Education and Training Foundation (ETF) recognised the value of the technology, and supported development of the program with a grant of more than \$300,000.

The venture is fully supported by IBM Australia, Digital Equipment Corporation, and major end users such as the NSW Roads and Traffic Authority.

The Informatics Institute has permanent facilities at the Illawarra Technology Centre, University of Wollongong campus, and also at the University's Sydney Centre, Level 7, 48-53 Wentworth Avenue.

Further information: Helen Wallach (02) 281 8800.

Alcatel STC contract for export-market payphones

A \$400,000 research and development contract to design an integrated circuit for speech detection has been signed between Alcatel STC and the Centre for Information Technology Research. The circuits will be used in payphones for export markets. The chip will be included in the control circuitry of payphones to provide automatic timed services.

Further information: Ian Reinecke (042) 268937

Frameworks Program

The Frameworks Program is a development by Associate Professor Brian Cambourne and Ms Jan Turbill of the School of Learning Studies in the University of Wollongong.

The Program involves teachers at the primary level in enhancing their understanding of the basic inter-relationship of language and learning. Humans have acquired knowledge, and become able to develop and apply it, only through use of a language. Cultural diversity arises in part from the use of different languages in the learning process and hence differing patterns of thought.

It is vital for teachers to understand and build on the language skills of their students. The Frameworks Program is de-

signed to empower teachers more effectively to manage their interaction with individual students. Developments of the Program will involve teachers and the parents of students in Years 4-8.

The Program was marketed extensively in the USA in 1990 by Associate Professor Cambourne, Jan Turbill and Graham Frost of ITC, and is currently being implemented in conjunction with the Wayne Finger-Lakes Board of Cooperative Educational Services in New York, Arizona, Colorado, Illinois and Virginia.

ITC will administer the Program and intends to expand the market to all states of the US and Canada. Negotiations between ITC and interested parties in Southeast Asia are also under way.

Further information: Graham Frost (042) 268884

Waste Processing Research

The Resources Division, as part of its continuing research into waste processing, is involved in a project investigating the conversion of asbestos wastes into a useful saleable product.

Other areas also under investigation are waste newspaper processing and recycling, together with a number of other waste processing operations where there may be opportunity to convert wastes into saleable products, hence making the disposal of the wastes far more cost effective for the community.

Earlier work on waste processing technology, commenced under Professor Howard Worner, has provided an excellent base for this endeavour.

Further information: Paul Howlett (042) 268827

Focus on the Wollongong English Language Centre

Special language projects

The WELC hopes to increase its involvement in special projects of different kinds. A small group of Thai students has recently begun a six-month professional English program at the Centre, in which they will undertake project-based work in their specialist fields. They are members of an AIDAB-sponsored group, and are the first participants in the scheme who have not been based at a centre in Sydney.

New Business English course

After enrolling its largest-ever number of students (340) in December, and while consolidating its traditional academic base, the Wollongong English Language Centre (WELC) is diversifying into fresh areas.

A new Business English course is being developed in cooperation with the Williams Business College. Students who complete the course successfully will have access to Williams Business College programs. At the same time, the number of school and cultural exchange groups continues at a high level.

Further information: Peter Day (042) 268914

Students' success

The academic programs of the Wollongong English Language Centre (WELC) are producing some impressive statistics. According to figures supplied by the University of Wollongong, the Precourse university entrance program has achieved a 75 per cent pass rate, with WELC graduates, who have passed at A or B levels, attaining 80 per cent pass rates in their first year undergraduate

studies. WELC attributes these results, which are better than those of the student body as a whole, including native Australians, to the intensive preparation in academic skills forming the core of the Precourse program.

Academic students still constitute 75 per cent of WELC enrolments. They are drawn from most of the countries of the Australian region, with large contingents from Korea, Taiwan, Thailand, Indonesia, Japan, Hong Kong, and the Middle East.

Accreditation for College

In January this year the Wollongong English Language College received accreditation as an IELTS (International English Language Testing System) Centre. Several staff members have completed the training program required for IELTS markers.

The Illawarra Technology Corporation Limited

Northfields Avenue, Wollongong

PO Box 2112 Wollongong NSW Australia 2500

Telephone: (042) 26 8999; Facsimile: (042) 26 8807

Editor, ITC News: Ann Webb (042) 26 8800

Education program launched here

APPLE Computer Australia and the University of Wollongong have embarked on a joint project called the *Christopher Columbus Program—Down Under*.

Just as Columbus discovered new worlds, this program aims to discover new ways of learning.

The project aims to research effective applications of interactive multimedia in education and training, and to develop educational courseware for both learners and teachers/trainers for Australian and overseas markets.

It is also investigating the use of international telecommunication systems in learning environments, through electronic mail links between Australian and the world wide network of centres participating in the program.

The University of Wollongong site is the first Australian representative in the Christopher Columbus program, which is based in the USA and incorporates 22 similar collaborative centres throughout the world.

The projects that are developed from the program will be based in the information technology research laboratory, established by the Education Policy Program on behalf of the Faculty of Education, which is specialised in educational applications of interactive multimedia.

The chief researchers in the project



Apple's NSW Education Manager Gary Ferguson-Smith

are Dr Barry Harper, Associate Professor John Hedberg, Professor Carla Fasano and Professor Russell Linke, members of the Education Policy Program, a funded research program of the University of Wollongong located in the Faculty of Education.

The project focuses on working with selected local schools to develop cost-effective uses of interactive multimedia in the K-12 curriculum.

Keira Technology High School is currently the local school partner and other

schools will be able to join as the project expands.

Apple Computer Australia is supporting the program through links to international telecommunications, supply of experimental software and technology to the University and collaborating schools, and funding production costs for the initial Interactive Multimedia package on ecology, which is being designed for use in the Years 11-12 biology curricula throughout Australia.

University and City co-operate in quality campaign

FEDERAL Industry and Commerce Minister Senator John Button launched a major Illawarra campaign on May 20, designed to focus attention on total quality as the primary aim of all manufacturing and service operations.

The campaign is called the Illawarra Quality Improvement Network.

The University Pro Vice-Chancellor, Professor Lauchlan Chipman, is patron of the Quality Network. Its chairman is Wollongong City Council General Manager Rod Oxley, who is also a member of the University Council.

Among those who have already aligned themselves with the Quality

Network are BHP, the NSW Police Service, the Illawarra Area Health Service, the *Illawarra Mercury*, the NSW Department of School Education and several other leading private and public sector manufacturers and service providers.

Professor Chipman said the campaign had four main goals:

- to promote the principles of Total Quality Management (TQM) throughout the Illawarra community;

- to provide a basis for exchanging information, practical experience and other relevant knowledge between Illawarra organisations and with other community that may adopt a similar

commitment to TQM.

- to assist public and private enterprises to adopt quality management principles and practices.

- to provide opportunities for the development of training and education programs on TQM.

The University of Wollongong was one of the first universities in Australia to introduce an interdisciplinary post-graduate program in TQM.

For further information about the Illawarra Quality Improvement Network, contact the Executive Officer, Ms Jacqui Forst, at Wollongong City Council, tel. (042) 27 7066.

Department of Civil and Mining Engineering

Postgraduate Research Seminar
June 6: Z. Ichwan, *A multi-viewing data entry system*. Chairman: Dr Baafi.
July 25: T. Lu, *Dumping characteristics of reinforced concrete both beams* Chairman: Associate Professor Loo.
August 1: H. Kavoski, *Unconventional composite beams*. Chairman: Dr Wong.
12.30-1.10pm, Photogrammetry Room - Building 4, Room 138.
For additional information contact Dr Baafi (ext 3031)

Department of Computer Science

Postgraduate Seminar
June 14: Dzung Le, *Negation In Prolog*; Pattarasinee Bhattarakosol, *Presentation of Consistent Information from independent Databases*. Michael Birt Library, 1st floor, Seminar Room 5. 1-2.30pm.

Department of History and Politics

June 5: Andrew Wells, *Marxism and Labour history*.
All seminars are held at 5.30pm in Room 19.2043. For further information contact Melanie Beresford, ext. 3669.

Department of Modern Languages

June 6: French Political Attaché, M. Rémy Perraud, *La France dans le monde: la politique étrangère*.
June 13: French Press Attaché to Aus-

Due to the increased demand for this section, in future it will be available only to staff and present students. Anyone wishing to advertise must complete a form in Planning and Marketing, Administration Building. This advertisement will be run once. For a repeat it will be necessary to complete another form.

FOR SALE

Townhouse in quiet area adjoining a reserve at Kiama Downs. As new condition throughout, 2br, one with built-ins. Large living area, very generous backyard. \$112,000. Tel (042) 32 2602.

FOR SALE

Most items available including a new dining suite, fridge/freezer, washing machine and antique Victorian grand-

Seminars

tralia, M. Kostia Sakow, *The French media*.

Lectures will be given at 10am, Room 19.2114. First two seminars given in French, the last in English.
For further details, contact Dr Susan Yates, ext. 3636.

Department of Public Health and Nutrition

June 11: Professor Phillip Barter, Chair of Preventive Cardiology, Graduate School of Health and Medical Sciences, *Regulation of Cholesterol Transport*.
All seminars from 12.30-1.30pm in 5.G03
RSVP or further information Linda Tapsell. ext 3152

Education Policy Program

July 19: Ms Jan Hall, *Educational policies and strategies for the gifted and talented child*.

August 16: Associate Professor Malcolm Harris, *Integration of management and motivation theory*.

August 30: Professor Russell Linke, *Performance Indicators in higher education*.

September 6: Associate Professor John Hedberg, *Information Technology and education organisation*.

September 27: Dr John Patterson and Mr Gregg Rowland, *Teachers and involvement in policy*.

Advertisements

mother chair, brass scales, etc., etc. Enquiries ext. 3012 (daytime), (042) 28 9475 (evenings).

FOR SALE

88 KE Laser GL hatch, white, low Kms, excellent condition. 9 month rego. \$11,800 ono. Ext. 3902.

TO RENT

Furnished flat becoming vacant end of June. Suit 2 male students. Rental \$80 per week, plus electricity, minimal charge for all vacations. Situated between Corrimal and Bellambi railway stations. (042) 83 3607

October 18: Professor Carla Fasano, *Knowledge, ignorance and epistemic utility: Issues in the construction of indicator-system*.

November 1: Ms Nita Temmerman, *Perception of the music community about the role of the Australia Council Performing Arts Board*.

November 14: Mr Ian Brown, *Introduction of design education: Implication of educational policy*.

All seminars will be held in building 21, room 101 at 12.30pm.

School of Creative Arts

Research Colloquia
July 25: Banduk Marika, *Identity and Country*. Banduk Marika gives a view of art in 1991 from her position as an artist from Nhulunbuy, north-east Arnhem Land, in the Northern Territory.

August 22: Anne Brennan, *Identity and Artefact*. Anne Brennan, a jewellery maker, also writes extensively on craft, personal experience and material culture.

October 31: *Studies in Contemporary Arts Practice and Performance in Australia*. Presented by members of the University research program: Diana Conroy, Ian McGrath, Sue Rowley, John Senczuk, Andrew Schultz, Peter Shepherd and David Vance.

All colloquia are held in Building 24, G01 - Music Auditorium from 4.30-6.30pm. Enquiries to (042) 21 3302.

Postgraduate Seminars for 1991 will be held on May 16, July 25, August 22, October 31. All seminars are in the Music Auditorium from 4.30-6.30pm.

Gender and Education Unit and Equity in Education

June 5: R.C King and N.J. Kyle, *Evaluation and investigation of link programs: a preliminary report*.

All seminars are held at 12.30pm in 22.107. For more information contact Associate Professor Noeline Kyle, ext. 3374.

Graduate School of Health and Medical Sciences

June 20: Dr Laurent Lagrost, Graduate School of Health and Medical Sciences, University of Wollongong. *Interaction of the human cholesteryl ester transfer protein with low-density and high-density lipoprotein particles*.

Seminars are held in 5.G02 - 12.30-1.30pm. Enquiries and RSVP to Christine Contacos, ext. 3952.

Dept of Community Services and Health

Australian National Council on Aids Applications for the 1992 AIDS research training awards are being called for. There are four categories under which applicants may apply for funding; Postgraduate Scholarships; Post-doctoral Fellowships; Research Traineeships; and Training Development Awards. These training awards are for all aspects of researching HIV/AIDS. The University closing date is June 21. The External Closing date is July 1.

National Health and Medical Research Council

Medical Postgraduate/Dental Postgraduate Research Awards

Applications are being called for the above postgraduate awards. The scholarships are awarded to full time students enrolled in an Australian institution for a higher degree. Applicants must be Australian citizens or permanent residents. The University closing date is June 21. The External closing date is June 30.

Australian Heritage Commission Register of Consultants

Expressions of interest are being called for to be placed on the register of consultants for the AHC. Specialists in natural, Aboriginal and historic environment fields as well as those specialising in National estate areas are the bulk of one such register. Consultants in the information and education fields are also required on another register. The University closing date is June 14. The External closing date is June 28.

Dept of Foreign Affairs and Trade North-east Asia Analytical Unit Register of Expertise

Enrolment on the above register is being requested for the duration of 12 months. Areas of expertise are; economic, political and strategic developments in North-east Asia (China, Hong Kong, Taiwan, the Korean Peninsula and Japan) and/or the implications of these for Australia; management and coordination of analytical studies; and the critical appraisal of analytical projects. The University and External closing date is any time.

A.W. Howard Memorial Trust (Aust. Institute of Agricultural Science) Travel Grants 1992

Research Funds

The sources of research funds given below are available to members of academic staff. Further information, including application forms, may be obtained from Lyndal Manton (ext. 3201). Intending applicants are reminded that all research applications must be forwarded through the Graduate Office.

Applications are called for travel grants with the aims of "to encourage and promote research and investigation in the fields of natural science and social science, including economics which relate to the development, management and use of pastures". Applicants must be engaged in aspects of pasture research and preference is given to those under the age of 35 (older applicants are not excluded). The University closing date is August 9. The External closing date is August 23.

Voluntary Care Association of NSW/ACT Inc.

Scholarship for students of Gerontic Nursing

Applications for this scholarship are being called for. Applicants will be currently employed or be seeking employment at a senior level, not less than 30 hours per week, in a VCA facility and should have five years experience in the field related to gerontic nursing. The closing date is unknown.

Gowrie Scholarship Trust Fund Research Scholarships 1992

These scholarships are both undergraduate and postgraduate and the main qualification is they are available only to members of the Armed Forces who served in a combat area during the War of 1939/45, or to their direct lineal descendants.

Under new selection rules all applicants must apply through the University. The University closing date is January 2, 1992.

Rothmans Foundation Fellowships

Applications are called for the above fellowship which enable Fellows to undertake postdoctoral research within an Australian university. Applicants must have held their doctorate for no more than three years and can not be permanent members of academic staff, or on sabbatical/study leave.

Australian Electricity Supply Industry Research Board

Research Grants 1992

Applications are called for the above research grants in a broad range of tropics; Generation; Systems; Customer service and Environment; and Business Development. Also included in these grants are supplementary scholarships, for research students already on a government (APRA) or university (UPRA) scholarship. The University closing date is June 28. The External closing date is July 5.

Industry Research and Development Board (GIRD)

Research Grants 1992 Information Technology and Communications Technology

Applications are called for as either expressions of interest or full applications. Information technology is termed as managing and processing information, communications technology is in communicating information. The University closing date is July 5. The External closing date is July 19.

Publications Received at the Graduate Office

Pig Research and Development Corporation, Research and Development Plan 1991-1996

Carnegie Corporation of New York Annual Report

Grants and Appropriations 1990

See how \$44,757,286 was spent on research for US/Commonwealth colleges/universities.

Previously Advertised Closing Date

The British Council Travel Grants	Any Time
Australian Academy of Humanities (Publication Subsidies)	Any Time
Clive and Vera Ramaciotti Travel Grants	Any Time
Criminology Research Grants	Any Time
Australian Arts Council	Various Dates
Arthritis Foundation Research Awards and Fellowships	June 14
Fellowships with Federal Republic of Germany	June 14
Aust. Tobacco Research Grants and Scholarships	June 14
Australian Academy of Humanities (Travelling fellowships)	June 14
NSW Cancer Council Research	

Continued page eight

What's On

■ **Moonlight Serenades** - Swing to the great songs of the thirties in music by George Gershwin, Cole Porter, Jerome Kern, Irving Berlin, Noël Coward and Glenn Miller. Presented by The University Singers. Bridge St. Theatre. Thursday June 6, 8.15pm; Friday June 7, 8.15pm; Saturday June 8, 2.15pm and 8.15pm. Bookings: tel. (042) 29 6144.

■ **The Art of Lunch** - Thursdays from 12.35-1.25pm, in the Music Auditorium of School of Creative Arts. The upcoming events are: June 6: John Eveleigh presents *A video as documentation*.

■ **Wollongong Workshop Theatre** is holding a season of one-act plays. The plays are all new and were written by local writers. The plays are: *The River Runs Deep* by Vesna Malnar; *The Prayer of a Heart* by Paul Rybak; *Hanging by a Thread* by Peter Bird; *Guilty Party* by Brian McGinn. The season will run on Wednesdays June 5 and 12; Fridays June 7 and 14; Saturdays June 8 and 15 at 8pm. Prices are adults \$8 and concession \$6. Bookings, tel. 85 1811 or Redback Music (The Mall) 29 6169.

■ **The Illawarra Committee for Overseas Students (ICOS)** has announced its calendar of events for this year. The events are: July 27: Snowy Mountains (one day) \$15 and \$10. Tickets and details are available from the ICOS office in the Union

Building next to the Careers and Appointments Service, Monday to Friday 9am-2pm. Tel (042) 21 3158 or ext. 3158.

■ **Director Stephen Thomas** has made surrealism as the key to his interpretation of Shakespeare's *A Mid Summer-Night's Dream*. To be performed on June 5, 6, 7 and 8 at the University of Wollongong Performance Space, the play is presented by the School of Creative Arts. Thomas, a post-graduate student, will break free from the traditional earthy dream sequence and create a contemporary working of this well-loved Shakespearean play. Enquiries to Leonie Molloy (042) 21 3580. Bookings (042) 21 3996 or 21 3987.

■ **The Illawarra Performing Arts Centre Guild Theatre** is preparing for a season of 'Annie'. Directed by Robert Peet, Annie has Peter Shepherd as musical director and Linda Shaw Wilson as choreographer. The season opens Friday July 26 then July 27 (two shows), 28 (two shows), 30, 31, August 1, 2 and 3 (two shows).

■ **Open Day** - Sunday August 25.

■ **Graduation Ceremonies** - October 10-11.

From page seven

Grants	June 14
Asian Studies Council Languages/Research Scholarships	June 14
Apex/Autism Research Grants	June 14
Oceanographic Research Vessel 1993	June 14
ARC Small Grants 1992	June 17
RACGP - Family Medicine Program	June 21
Worksafe Australia (Grants in Back and Hearing Disorders)	June 21
Academy of Science Fellowships	June 21
NSW Literary Awards 1991 (Play and Scripts)	June 21
National Campaign Against Drug Abuse Scholarships	June 28
Cooperative Research Centres	July 3
Electricity Supply Association (National Database)	July 12
Academy of Science Conference Funds	July 19
Asian Fellowship Scheme	July 19
Sir George Murray Prize	August 9
Harkness Fellowships (USA Travel and Study)	August 16
Multiple Sclerosis Society P/Grad Scholarship	August 16
Nuffield Foundation Fellowships 1992	August 30
AFUW Queensland Inc Scholarships	September 20
Bilateral Science and Technology	

Collaboration Program September 20
Drug and Alcohol Research Centre (Syd Lovibond Prize) September 20

Grants Received

Dept of Community Services and Health

General Practice Evaluation Program: Dr J Fardy - IAHS; Dr D Jeffs - IAHS; Professor D Calvert - Public Health and Nutrition; Professor C Ewan - Public Health and Nutrition; "Which GPs Provide Quality Care?" - \$112,630

Rural Health Support Education and Training: A/Pr R Harris - Public Health and Nutrition; Professor C Ewan - Public Health and Nutrition; Professor D Calvert - Public Health and Nutrition; Professor S Speedy - Nursing; "Developing a National Network of Rural Health Education" - \$75,900

Dr M Harris - Public Health and Nutrition; Dr A Wallace - UQLD; Professor C Ewan - Public Health and Nutrition; Dr R Jayasuriya - Public Health and Nutrition; "Evaluation of the Provision of Specialist Medical Services to Remote and Isolated Patient Groups" - \$31,087

Dept of Primary Industries and Energy National Energy Research Development and Demonstration Program

Professor H Worner - Microwave Applications Research Centre; Dr D Bradhurst - Microwave Applications Research Centre; "Microwave Aided Thermal Processing of Coals" - \$527,000.

Dr P Wypych - Mechanical Engineering; Professor P Arnold - Mechanical Engineering; "Development of Handling Techniques for the Injection of Coal into Boilers" - \$350,396.

Stop Press

Cholesterol and your heart - Lessons from Research

Dr Philip Barter will hold a public seminar at 6.30pm on Thursday June 19. Bookings with Marilyn Yatras, tel. (042) 21 3943