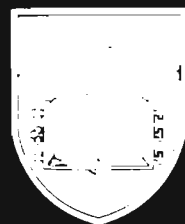


# UNIVERSITY OF WOLLONGONG CAMPUS NEWS



Number 14

Wednesday, 24 June 1992

## Illawarra Technology Corporation Limited

**Report  
to  
Council**

The Illawarra Technology Corporation (ITC) expects to report a nett profit in excess of \$200,000 on a turnover of \$13.8 million for the financial year ending 30 June 1992.

This forecast result will be particularly pleasing, given the continuing recession in the Australian economy, and the significant investment in technologies whose potential will not be realised for some time to come.

During the current financial year, ITC has also provided to the University \$400,000 for scholarships, and the second instalment of \$50,000 in a five year commitment of \$250,000 for the joint chair in Materials Handling and Processing.

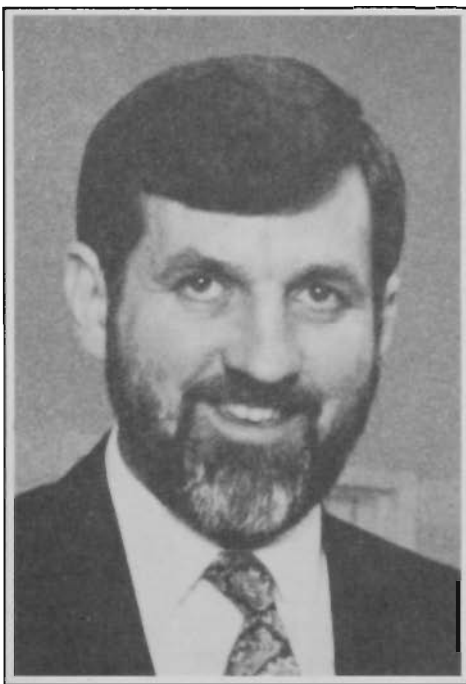
In addition, in keeping with the Board's decision to patiently invest in R&D activities to protect the intellectual assets of the University, some \$400,000 was invested in 1991/92 in the Centre for Technology and Social Change and the Automation and Engineering Applications Centre.

In recent weeks, ITC has received advice from clients which makes the order book stronger than at any time over the past two years.

Some of the major projects and prospects include the following.

□ F J Walker's United States parent Conagra Incorporated, has indicated approval in principle of significant expenditure for prototype development by ITC in food processing technology.

□ The Australian International Development Assistance Bureau (AIDAB) is sponsoring twenty engineers from India on a training program being



*Managing Director of the Illawarra Technology Corporation, Jim Langridge*

presented by the University of Wollongong and ITC. This is the first significant contract secured by ITC with the AIDAB. (see photo page two)

□ Letters of intent have been received from Pacific Power (Elcom) and the Water Board in relation to the continuation of the Biofly waste treatment and recycling project. The Water Board has also committed funding to a Sensing Project submitted by the Intelligent Polymer Research Laboratory. The combined value of these projects exceeds \$0.5 million.

□ The trial smelt of sewage and steelworks dust under the ENVIRONMENT Project at BHP Shortland on 24 April 1992 proved ex-

tremely successful. The Water Board and Pacific Power (Elcom) have committed \$1,000,000 for the 1992/93 financial year. A proposal for the ongoing development and commercialisation of the process over the next five years, with a total research value of \$3.5 million, has also been submitted.

□ PT Krakatau Steel of Indonesia has signed agreements with the University of Wollongong and ITC for the delivery of Graduate Diploma and Masters programs in Materials Engineering in Indonesia on a commercial basis, commencing in August 1992.

□ Letters of intent have been exchanged for the delivery of computer training courses in the Middle East, later in 1992.

□ A leading overseas airline company has sent a letter of intent to Qantas (our joint venture partner) for a pre-set line. ITC will receive royalty payments during 1992/93 for its contribution to the development of this technology.

□ The Frameworks project, a joint venture in advanced literacy training with the Wayne-Finger Lakes Board of Cooperative Educational Services in New York, has completed its first year successfully and will again produce a nett profit in 1992/93. This project is exploiting intellectual property developed in association with the Faculty of Education of the University of Wollongong.

□ A contract with Ericsson for Studies in Signalling Systems was signed in late April, at a value of \$452,000, by the Corporation's Centre for Information Technology Research.

□ Negotiations with the Aboriginal and Torres Strait Islander Commission (ATSIC) have progressed favourably

*Continued page two*

**There will be no issues of Campus News on 15 or 22 July during the Autumn Session recess. Material is required by midday 20 July for the issue of 29 July**

## Brief News

Dr Joan Cooper has accepted the position of Associate Professor and Head of the Information Technology and Communication Unit in the Faculty of Informatics.

Dr Cooper has 18 years' experience in the Information Technology field including four years as Head of the Department of Management at the University of Newcastle and currently as Reader in the Information Systems Department at ANU.

She was involved in the establishment of the Bachelor of Information Science at Newcastle and the Bachelor of Information Technology at ANU and is involved in the day-to-day management of the latter degree.

Her previous employment includes a Lectureship in the Department of Commerce at Newcastle and periods as a computer programmer and professional officer.

She has served on the Executive Committee of the Australian Institute of Management.

For several years she served on the computer committee of the Newcastle

Mater Hospital.

Her interests span the technical and policy areas. She is currently involved in research into "Business Integrity and Security in Electronic Trading".

This involves business, policy, technical and regulatory issues.

She has research interests in computer security and so her presence will strengthen and enhance the recently formed computer security group.

Her PhD was done under the supervision of Professor Jennifer Seberry.

Dean of the Faculty of Informatics Professor Sid Morris said: 'I am very pleased that we have attracted someone of Joan's quality and experience to our Faculty.'

'Like other recent high quality appointments, it provides evidence of the ever-growing strength and attraction of the Faculty of Informatics and the University of Wollongong.'

Dr Cooper will take up her appointment in September.

A report by the National Board of Employment, Education and Training, *Assessment of the impact of the Higher Education contribution scheme on the potentially disadvantaged*, is available in the Library.

The Postgraduate Association is producing another newsletter at the end of July. Contributions are requested from postgraduate students, and members of staff.

Articles should be of general interest to postgraduate students, either on campus, or in the wider academic community. They should be no more than 1000 words, due to space limitations.

Naturally the editor, David Shaw reserves the right to edit for space reasons. Any edited contribution will be referred to the author before publication. Authors should include their name and department.

Contributions can be sent to David Shaw through the e-mail, or to the Centre for Research Policy, on a 3.5 inch floppy disk (Macintosh or MS-Dos) (which will be returned) or hard copy.

Deadline for contributions is 24 July.



*Under a Commonwealth of Australia AIDAB Award, twenty senior coal mining engineers and managers from India carried out a course of study presented by the University of Wollongong and the Illawarra Technology Corporation designed to further their skills in and knowledge of advanced coal production techniques as used in Australia.*

From page one

in relation to a contract for a Study of the Social and Economic Impact of the Community Employment Development Program (CEDP). A final decision from the Commission is expected prior to the end of June 1992.

□ ITC is hosting an AIDAB Seminar, *Development Import Finance Facility*, on 10 July 1992. The seminar will be opened by the Hon John Kerin, Minister for Trade and Overseas Development.

□ Seven proposals, with a combined value of approximately \$500,000, have been submitted for Training, Multi-

## ITC report to Council

modal Transport Studies and Port Studies in Dubai, Fujairah, and the Sultanate of Oman.

□ A joint venture proposal has been submitted for the establishment of an International College in the Sultanate of Oman. The initial proposal envisages facilities for English language training, Foundation Studies programs and relevant short course delivery.

For 1992/93 a budget is under prepa-

ration with a projected increase in revenues of around \$2.5 million to \$16.2 million and a nett profit target significantly in excess of 1991/92 levels.

Contributions of \$400,000 for scholarships, \$50,000 for the joint chair in Materials Handling and Processing and other donations to the University of Wollongong have again been included.

For further news from the Council meeting of 12 June see page four.



# Building on success with training programs for Russian managers



*The Russian delegation was shown over the University by Anna Rousch from the Illawarra Technology Corporation, one of several Russian speaking members of staff. (Front far left)*

Deputy Chancellor of the University of Wollongong, Dr Brian Gillett, in close co-operation with the Faculty of Engineering, the Department of Management and the Illawarra Technology Corporation, received a second Russian delegation in two months.

Fifteen petroleum engineers in middle management positions with the Samotlorneftj gas and oil production company from Nizhnevartovsk, Tumej, Russia arrived on 4 June for a three-week educational program.

The delegates were introduced to elements of western business culture (capital, investment, marketing, management and finance) and were given presentations on specific area of petroleum engineering.

Dean of the Faculty of Engineering, Professor Tibor G. Rozgonyi, provided

the group with expertise on petroleum engineering.

Professor Rozgonyi has taught subjects such as Reservoir Rock Properties and Reservoir Fluid Properties to petroleum engineering students, and has been involved in research and consultancy with directional drilling and horizontal well stability at his former university, Texas A & M University.

The Centre for Petroleum Engineering at University of NSW and Australian petroleum companies such as Esso Australia and Santos Limited also provided expertise.

Topics covered over the three weeks included reservoir management, drilling and well logging, enhanced oil recovery, production and operation, artificial lift methods, well completion/repairs, surface production, operation,

and automation, and infill drilling

The delegates also visited field operations of Santos Limited in Moomba, South Australia and the Esso facility at Long Island Point in Melbourne.

Professor Rozgonyi said: 'The Faculty of Engineering is committed to producing excellent engineers for both the domestic and international industries and in co-operation with the Illawarra Technology Corporation, to the internationalisation of relevant programs The Faculty aims to assist Australian industry with technology transfer and with domestic and international business development through joint ventures.

'These short courses provided for business representatives from the Federation of Russian States fit well into the mission of the Faculty.'

# Felicity McGregor fills casual vacancy

At the Council meeting on 12 June:

■ Ms Felicity McGregor was elected by Council to the casual vacancy in the non-academic staff position on Council. Ten nominations were received for the position which will last until the end of December this year. An election will be held later in the year to fill the position for the next three-year term.

■ A strategic plan, recommended by the Faculty of Science, was endorsed for the development and management of an effectively integrated unit which retains the distinctive academic identities of the disciplines of Geography and Geology. This plan is one outcome of the review of the two Departments which recommended discussion of closer co-operation.

■ Two new Bachelor of Education Conversion courses were approved.

■ A Visiting Committee for the Aboriginal Education Unit was estab-

## Council News

lished. (Visiting committees already in place in the faculties bring in expert advice and support from external members).

■ The Calendar of Dates for 1994 was approved. After discussion of possible alternative patterns at Senate and Council, the current pattern was endorsed as the one answering the majority of needs. (Details of the 1994 Calendar are available from Academic Services, ext. 3947).

■ Council noted that a full review of the Department of Science and Technology Studies would be held in September/October this year in accordance with University policy of reviewing Departments every 10 years. Ms Shirley Nixon was elected as the Council mem-

ber on the Review Panel.

■ The Interim Guidelines for Responsible Practices in Research (as prepared by the NH & MRC) were approved and a progress report requested on the research projects receiving University funding. Contact the Research Officer, Mr Aapo Skorulis, ext. 3386, for details of the guidelines.

■ The University Forward Planning Document - Towards 2000 - was approved as the basis for University planning until the year 2000. For details, please contact Canio Fierravanti in Planning, ext. 3373.

■ The 1993 Halls of Residence Budgets and fee schedules for 1993 were approved.

■ Council established a Chair in Business Systems.

■ The 1991 Annual Reports and Statements of Accounts from the Union and the Sports & Recreation Association were received.

■ A consultant's report reviewing academic salaries was placed before Council. While not endorsing the report, Council authorised the Vice-Chancellor to use it in discussion of the topic within the university.

■ Illawarra Technology Corporation - see report on page 1 of this issue.

## HARKNESS FELLOWSHIPS

**For Study and Travel in the United States, and the advancement of Australian - United States Relations.**

Up to **FOUR FELLOWSHIPS**, tenable for between 12 and 21 months are offered. The award includes return fares to the United States, living and family allowances, travel in America (with car rental allowance), tuition and research expenses, a book and equipment allowance and health insurance.

Candidacy is open to men and women in any profession or field of study who are over the age of 21 years. Strong preference will be given to applicants who will be under 36 years of age on 1st September 1993. Candidates must by that date have a degree, or an equivalent qualification conferred by a professional body, or an outstanding record of achievement in the creative arts, journalism or other career. In addition, candidates for an M.B.A. must have had substantial full-time post-graduate administrative experience.

The Commonwealth Fund focuses on health care, education systems, and issues affecting the quality of life in cities, therefore The Australian Selection Committee would wish to encourage candidates from these areas, providing they meet the overall criteria of exceptional ability and promise. The Committee will also aim to recommend outstanding young people from other fields of study or vocation.

Candidates must be citizens of Australia or have taken positive steps to achieve citizenship. They must not, between their 19th birthday and 1 September 1993, have spent more than six months in the United States.

**The closing date for applications is 31 August 1992.**

APPLICATION FORMS may be obtained by individual candidates on request by letter to the Australian Representative of The Commonwealth Fund: Mr R.D. Beale, C/-Department of Transport & Communications, GPO Box 594, Canberra, ACT 2601.

Further information from:

Professor John Gero, Department of Architectural and Design Science, University of Sydney NSW 2006.

## Upcoming Staff Development workshops

The Centre for Staff Development is offering the following workshops in June and July.

26 and 29 June: 9.30am-12.30pm, Presentation Skills for Teaching Staff whose First Language is Not English, Ms Liz Ellis.

30 June: 9-12am, Getting Your Paper Published (Humanities), Professor Stephen Hill.

30 June: 1.30-5pm, Lecturing in the Hope and Other Large Theatres, Mr Jeff Kevin, Mr Ian McGrath, Dr John Panter, Mr Barry Robson.

2 July: 9.30am-12.30pm, Using Video Conferencing in Distance Education, Mr Richard Caladine and Mr Brian O'Neill.

If you require further information after reading the workshop outlines, contact Staff Development Officer, Liz Ellis, on ext. 4101.



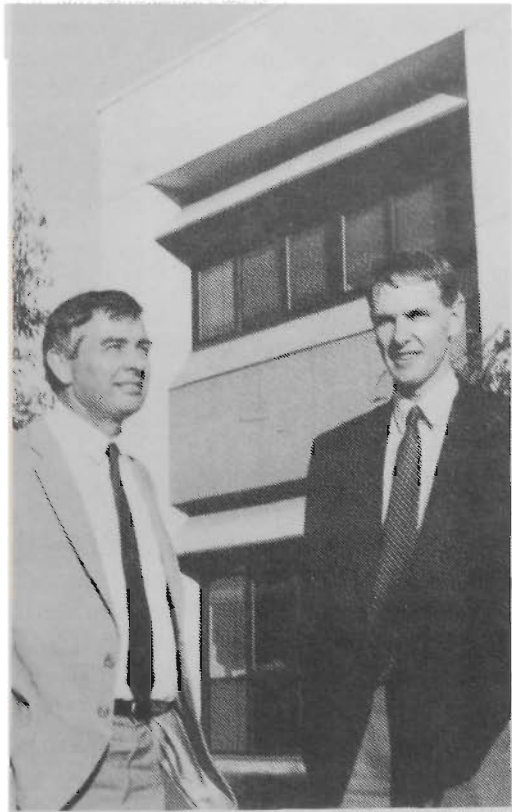


## NEW APPOINTMENTS

To capitalise on the technical excellence that exists within the Resources Division, and to assist in ensuring the future financial success of the Division, two appointments have been made.

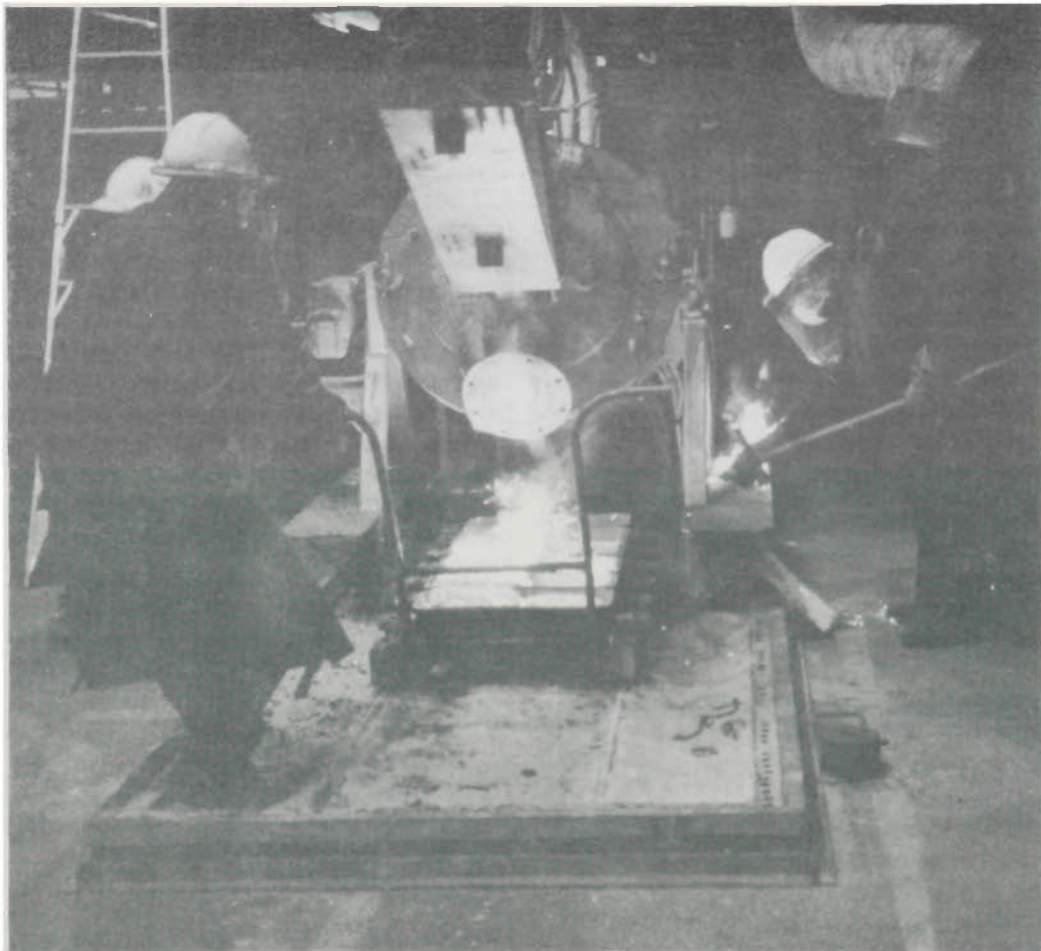
Peter Headley has been appointed Operations Manager, with responsibility for coordinating and managing all projects carried out by the Division. His brief is to improve the delivery, costing, margins, monitoring, variance control and adherence to timetable of all existing and future projects. It is anticipated that Peter's wide background of experience over 27 years, much of it in the food industry, will assist the Division in its penetration of the food industry.

Paul Blackwell, Sales Manager, is responsible for the identification of new business opportunities for all Centres within the Division. His role is to open initial discussions, to identify and quantify opportunities together with technical support, and to progress them through to contract or proposal signing. Paul has spent the past 12 years in the mining, food and waste water industries, the last four with the Swedish multinational Alfa-Laval.



✦ Peter Headley and Paul Blackwell

## WASTE RECYCLING PROJECT THE CENTRE OF ATTENTION



✦ Visitors watching the pour from the smelt.

The EnvIRONment project smelting process was successfully demonstrated recently to a group of distinguished guests at BHP's Newcastle Research Laboratories. Guests included senior representatives from the partners in the venture - Water Board, Pacific Power (formerly Elcom) and ITC - as well as visitors representing the Independent Panel on Intractable Wastes, the Waste Recycling and Processing Service of NSW, Hunter Water Corporation, Bradken, Comsteel and the NSW Public Works Department.

In the demonstration, pellets made from Port Kembla Steelworks dusts and sewage treatment plant sludge were continuously fed into a molten iron/slag bath held at 1500°C in a 100kg Plasma Arc furnace. The result was marketable cast iron, slag and zinc oxide powder. In early July a similar trial will be conducted using a commercial 5-tonne arc furnace to allow the Microwave

Applications Research Centre (MARC) to further demonstrate the potential to scale up the process to full size.

In earlier trials the first part of the EnvIRONment process was demonstrated, using steelworks dusts to improve sedimentation. In these trials the MARC process was used to operate one leg of the Port Kembla Sewage Treatment Plant. The major partners have now spent over \$1 million in developing the process, which is attracting considerable attention. ITC is now actively seeking partners for full scale commercial development of the process.

The demonstration was watched with particular satisfaction by Professor Howard Worner, the founder of MARC and the father of the EnvIRONment process concept.

*Further information:*

Gill Chuchill (042) 268821



# EXECUTIVE DEVELOPMENT PROGRAM MOVES OFFSHORE

The Centre for Transport Policy Analysis (CTPA) has now expanded its management training program into the international arena. The first of a number of training programs, organised on behalf of the Klang Port Authority in Malaysia, is

entitled "Intermodalism: New Opportunities for Asia". Dr Ross Robinson, Director of CTPA, noted that transport traditionally has been divided into a sequence of discrete transport movements, but that the focus in recent times has turned to the provision of intermodal, door-to-door operations.

While intermodal operations undoubtedly provide greater efficiency, the change has not been without problems, as modifications have also been undertaken in both operational and management areas to 'streamline' the transport chain.

Some of the issues which will be discussed at the training program to be held in Kuala Lumpur in June are designed to remove the 'mystique' surrounding the concept of intermodalism. Topics to be discussed include the assessment of economic benefits of an integrated door-to-door transport service and the impacts on Malaysian ports, shipping and government. The training program will also include highly specialised topics such as the computer modelling of an efficient integrated transport network as well as international conventions, and more

pragmatic and legal issues such as damage insurance and liability. Other programs being organised for the Klang Port Authority include continuing controversial topics such as port pricing and planning.

The Centre's Executive Development Program, established in 1990, focusses on management training at middle and senior levels in transport related areas, and programs are tailored to meet the needs of a particular port or country.

*Further information:*

Dr Ross Robinson (042) 268915

## DIFF SEMINAR

ITC, in association with R&D Connections, is hosting a Seminar on behalf of the Australian International Assistance Development Bureau (AIDAB). The purpose of the Seminar is to promote an informed public debate on the developmental, trade creation and industry development impacts of the Development Import Finance Facility (DIFF) and its future. Speakers include Mr Russell Rollason, Executive Director, Australian Council for Overseas Aid, Dr Peter McCawley, Executive Director, Asian Development Bank, and representatives from government, industry and academia. The Seminar will take place on 10 July 1992.

*Further information:*

Ann Webb (042) 268800

## TRANSPORT MODELLING

The Centre for Transport Policy Analysis (CTPA) has an ongoing and escalating involvement in the development and application of transport planning and shipping models. One of the models, the Multi-Modal Freight Flow model, is a sophisticated logistical model that focuses on ports and shipping while recognising that the maritime component cannot be isolated from the overall transport task. The model tracks freight flows from origin to destination, including land links at either end, port handling, and options for transshipment of cargo at intermediate ports.

The model is well suited to the investigation of issues such as port competition, landbridging and the development of hub and feeder operations. The benefit of the model is two-fold. First, it can be used to investigate the transport options and decision strategies of individual shippers. Secondly, it can be used to evaluate the behaviour of an entire shipping market.

The model was initially developed for the Bass Strait shipping trade and has been customised to model trade through Australian ports, and is currently being implemented in the Port of Wellington, New Zealand.

*Further information:*

Dr Ross Robinson (042) 268915

## COILED FOR ACTION A Weight Lifting Challenge

Hot-rolled steel coils produced at BHP Slab and Plate Products Division, Port Kembla, are finished at 600°C and take three days to cool. No more than the height of a doorway in diameter, and less than that in length, these little behemoths weigh up to 30 tonnes, about the weight of a medium-sized tank. The coils are used for further processing into thin steel products, such as sheet steel, tin cans and corrugated iron roofing, and are also exported to overseas customers.

The logistics of handling and moving these bulky coils is just one of the challenges being addressed by BHP in a continuing endeavour to improve efficiency and reduce production costs. To help meet the challenge, BHP enlisted the research skills of the Centre for Transport Policy Analysis (CTPA). A team of researchers, led by Dr Glen D'Este, worked for six months on the project, and developed a computer based analytical simulation model for the logistical system for these coils. The complexity of the system is attributable to the wide range of customer requirements.

*Further information:*

Dr Ross Robinson (042) 268915



✱ Pictured from left to right Mr Gary Langton, Transport Services Manager, BHP Slab and Plate Products Division, Dr Glen D'Este, Senior Research Fellow, CTPA and Mr Peter Beniuk, Company Secretary, ITC, discussing the logistical model for the handling of hot rolled coils.

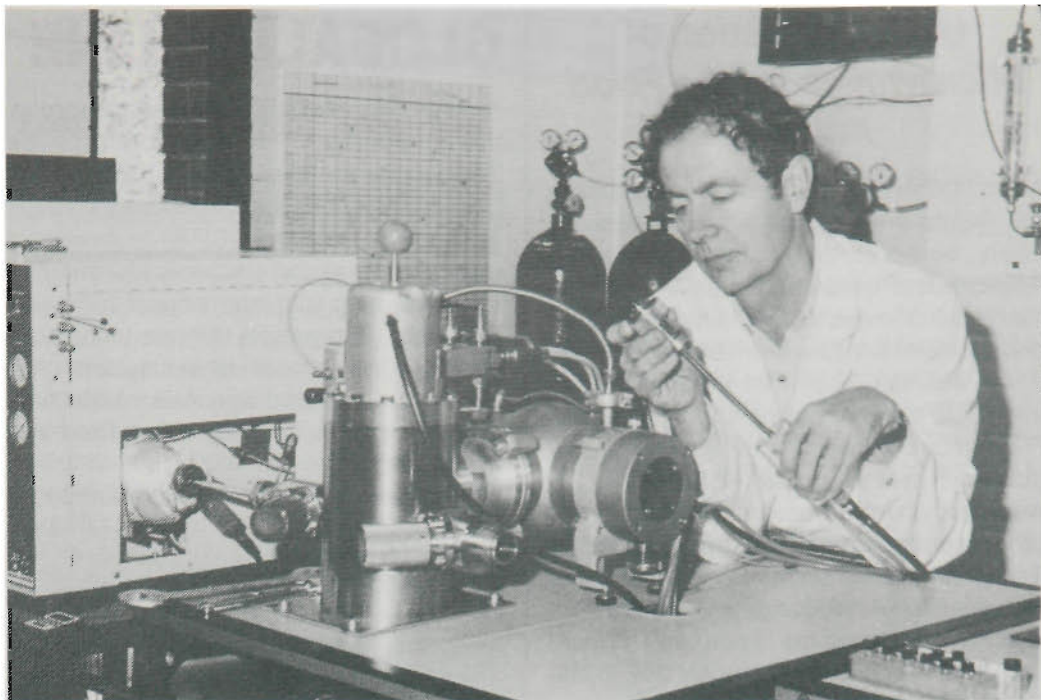


# PESTICIDE AND HERBICIDE ANALYSIS

Dr John Korth from the University's Department of Chemistry has recently returned from a four week training course with the US Environmental Protection Agency. His time was spent in Athens, Georgia and the Stennis Space Centre, Mississippi, familiarising himself with methods for analysis of pesticides in soils and drinking water. This experience will allow Dr Korth to analyse pesticides and herbicides within the University using current US-EPA techniques. These tests will be a valuable addition to the range of chemical and microbiological tests available through Biological and Chemical Analytical Services (BACAS).

Further information:

Gill Churchill (042) 268821



✦ Dr John Korth with Mass Spectrometer used in analyses.

## Major Vision Inspection Project Started

The Automation and Engineering Applications Centre (AEAC) recently commenced a major project with F J Walker Foods for the utilisation of machine vision inspection and automated packaging of frozen meat patties. The system will be a world first in achieving production line speeds with this type of process.

The project will involve research and development, design and manufacture of a production prototype at AEAC before installing the system on one of the production lines at F J Walker Foods' Blacktown plant. Should the system prove successful, additional systems will be manufactured for installation onto other F J Walker Foods production lines. A number of overseas companies have expressed considerable interest in the system.

Further information:

Gill Churchill(042) 268821

## Computer Training

In early 1992, ITC Training introduced courses in Unix and C programming, which have proved to be very popular. These courses will continue throughout the year.

In addition, a computer training course for 16 Japanese students was conducted in January and February, as part of an overall program in conjunction with the Wollongong English Language Centre. The students were trained in the fundamentals of an IBM PC, in word processing, spreadsheets and databases, whilst studying English. The students enjoyed these integrated studies, and it was refreshing to see their excitement at being in Australia.

Further information:

Graham Frost (042) 268884

## "Late Season" for Legionella

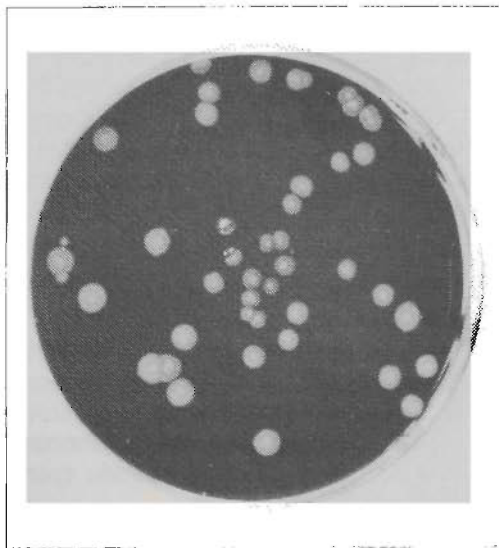
Testing for *Legionella* is only one of the many microbiological analyses performed by Biological and Chemical Analytical Services (BACAS). Other tests include faecal coliform, salmonella, streptococci and total bacterial counts. During the recent *Legionella* outbreaks, the staff at BACAS tested samples from two hundred of the cooling towers located in Wollongong, Sydney, Newcastle and Canberra.

The normal period of most concern for *Legionella* bacteria in air conditioning cooling towers is from November to March. Even though summer is certainly long gone, and the peak period should be over, for this year at least the *Legionella* season has extended to the end of May and shows no sign of abating.

By providing analysis of *Legionella* and other bacteria, BACAS continues to play an important role in public health in NSW.

Further information:

Gill Churchill (042) 268821



✦ A positive *Legionella* plate.

## Training and Education Projects

The Training and Education Division (TED) is currently coordinating several conference projects in conjunction with departments of the University of Wollongong and other training companies.

In addition to conference coordination, TED is coordinating the marketing and delivery of an exciting new educational package, "**Frameworks**", developed by Professor Brian Cambourne, Ms Jan Turbill and Ms Andrea Butler. "**Frameworks**" is a long term staff development course for teachers of years 3 to 8, using the philosophy of holistic learning in language education on the basis of a whole language approach. Initially introduced into North America, with a positive response from professional educators, it has been marketed in conjunction with the Wayne-Finger Lakes Board of Cooperative Educational Services in New York. Following its success in the USA, it has been introduced into the Australian market.

In addition to "Frameworks", TED also offers other educational packages such as the highly successful "**Train the Trainer**". Previously presented for large companies such as BHP, it is now planned to offer it to groups of individuals. This program is designed to develop the ability of trainers to analyse the training needs of their organisation and formulate objectives to meet those needs. The design and implementation of strategies to achieve the set objectives, and the development of materials to use in the learning process is also covered. The trainer for this course is Professor John Hedberg from the Faculty of Education, University of Wollongong. The next "Train the Trainer" program is planned for 22-24 July 1992, and enquiries are welcome.

Further information:

Kathy Myers (042) 268884

## ***Underutilisation of Microwaves by the Food Industry***

A \$65,000 study of microwave energy use in the Australian food industry has recently been completed by the Microwave Applications Research Centre (MARC). The main objective was to determine the present and possible future uses of microwave energy in the industry, and what the implications might be for the power supply industry. Funded by the Australian Electricity Supply Industry Research Board (AESIRB), the 20-week study involved researchers from several other centres, including the Centre for Technology and Social Change and the Universities of Wollongong and Western Sydney. Copies of the report are available from the ESAA office-Tel: (02) 267 8366, Fax: (02) 267 2207.

### *Further information:*

Gill Churchill (042) 268821

## ***Telecommunications Research***

Ericsson Australia is to fund its first NSW telecommunications research project, which is also the first to be allocated to a NSW tertiary institution. The three year project, being undertaken by the Centre for Information Technology Research (CITR), has the capacity to position Australia at the forefront of world telecommunications networks technology. Its purpose is to identify the specialised infrastructure requirements of signalling systems for new and expanding networks. An example of those requirements is computer software. Once those needs are identified, Australian industry will be encouraged to provide those resources.

Announcing the research funding on 2 April 1992, Mr Kjell Sorme, Ericsson Australia's Managing Director, described CITR as an Australian leader in the field of telecommunications research. He also said that the aim of Ericsson's R&D program was to foster a strong local telecommunications industry, and to create export opportunities to South East Asia and the Pacific. As one aspect of the NSW project, researchers from the University of Wollongong would be given access to the expertise of Ericsson's extensive Australian research and development facilities. It is anticipated that the research will help to identify specialised resources that will be required as various networks expand, including the public telephone and mobile telephone networks, the Integrated Services Digital Network, and future intelligent networks. These resources include transmission bandwidth, memory requirements and software management.

### *Further information:*

Dr Ian Reinecke (042) 272644

# **GLOBAL AIRLINE SECURITY SYSTEM**

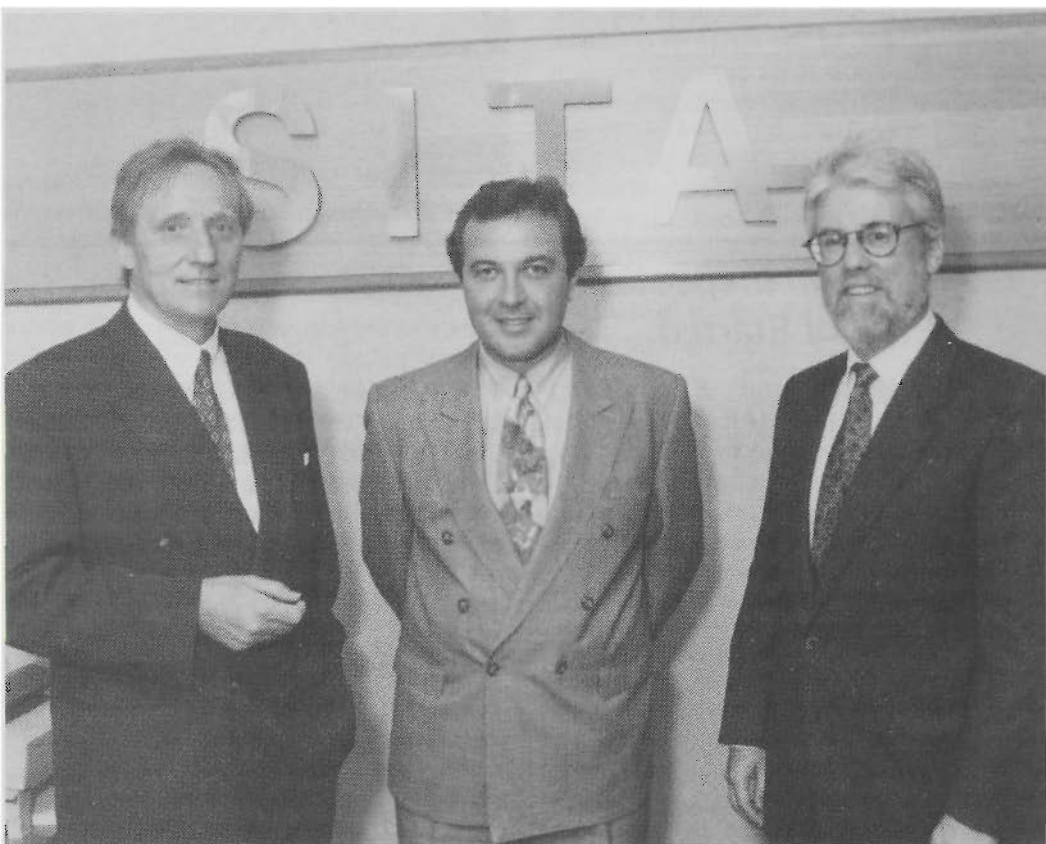
An international airline communication group, the Société Internationale de Télécommunications Aéronautique (SITA), has commissioned the Centre for Information Technology Research (CITR) to develop a revolutionary airport electronic identification system to help fight international crime and terrorism. The project will use techniques based on the manual identikit system used by law enforcement agencies rather than decomposing facial images into fixed-size mosaic tiles.

'The face-recognition project has tremendous

implications for airport security', the Sydney-based regional Vice-President of SITA, Mr Jean Paul Schittenhelm, said at the launch of the project. The system could also be used in other areas such as bank security. It could, however, spark controversy over privacy rights because it would eventually record millions of air travellers on video for comparison with a computer database of crime suspects.

### *Further information:*

Dr Ian Reinecke (042) 272644



❖ From left, Mr Jean Paul Schittenhelm, Regional Vice-President, SITA, Mr Michael Yabsley, NSW Minister for State Development, and Dr Ian Reinecke, Director, CITR

## ***In-House Training for Certificate in Manufacturing***

Over the past two years the Australian Training School for Advanced Manufacturing (ATSAM) has developed a Certificate in Manufacturing which can be taught in the workplace. The course has been designed to provide training and career paths in modern manufacturing systems for shop floor employees. At a time when multi-skilling is a high priority for industry, this Certificate offers an excellent opportunity to workers previously without access to higher education.

The course encourages innovation and provides a strong "hands-on" component using the flexible manufacturing system available at ITC. To assist in its effectiveness, the course can be modified to specific client needs.

### *Further information:*

Gill Churchill (042) 268821

## ***Food for Thought***

The recent marketing of the Resources Division in the food industry has resulted in a number of companies showing considerable interest in microwave technology.

The Microwave Applications Research Centre (MARC) is set up to conduct tests at laboratory scale and also at full industrial scale, and to develop new commercial industrial applications using microwave technology.

Preliminary trials already conducted by MARC include the drying of starch and grain products. A detailed analysis has also been carried out on a new type of container for microwaving convenience foods. Following other successful feasibility studies, MARC is now working in conjunction with the Automation and Engineering applications Centre (AEAC) on a number of full scale factory proposals.

### *Further information:*

Gill Churchill (042) 268821



## **English in the Workplace (EIWP)**

Manufacturers are discovering that there are not only direct benefits in offering language training to shopfloor personnel prior to the delivery of specialised training courses but that there are also indirect benefits. These include an increase in morale, and a consequent increase in productivity of the participants.

The initial EIWP language courses presented by the Wollongong English Language Centre (WELC) have been so successful that clients are requesting extension courses and, at present, WELC is providing language and literacy tuition for a number of companies in Sydney.

In preparation for a course, normally delivered in 2-hour blocks over 20 weeks, WELC will undertake a language audit of the workplace, interview the prospective participants, assess their language competencies, and design the syllabus to suit the needs of the employer.

*Further information:*  
Peter Day (042) 268905

## **"Holiday" English Courses**

The Wollongong English Language Centre (WELC) has established a reputation as a package provider of "language and leisure" tours, with WELC coordinating all aspects of the tour as well as delivering the English language tuition component. The programs are based in Wollongong, and 180 Japanese college and high-school students, in five groups, will attend a 2-3 week program through July and August. Four of these groups have returned for a second "summer program". The high standard of homestay accommodation provided in the Illawarra is one of the major factors in the success of these tours.

*Further information:*  
Anna Rousch (042) 268892

## **New Bar Coding Course**

A short course in Bar Coding Applications for Industry has recently been added to the wide range of in-house training offered by the Australian Training School for Advanced Manufacturing (ATSAM). Like most ATSAM courses, the basic course can be tailored to meet the specific needs of each client. ATSAM has a range of portable equipment for use in classes, including guns, slot scanners, raster scanners, portable terminals and workstations. It is expected that demand for these courses will be high as Australian industry works towards better stock control and modern quality systems.

*Further information:*  
Gill Churchill (042) 268821

## **University Study Courses**

From February 1992, students undertaking the General English course at the Wollongong English Language Centre (WELC) have been able to choose to audit one or two university undergraduate subjects as part of their ELICOS course. These subjects will act as an introduction to tertiary education in Australia for European students who would not normally consider a full undergraduate or postgraduate program abroad. Students will be able to select a pre-session intensive English course of 4, 8 or 12 weeks in length before embarking on their university studies. European agents have greeted this initiative with enthusiasm, and there are plans to expand WELC markets to European countries, including France and Italy.

*Further information:*  
Peter Day (042) 268905

## **Unique Microwave Ovens now in Manufacture**

The Microwave Applications Research Centre (MARC) has joined with a Sydney furnace manufacturer, Ceramic Engineering, to supply variable power microwave ovens. The unique control system, developed by MARC engineers, provides continuous power at any setting from zero to full power (1300 watts).

Power control is built in, with optional temperature control using an external optical pyrometer. These ovens are expected to have a wide market in universities, schools and in other laboratory applications.

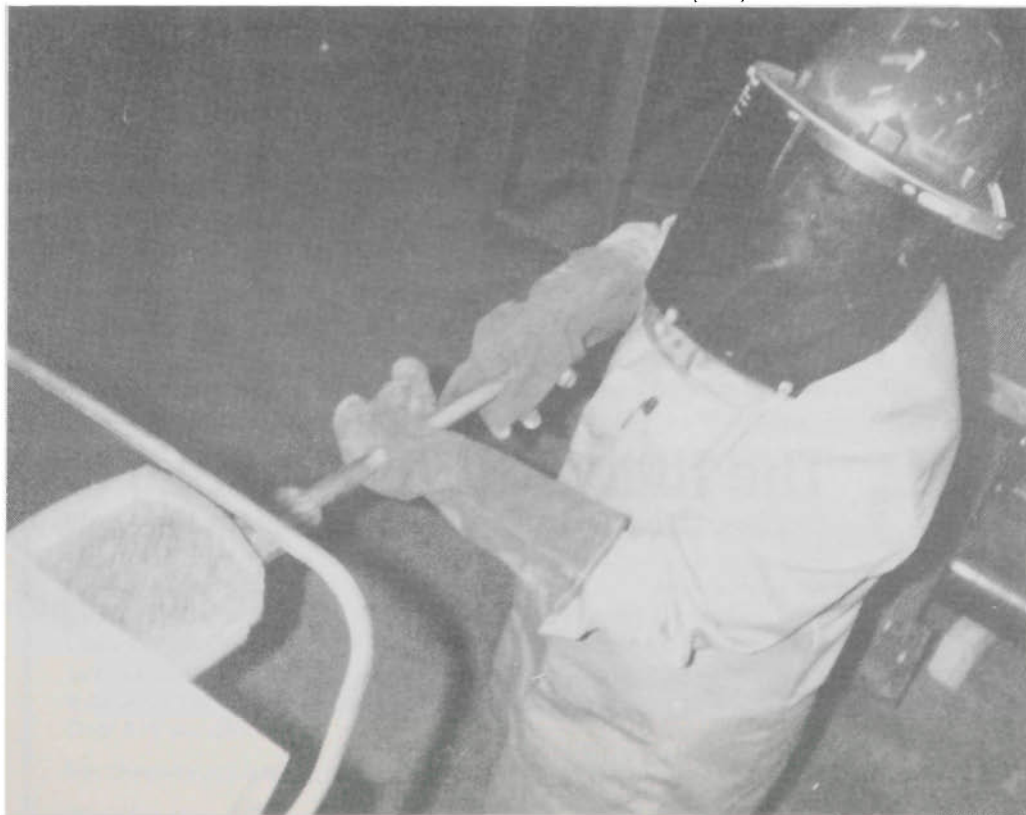
*Further information:*  
Gill Churchill (042) 268821

# **BREAKTHROUGH IN CONTINUOUS COKE MAKING**

The Microwave Applications Research Centre (MARC) has received a grant of \$527,000 through the NERDDP scheme to continue development of a process for continuous cokemaking. The industrial partner in this project is Kembla Coal and Coke Pty Ltd. Earlier studies on microwave heating and drying of various grades of coal, initiated by Professor Howard Worner, convinced MARC's research team that microwave energy could be useful in the production of high grade formcoke. Progress so far has included the design and

construction of a 30kW microwave power supply, and a number of specifically designed applicators for processing coal briquettes at the industrial microwave frequency of 922MHz. Microwave energy will be used to assist the coke-forming process, resulting in stronger coke for use either in the blast furnace for ironmaking or as fuel in the cupolas used in foundries for melting various metals. If successful, this process could eventually replace the traditional coke oven method.

*Further information:*  
Gill Churchill (042) 268821



✦ **Jeune Eshman removing a test sample from the muffle furnace**



## **The Illawarra Technology Corporation Limited**

The Research & Development Company of the University of Wollongong A.C.N. 002 882 064

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Telephone: (042) 268999, Facsimile (042) 268807

Editor, ITC News: Ann Webb (042) 268800



# Internationalising intelligent materials research

Professor Gordon Wallace has been awarded an Academy of Science/Japan Society for Promotion of Science Fellowship to allow him to visit several universities and companies in Japan during July.

He will use this visit to further strengthen collaborative ties initiated during the first Asia Pacific Workshop held in Wollongong during 1991 and the First International Conference on Intelligent Materials (ICIM) held in Japan in March 1992.

Professor Wallace is a member of the International Advisory Board for the ICIM and Technical Chairman of the next Conference to be held in the USA.

Professor Wallace will visit several universities and companies during this visit to explore ways in which his research group can collaborate with Japanese scientists.



## Industry-University collaboration in German project

The Australian Smart Manufacturing Techniques mission to Germany has just returned from a two-week ISTAC-funded trip that involved visiting eight firms, five applied research institutes and three technology transfer centres involved in "cell manufacturing" or "production island" projects.

This mission, led by Dr Richard Badham of the STS Department, included representatives from three Australian firms, CSIRO Division of Manufacturing Technology, University of New South Wales and the South Australian Centre for Manufacturing.

The aim of the mission was to examine leading edge software, techniques and examples of production island organisation, and organise collaborative links with German partners in the definition phase of a project sponsored by DITAC in Australia and the German Research and Technology Ministry (BMFT).

As a result of the mission, a return German mission is planned for later this year, co-ordinated by the Fraunhofer IPA/IAO in Stuttgart and the Fraunhofer IPK in Berlin. The collaboration has been organised to assist the transfer, adaptation and development of German production island techniques in Australia.

In the latter part of 1992 applications will be submitted to DITAC and the BMFT for the funding of the main phase of the project.

The project is industry focused with the core part of the project being the successful implementation of team based production islands in the number of Australian companies. This will involve researchers and consultants being funded to assist the firms in the implementation process and develop software and organisational

methods suitable for production island operation in Australia.

The project is unique in a number of senses. Firstly, it is an attempt to establish a technology transfer link between Germany and Australia that gives Australian researchers and consultants an active role in collaborative technology development.

Secondly, it is based on the concept that the key component of successful technological innovation lies in effective organisational and human change, and is encouraging this view within the more traditional technology programmes in DITAC.

Thirdly, it combines industry practitioners and university researchers in an 'action oriented' project that has both a practical economic objective as well as a research objective. As a practical economic project it aims to successfully implement island based production systems that dramatically improve productivity and increase worker skills, responsibility

and satisfaction.

As a research project it aims to both develop new software and organisational techniques for production islands and address the cultural dimension of production innovation.

An important research outcome of the project will be increased knowledge and awareness of how far European responses to the Japanese challenge are relevant as an ideal and as a practical model for Australian manufacturing firms.

Applications have been made to the Australian Research Council and, by Brunel University's Centre for Research on Information and Communication Technology (CRICT) for funding to assist collaborative research on the broader culture and production issues.

If the final funding application is successful, the main phase of the project will begin in January 1993.

There will be several opportunities available for postgraduate research and experience. Enquiries to Dr Badham, ext. 3634.

### RESEARCH INTO READING: AN INTERNATIONAL PERSPECTIVE

A one day conference presented by The Applied Cognitive Studies Reading Research Group from the Psychology Department of the University of Wollongong.

To be held at Wollongong University Pentagon Lecture Theatre 1  
Saturday 25 July 11am-5pm

This one day conference brings together researchers and speakers with a comprehensive knowledge of Australian and International Research regarding the process of reading and the nature of specific reading disability. Conference speakers from the United States of America, United Kingdom and Australia will examine a number of important issues relevant to teachers, special educators, counsellors, psychologists and parents. The conference will examine and summarise current literature that examines the causes of reading difficulty.

Cost \$15 per person:

For reservations please ring: (042) 21 3742 or (042) 21 3747 or Register on the day.



*The University Centre was opened on the evening of the 9 May by the three Vice-Chancellors of the participating universities. From left: Professor Ken McKinnon, University of Wollongong, Professor Robert Smith, University of New England and Professor Cliff Blake, Charles Sturt University signed an operating agreement to continue the joint arrangement for at least six years.*

## Successful workshop for health managers

In May, a highly successful workshop organised by the Department of Public Health and Nutrition was held at The University Centre in Clarence St, Sydney.

Approximately 30 health service managers attended the two-day session conducted by Ms Kathy Eagar and Professor Don Hindle.

It was called "Hospital management under output-based funding: a simulation-based workshop",

With the aid of 15 IBM computers, the participants were introduced to DRAGON, a hospital management simulation game which gives people the opportunity to develop management skills.



## The University Centre News

It is envisaged that DRAGON will be used within one of the courses offered in the MSc (Health Policy and Management) offered by the Department of Public Health and Nutrition.

Management simulation is a learning method widely used in other industries besides health, which involves the construction of a computer model to represent the system to be managed.

Participants enter their decisions in an attempt to achieve satisfactory performance over a simulated period of time.

DRAGON was developed by the St George-Illawarra Casemix Education Group, chaired by Mr Peter Lemon, and includes University of Wollongong staff from the Department of Public Health and Nutrition and senior executives of the Illawarra Area Health Service and the St George Hospital. University of Wollongong staff included Rohan Jayasuriya, Don Hindle and Mary Harris.

The development of DRAGON together with other educational packages related to the use of casemix in health service management was supported by a grant of \$100,000 from the Department of Health, Housing and Community Service's Commonwealth Casemix Development Program.

### SUBMISSIONS FOR THE 1993/94 CANADIAN STUDIES AWARDS

As part of the Canadian Studies Program in Australia, the Canadian Government is offering three annual awards to Australian academics.

- The Canada-Australia Institutional Research Award (CABIRA - \$25,000);
- The Faculty Enrichment Award Program (FEP - max \$5,300);
- The Faculty Research Award Program (FRP - max \$5,300);

The closing date for these awards has been brought forward from November to 31 August, 1992.

As well, ACSANZ (the Association for Canadian Studies in Australia and New Zealand), in association with the Canadian High Commission, has introduced a Postgraduate award for ACSANZ '92 to enable a student to attend and present a paper at the ACSANZ biennial conference to be held in Wellington in December, 1992.

Contact Canadian High Commission, Commonwealth Avenue, Canberra, ACT, 2600 Phone (06) 27 33844



# John Bern heads Department of Sociology

John Bern (pictured) took up the position of Professor and head of the Department of Sociology early this year.

Before coming to Wollongong he was Associate Professor in the Department of Sociology at the University of Newcastle.

His research covers two main areas of sociology and social anthropology.

In the last 20 or more years he has carried out field work among Aboriginal people in Australia's Northern Territory.

He has written extensively on Aboriginal social and political movements, local organisation, land rights and the relations between Aboriginal organisations and Australian governments.

He is planning a comparative study on the politics of Aboriginal self-government in Canada and Australia.

In the last few years Professor Bern's research interests have also been directed to questions of urban social change.

He is engaged in an ARC-funded project *The Hunter in Transition: Social Readjustment in a Major Industrial Region*.

This is a study of the political, economic and social changes in the Lower Hunter, particularly those related to the industrial restructuring of the last decade.

The research into contemporary Newcastle continues and extends his central concerns with the politics and representation of social change.

Professor Bern is developing the Department's already strong teaching and research base in the areas of gender studies, public and social policy, urban and regional society, cultural studies and the development of indigenous and third world people.

He is keen to develop the links between sociology and both other parts of the University in both teaching and research, and collaborative links with the community and other outside organisations.



## Staff News

Applications are invited for promotion under the Personal Promotion (General Staff) system.

Application forms and details on eligibility are available from Personnel Services.

This information is also available on the Administration File Server under Staff Matters - General Staff. Completed applications should be submitted to the Manager, Personnel Services by 31 July.

"All Administrative Assistants Grades 1,2 and 3 in Departments, Academic Units & Faculties, Executive Assistants and those formerly classified as secretaries are eligible to apply".

Further information is available from Ann Kiceluk, ext. 4284, or Chris Wells, ext. 3944.

## University of Wollongong CONSERVATORIUM OF MUSIC



The Friends of the Conservatorium proudly present

### POPULAR PROMS

(Here-we-go-round-the-orchestra)

for children from 3 to 103

 BHP YOUTH ORCHESTRA   
CONSERVATORIUM YOUTH CHOIR

Conductor: DAVID VANCE

- Meet the Instruments
- Audience Participation
- And Peter and the Wolf by Prokofiev

### HOPE THEATRE

Wollongong University Sunday, 28th June  
Two Concerts Only: 1.30 p.m. and 2.45 p.m.

\$5 Adult; \$3 Concession; \$10.00 Family Ticket (4 Members) \$1 Each additional child.

### BOOK EARLY

(OUR LAST CONCERTS WERE SOLD OUT)

Phone Conservatorium: (042) 28.1122 or (042) 21.3533

## What's On

- The Friends of the University Graduates Group will hold its next monthly **Book Sale** on Saturday June 27 and Sunday June 28 at their Campus East Shop (opposite the Science Centre), Cowper St., Fairy Meadow from 1-5pm. Mixed textbooks, fiction and non-fiction, music, classics for young readers and good magazines will be available. Donations of material are also invited and may be left at the Library or at the Administration Building (student enquiry counter), or at the Science Centre on any weekend afternoon. All proceeds go towards Campus projects. Enquiries to 29 1951 or 62 1537 at any time, or to the Friends' Office, tel. 21 3110, during weekdays.

- The **1992 Bridge Recital Series** continues on 28 June with the Graeme Bell All Stars at the Bridge Theatre, Coniston. The rest of this year's programme is: multicultural folk fusion group Southen Crossings (20 September) as well as an appearance by the opera diva Amanda Thane (6 September). Tickets for the Sydney Shanghai String Quartet are \$18 (\$14 concession) or \$50 for a family of four. Book with Margaret Sharrad, tel. 28 1843, or Bridge Theatre, tel. 29 6144.

- Agenda deadlines for the 1992 **Human Experimentation Ethics Committee meetings** are: 4 July, 30 August, 24 October, 5 December. It will no longer be possible to table late items. Late applications will be held over until the next meeting.

- The **11th International Conference on Ground Control in Mining** will be held at Northbeach Parkroyal from 7-10 July. It is organised by the University of Wollongong, the University of West Virginia and the Australian Institute of Mining Metallurgy. The keynote address will be given by Mr W Tattersall, Assistant to the Secretary of State for Safety and Health, USA.

- **Session two School of Creative Arts events** include: 7-10 July: Conference *Craft Theory and Curation* Sue Rowley. 6-26 July: Hope Theatre *The Rime of the Ancient Mariner* - Ian McGrath

- The **Illawarra Garden School** is holding a function on Thursday 9 July in the Pentagon Lecture Theatre 1. Cost is \$16 per person for the day. This includes morning tea, a two-course lunch in the dining hall, and four excellent speakers. The speakers are: Stephen Astill, Floral art demo; Harry Churchland, Camellias; Greg Honess, Gardening in pots; Robbie Engall - Citrus trees and roses. Members of the public will be most welcome. Enquiries, by 26 June, to Mrs Merle Moncreiff, tel. 287297.

- AIDAB is holding a seminar, **Development import finance facility** at the Illawarra Technology

Corporation on 10 July. The seminar will be opened by the Hon John Kerin, Minister for Trade and Overseas Development. Enquiries: Anne Webb (042) 26 8800.

- **Upcoming Illawarra Committee for Overseas Students** events are: 25 July, Snowy Mountains; 19 September, Canberra; 11 October, Harbour Cruise and Sydney Aquarium; 5 December, Australia's Wonderland. Tickets and details are available from the ICOS office in the Union Building next to the Careers and Appointments Service, Tuesday, Wednesday and Friday, 9.30am-2pm. Tel. (042) 21 3158 or ext. 3158.

- **Open Day:** Sunday, 30 August.

- A special schools performance of *Expans*, which combines **new music and dance theatre**, will be held on 28 August, from 10.30am-12.30pm. This performance has been arranged for music and drama students to experience an exciting new combination of music and dance theatre/movement. There will be public performances of the concert in the evening at 8pm. Bookings: (042) 21 4214. Enquiries: (042) 21 3580

- **Australian Computer Conference on Information Systems** hosted by the Department of Business Systems 5-8 October at the University of Wollongong. Enquiries to Gaye Herbert (042) 21 3958.

- **1992 Graduation Ceremony:** 8-9 October.

## University of Wollongong Club open for membership

The aim of the University of Wollongong Club is to promote cross-campus activities for all staff and postgraduate students.

It also aims to foster a collegiate atmosphere on the campus. To this end functions are organised on a regular basis throughout the year.

The Club Lounge is located in the Union Building.

Furniture, in the form of easy chairs, coffee tables, dining chairs and tables, and kitchen facilities are provided. There are also other facilities available, such as a sound system. Members meet over lunch in the quiet relaxed atmosphere of the Club Lounge.

Membership is available to all categories of University staff, as well as to postgraduate students, members of Convocation, the University Council, the Friends Organisation and other On-campus Organisations.

Cost of membership is \$30 or \$50 per annum, depending upon salary level, which entitles members to subsidised prices to organised club functions. Coming events include:

25 June: Afternoon tea for Union Building Staff and Club Members.

3 July, 7.30pm: Second in a planned series of Card Nights for Euchre and 500 players.

14 August, 8pm: Theatre Evening - *Lettice and Lovage* - at the Illawarra Performing Arts Centre.

26 August, 12.30pm: Arts and Informatics Faculties/Financial Services Branch/Club Members Luncheon.

September: Possibly another theatre evening.

9 September, 12.30pm: Special General Meeting to consider a change in name to 'The University of Wollongong Social Club'.

October: Possibly another Faculties/Admin. Branch/Club Members Luncheon.

December: Christmas Function (Details to be provided later.)

New members are welcome. For further details contact the Hon. Secretary, Maree Fryer (tel. 213065).

**Campus News is published weekly on Tuesdays during Autumn and Spring sessions. Send material, preferably by Microsoft Mail or on disk, to Gillian Curtis (042) 21 3110 by noon on Monday of the week before that of publication**