

Gazette



Chisholm Design students win packaging awards

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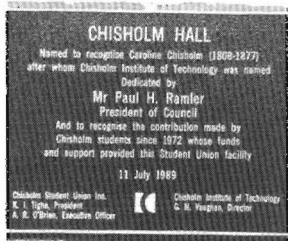
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Chisholm Gazette

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Chisholm Institute of Technology

Chisholm Institute of Technology is a multi-disciplinary tertiary institute offering studies in four schools and two faculties located at two campuses, Caulfield and Frankston.

It is the second largest of Victoria's Colleges of Advanced Education with a total enrolment of over 8,000 full- and part-time students in its graduate and undergraduate programs in Art & Design, Business (Accounting, Banking & Finance, Management, and Marketing), Education, Nursing, Social & Behavioural Studies and the Technologies (Applied Science, Computing & Information Systems, Digital Technology, and Engineering).

Chisholm has a proud record of offering relevant short courses in its areas of expertise for thousands of students each year, and a strong reputation as a research and consultancy organisation.

Chisholm is negotiating to merge with Monash University on 1 July 1990.

Cover: the winning entry in the prestigious Southern Cross Packaging Design Awards, won by Chisholm student Katie McCartin. See page 4.

Business language laboratory introduces trade degree

The recent opening of the new Business Language Laboratory at Chisholm's Frankston campus introduced a new International Trade degree for school leavers and others wishing to enter this exciting and essential area of business. The laboratory was opened by the Victorian State Manager of Austrade, Mr Barry Cain.

Guests included major government, business and industry figures, members of Parliament and local government, and representatives of a number of the large secondary schools in the Mornington Peninsula/Westernport area.

The three-year Bachelor of Business (International Trade) will be conducted at Chisholm's rapidly expanding Frankston campus as both a full-time and part-time degree, providing graduates with a comprehensive range of skills and knowledge essential for the effective management of firms involved in international trade.

As part of the course, students will learn three years of a language important to trade. Initially, this will be either Mandarin Chinese or Japanese. Graduates will have the ability to communicate effectively in social and business situations with native speakers of the language. The Foreign Business Language Program is funded by the Victorian Education Foundation and is run in cooperation with staff of Monash University and Victoria College.

In addition to the language component, the degree comprises foundation business subjects and specialised international trade subjects essential to a comprehensive understanding of international business activity.

The course is to commence in the first semester of 1990, and will be



Above: the staff of the new language laboratory demonstrate the equipment

the first degree course in Victoria to specialise in preparing graduates for employment in the trade sector of

The course is a response to urgent requests from firms in international trade, investment and tourism for a supply of suitably trained executives

the Australian economy. It is being run by the School of Banking & Finance in the highly regarded David Syme Business Schools, which have a number of innovative and important business degrees.

The course is a response to urgent requests from firms which deal in international trade, investment and tourism for a supply of suitably trained executives.

The Head of the School of Banking & Finance, Ms Denise Wheller, said

that it is now well recognised that for the Australian economy to prosper, Australian businesses will need to identify and successfully pursue export opportunities.

Ms Wheller said that employer organisations and individual employers had made it clear that graduates of the course will be in great demand from trading companies, tourism and hospitality operators, government agencies, multinational corporations and banks.

The degree satisfies the educational requirements for Associate membership of the Australian Institute of Export. Entry requirements are Year 12 VCE (with preference given to Group 1 subjects) or equivalent, some other qualifications such as Certificates in business studies, or qualifications or experience relevant to the field.

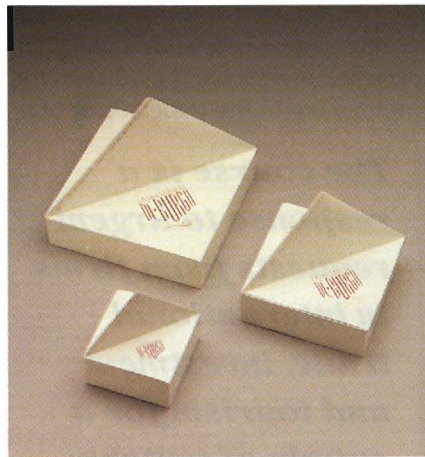
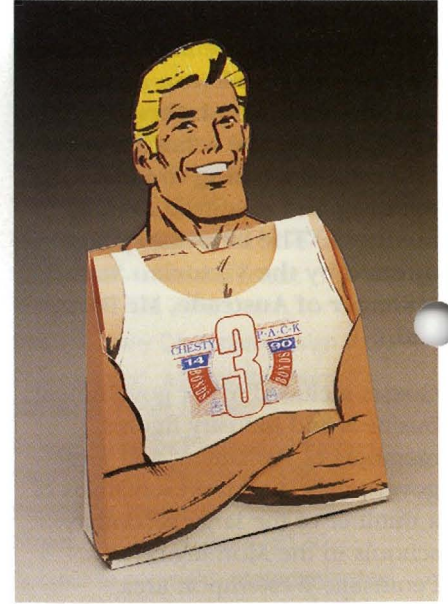
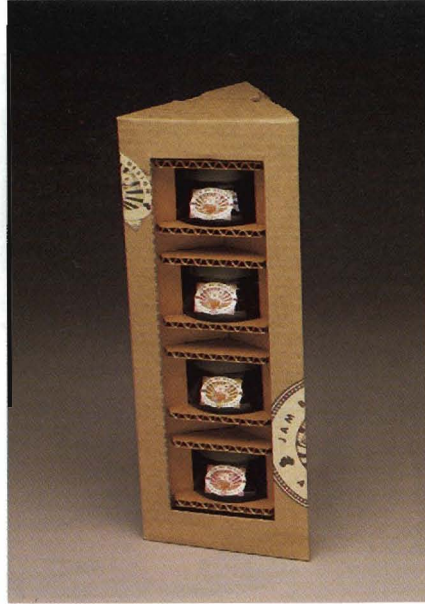
Enquiries concerning the course may be directed to the Admissions Office on (03) 573 2000.

Design Students wrapped about their awards

Chisholm Graphic Design students won the major, silver and bronze awards in the 1989 national Southern Cross Packaging Design competition, run by the Packaging Council of Australia in conjunction with the Australian Institute of Packaging.

Ms Katie McCartin, a fourth year Bachelor of Arts (Graphic Communications) student, won the major award for her package design which fulfilled both function and form to the competition brief, and whose applied graphics were considered to be of an outstanding level.

Ms McCartin is considered by her



lecturers to solve projects with creativity, intelligence and practicality, and this was clearly demonstrated in her entry.

The competition has only been won twice by any college, and this is the second time a Chisholm student has won this prestigious award. The major prize consists of a return trip to Japan with \$500 spending money, to discover at first hand Japanese design and culture.

Chisholm also won three silver and four bronze awards. By winning

the major award and by featuring so prominently in the other sections, the Department of Graphic Design was awarded the \$500 Packaging News Award for the most significant contribution by any School.

The Head of Graphic Design, Mr Jack Larkin, congratulated all students and staff, saying they had put in a great effort.

The recipients of the silver awards were: Fiona Mann (fourth year degree student), Dennis Miller (fourth year degree student) and Mandy Hauser (third year diploma

Some of the winning entries: Top Left: Katie McCartin's winning jam jar package; top right: silver medal winner by Dennis Miller; left: silver medal entry from Mandy Hauser; centre: silver medal entry from Fiona Mann. Bottom right: Katie McCartin.

student). The Bronze winners were Henry Wong (third year degree student), Katarina Plastaras (third year degree student), Sandy Skabar (fourth year degree student) and J. J. Yeong (fourth year degree student).

CASE for the future at Chisholm

A grant from the Victorian Education Foundation has given Chisholm the opportunity to enter the arena of CASE – Computer Aided Software Engineering – by establishing a CASE laboratory at its Caulfield campus.

CASE allows a new and different approach to the development and implementation of computer-based systems by using the computer itself to link and automate the steps in their development. It provides a series of tools on the computer to help with the planning, analysis, design, programming and implementation, enhancing communication between developers and improving consistency and quality of the finished product.

Laboratory Director, John Moore, says that this new approach requires a completely different "culture" to those found in most traditional data processing departments.

"Management particularly must be committed to its adoption, encouraging standard methodologies within the organisation, and they must be prepared to support the necessary training or retraining of staff, if

CASE is to be effective," he said. "Experience in England and the US shows that bringing CASE products into use, without at the same time undertaking a major training effort to make sure that the relevant methodologies and procedures are used, results in the software quickly becoming 'shelfware'."

Management particularly must be committed to its adoption ... and must be prepared to support the necessary training or retraining of staff, if CASE is to be effective

To help Australian industry avoid these problems, Chisholm will offer training in all aspects of CASE, as well as providing a consultancy service to help organisations in the initial stages of CASE implementation.

The VEF grant of \$230,000 is being supplemented by another \$100,000 from Chisholm's commercial computer training centre, the Pearcey Centre for Computing.

Mr Moore stressed, "We will not be limited to a specific vendor, product or methodology. We aim to ensure that participants in our courses understand the concepts involved in selecting and installing a CASE product for their company, and know how to train personnel in its use."

In addition, all Computing undergraduates at Chisholm will have the opportunity to use CASE as a part of their degree. The facilities will be made available for undergraduate and post-graduate research, and the results will be published and made available to industry.

The laboratory will also promote the correct use of CASE in industry through seminars and by providing speakers to various relevant forums.

For further information concerning the CASE services at Chisholm or to discuss relevant research programs, contact John Moore on (03) 573 2433.

Traffic Engineering Lecturer receives UK Award

Chisholm senior lecturer in Civil Engineering, Robin Underwood, has won a prestigious British award for a paper he wrote on the Hume Freeway. The Webb Prize is presented annually by the United Kingdom Institution of Civil Engineers.

Robin has an intimate knowledge of the work nearing completion on the

construction of a freeway from Melbourne to Sydney. He was a senior engineer with the Country Roads Board, which later became the Road Construction Authority and more recently the Roads Corporation. Robin was Chairman of the RCA prior to his coming to Chisholm, and is one of the most knowledgeable people in road building in Australia.

In addition to his prize-winning paper, "The Hume (Melbourne–Sydney) Freeway in Victoria", which was published in the proceedings of

the Institution in April 1988, Robin has also recently published *A History of Traffic Engineering In Australia* through the Australian Road Research Board. Following developments since before the 1950s, the book covers signs, traffic signals, line marking, and other devices used to manage traffic flow.

Robin has just completed writing a textbook on traffic management which will be published in November. He is course leader of Chisholm's Graduate Diploma in Municipal Engineering.

Alumni News

The Chisholm Alumni Association has begun well, with many enquiries and membership applications. The first Annual General Meeting is to be held in October this year to elect a Board and office bearers, and a number of chapters will become affiliates of the Association.

Moves are afoot to start several new chapters, including a Computing Chapter, to commemorate the 25th anniversary of computer education at Chisholm, a Science Chapter, and a Nursing Chapter, to mark the first year of Nursing graduates in 1990.

Benefits to members of the Association have been increased to include access at Institute rates to hire Student Union facilities such as the recently named Chisholm Hall, which seats 650 people, conference rooms and meeting rooms, and also to allow associate membership of the Chisholm Staff Club, situated on Dandenong Road in Caulfield near the Institute.

Where Are They Now?

A number of Chisholm graduates have been featured in the news lately.

Robert Molyneux, Bachelor of Business (Accounting) 1983, is the chief group auditor of the ANZ Banking Group. He is working on a global audit strategy for the bank, which has assets of \$73 billion, and has over 300 auditors. He was recently featured in an article in the *Business Review Weekly*. Robert studied computer science at Monash University before gaining a job as a computer programmer with the bank in 1977. He has seen the growth of computer based auditing at the ANZ from its embryonic stage. He recently returned from eighteen months as the bank's chief auditor for Europe and Britain, the

Mid-East and Africa. He is now the group chief auditor, responsible for the eight chief auditors and ensuring that the overall strategy is working.

Manuela Ferstl, Bachelor of Arts (Ceramic Design) 1985, is a potter in Mt Eliza who recently exhibited her Raku ceramics (an ancient Japanese art form) at Moorooduc. In 1985, Manuela's ceramics were part of a group exhibition in China, organised by Chisholm, and were later displayed at the Sydney Opera House, before returning to Melbourne. In June, she staged her first solo exhibition in the Potoroo ceramics and glass gallery at the Moorooduc Coolstores. Manuela has received awards at the Royal Melbourne Show in 1985, 1986 and 1988, the National Bicentennial Art and Craft event, and the RSPCA Art

and Craft Exhibition. A former Mt Eliza High School student, Manuela started working in ceramics at Chisholm in 1981.

Rob Jenkins who was recently appointed Community Arts Officer at the City of Hawthorn, graduated with a Diploma of Arts from the Caulfield Institute of Technology. He worked as a potter and was artist-in-residence at Kerang High School until 1980, after which he was field officer for the Crafts Council of Victoria. Rob has been vice-chairman of the Victorian Community Arts Network, and worked as community arts officer for the Bendigo sub-region. He worked as arts development officer for the City of Camberwell during the bicentenary, and is also a musician.

Entrepreneurial Accounting scholarship winner

Angela Pinches, third year accounting student, has won a \$3,000 scholarship for entrepreneurial accountants, awarded by the accounting firm Bourne Griffiths. The Scholarships were launched with Chisholm in 1987.

Angela, who lives in Edithvale, is one of seven state winners. She has received high marks for her studies and is involved in community work. She has also received the City of Mordialloc's Roy Ward Scholarship for general excellence, sporting achievements and community contributions in 1984 and 1987.

The awards aim to reward business-minded students with outstanding potential.



Angela Pinches

**Changed your
address? Let us
know on
(03) 573 2099**

Silver jubilee Computing night

The 25th anniversary of computing courses at Chisholm was celebrated by a dinner held in the Chisholm Hall in July with about 300 ex-students and staff of Caulfield and Chisholm Institutes attending.

The evening proved to be a great success and most of the guests spent the time moving from table to table catching up with former classmates, workmates and staff. The success of the evening was clear from the difficulty the organisers of the event had getting guests to leave by the published finishing time of midnight, and celebrations continued for some time after that.

The highlight of the evening was an address by Professor Bart Sylvester, an expert in Artificial Intelligence from Cornell University. The title of his address was "Computing from

Mystery to History – We've come a long way, Maybe!" Professor Sylvester proved to be an extremely witty and accomplished speaker who kept the guests entertained for about 45 minutes before revealing that in fact he was none other than Melbourne comedian Campbell McComas.

The master of ceremonies for the evening was Gerry Maynard, President of the Australian Computer Society Victorian Branch, and well known to all who studied Computing at Chisholm in the 70s as a senior lecturer and head of department. The Director, Dr. Geoff Vaughan, proposed the toast to the School, and Jack Greig, Head of the School of Computing and Information Systems, as it is now known, gave a brief history of its development. He expressed the hope that the reputation it has built up over the last 25 years will

continue to grow in the new "Greater Monash University", which Chisholm joins in July next year.

A history of "Computing at Chisholm – The First Twenty Five Years", written by Jack Greig and senior lecturer Pearl Levin, was launched at the dinner. This history also contains the names of all graduates of all courses run by the School of Computing over the last 25 years, some two thousand in number. The School is now in the process of organising a Computing Alumni Chapter for graduates of Caulfield and Chisholm, and eventually Monash.

The Director later said that it would have been difficult twenty five years ago to predict the impact computers would have had on our lives today, let alone the significant role they play in education, and especially at Chisholm in 1989.

Chisholm Hall named

The multifunction hall of the Student Union facilities was recently named the "Chisholm Hall" to perpetuate the Chisholm name after the amalgamation with Monash University.



Above: Paul Ramler unveils the plaque (right).

President of Chisholm Council, Paul Ramler, dedicated the hall. Mr Ramler was President of the then Caulfield Institute Student Union when the first moves were made towards the planning of the new facilities.



Computers help manage learning in maths

An extensive project at Chisholm in bridging mathematics into science, engineering and related technologies has been funded by a one-year grant from the Victorian Education Foundation.

The project, under Dr Kenneth Mann, Senior Lecturer in Computational Mathematics, commenced with an extensive research and appraisal of both national and international approaches to bridging mathematics and of the use of computer based training in commerce and industry.

This has led to the development of a syllabus, objectives, computerised resource booklets and the use of other teaching aids, and a system of computerised assessment and diagnostic testing using a computer managed learning (CML) system. Computer hardware and software are being assessed for both the testing and for the production of the resource booklets.

To avoid "reinventing the wheel", Dr Mann and his team have made an extensive appraisal of available resources, and a study tour saw leading overseas ventures in the field in operation. The team visited similar ventures at Princeton University, in California, at the University of Arizona, at Ohio State University, in Calgary, at University of California, Berkeley, a workshop in electronic communications at Harvard and the National Educational Computing Conference in Boston.

The Centre for Foundation Mathematics has discussed cooperative ventures with other Australian organisations, including a cooperative venture with TAFE. One that has commenced is the development of large question banks for use by maths assessors.

The Australian Council of Educational Research (ACER), through the Assistant Director of Measurement and Research, Dr Geoff Masters, and his mathematics team are collaborating on the development of the large question banks, and the Australian Item Bank that the ACER developed some time ago will be used and adapted and then further extended. Tests from other organisations, such as the diagnostic tests that are used in the University of California system, have been obtained on a personal basis and the tests of other systems are being solicited. This will lead to the development of a comprehensive testing system that would have value both nationally and internationally.

"There are many computer software packages for CML and all have their advantages and disadvantages," Dr Mann said.

"A detailed study of all the available systems of computer managed learning was undertaken with the assistance and advice from many commercial organisations, before committing to two systems, a mainframe and a personal computer system," he said.

"The mainframe system has excellent analysis aspects and will use the VAX system at Monash University, which has become available through the merger of Chisholm and Monash."

Recently a two megabit communications line connected the Clayton and Caulfield campuses. The Computer Centres at Chisholm and Monash have helped in implementing the system. The personal computer system which will operate on a network of AT-class computers is now operational, and it is anticipated that the first mathematics tests on this system will

be available later in the year. Further comparisons of these systems will be carried out as part of the project.

With the development of this system, a student will be able to follow the progression of a course in small steps by studying the resource material for a module then going to the computer to undertake a test on that module. Progression to the next module is dependent on achieving a set mark of perhaps 90 per cent. These tests will be able to be taken at any time. Management of the system includes the automatic registering of all attempts at the test and the marks achieved. It also provides students with the mark and the questions that they have wrong and where they should study to overcome the obvious weaknesses. It provides the lecturer with an analysis of the effectiveness of the questions.

Apart from the direct value to Chisholm students, there are distinct extensions in its use to overseas students prior to tertiary entry, export potential, use by schools and collaborative ventures with industry. Later extension to the system will need to include the possibility of students taking these test from remote areas. There are many educational advantages from extensions to the program.

With the new VCE approach to mathematics tertiary institutions will be able to use CML to provide diagnostic testing for their own needs.

The constant stream of visitors to the project, and the many enquiries is encouraging. Already there is expressed interest in the use of the output by other institutions.

Does SQL have a future?

A one-day seminar at the Hyatt on Collins was held recently to investigate the future directions and standards of relational databases and SQL (Structured Query Language), the so-called "industry standard" in relational query languages.

The success of the relational database model has put SQL in a privileged place among data manipulation languages.

The seminar, "Flavours of SQL", was presented by the Pearcey Centre for Computing in conjunction with Chisholm's DataBase Special Interest Group and the Victorian branch of the Australian Computer Society.

The seminar's aim was to take a careful and independent look at the origins of SQL, its various forms, strengths and weaknesses, its alternatives, and its future. The speakers were chosen for their knowledge of current commercial products, the human interface, the future of standards and possible future directions of the products.

Speakers included SQL experts from Chisholm's School of Computing and Information Systems, from IBM and an independent consultant.

Phillip Steele of Chisholm discussed the SQL standard and how it is implemented. Jim Boyle of IBM Australia covered the IBM SQL implementation as defined in the IBM Systems Application Architecture and as used in current IBM relational database products on the System 370 MVS/ESA (IBM DB2), and System 370 VM and AS400 SQL/400 (SQL/DS), and the OS/2 Extended Edition.

Max Warlord of Chisholm

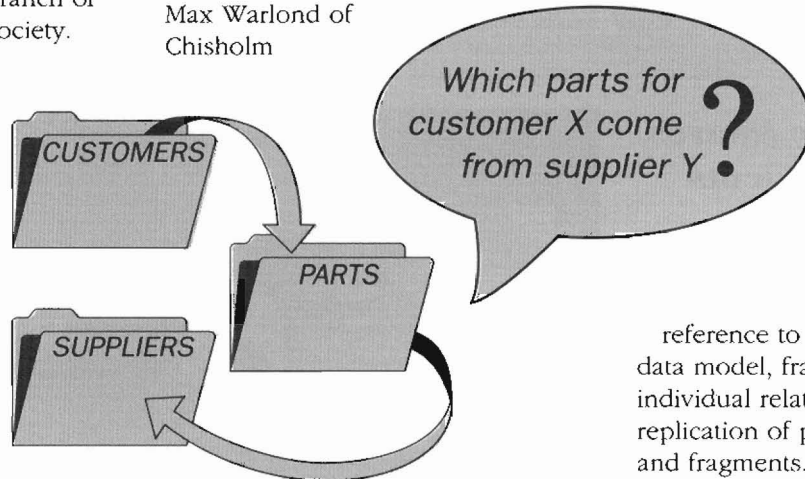
database management system (RDBMS) model, E.F. Codd and C.J. Date. Chisholm's Dan Eaves presented some of the front ends to SQL including IBM's Query By Example (QBE) and other QBE-like interfaces, and the OS/2 EE Multi-menu interface.

Consultant John Symington looked at SQL as a fourth-generation language and the application development tools, both fourth and third generation, with which it interfaces. He also examined the demarcation between a database

language like SQL and an application tool.

Finally, John Daly of Chisholm examined SQL from the view of a distributed RDBMS implementation, with special

reference to the partitioning of the data model, fragmentation of individual relations, and even the replication of partitions, relations and fragments.



examined the criticisms of SQL by the originators of the relational

Development and ecology can co-exist says lecturer

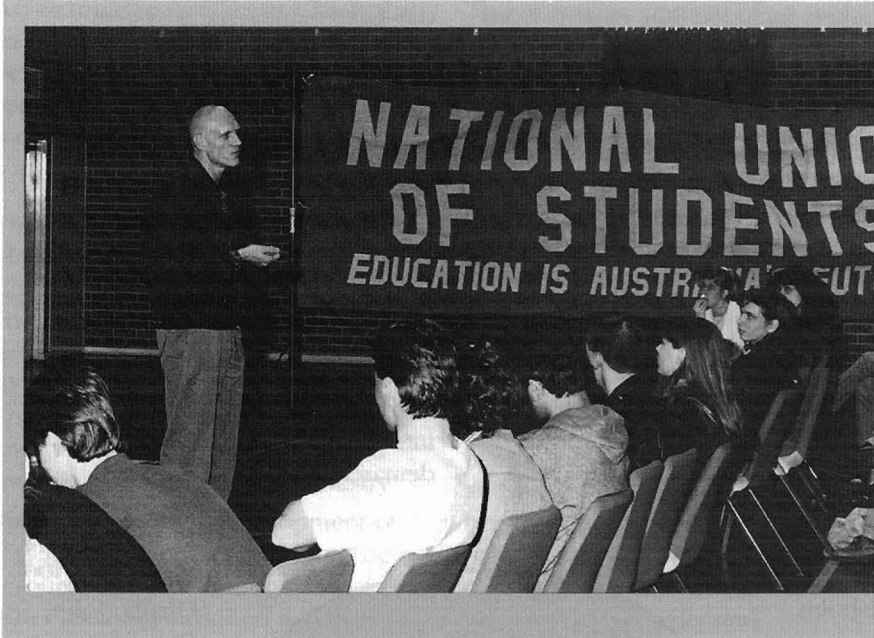
Dr Graeme Lorimer, senior lecturer in the Centre for Applied Mathematics, and researcher in environmental science, says that development can occur within ecological constraints.

"It's a case of economics," Graeme told *The Heidelberg* local paper.

"There are two ways of running a factory: one safe, the other not safe."

"It usually comes down to a question of whether it is profitable to produce and still be environmentally safe," he said.

He believes it is up to the community to decide what level of pollution it accepts and to act accordingly. Dr Lorimer was commenting on the recently announced federal government environment policy.



Peter Garrett Speaks at Chisholm

At a meeting of the National Union of Students, held at Chisholm, Peter Garrett spoke out on the need for environmental planning and dedication to conservation. Mr Garrett is President of the Australian Conservation Foundation. The conference coincided with the Global Issues Conference of AISEC, the international business students organisation.

Applied Science Awards presented to students

Students of the School of Applied Science received the 1988 Applied Science Prizes at a dinner recently. The prizewinners are pictured from left:

Michael Simmons (Ajaz Fastners Award for the top final year student in Experimental Physics – \$100, jointly with Bill Dew; and an Applied Physics award for the best third year student in the Computer Imaging Project – \$100)

David Skerrit (top first year student in Physics PHY120 – \$100)

Bill Dew (joint recipient with Michael Simmons of the Ajaz Fastners award – \$100)

Paul McMullen (obscured) (NSR Aquatic Chemistry Prize – \$100)

Shane Fielding (Centre for Mathematical Modelling – \$100)

Lilian Fuchshuber (Ogden Industries for most outstanding second year BAppSci



(Multidiscipline) student in analytical chemistry – \$100)

Timothy Settle (Joint winner of the top second year student in Computer Imaging – \$100, with Anthony Miller)

Peter Ellis (Chemplex Australia Ltd award to most outstanding polymer chemistry student – \$75)

Deidre Hotchin (Water Studies Centre award to top student in Water Chemistry – \$100)

Karine Young (joint winner with Seville Gunes of Statistics and

Operations Research award – \$100)

Sevil Gunes (Statistics and Operations Research award – \$100)

Helda Payet (City of Malvern award to top first year student enrolled in second year of a degree course – \$100)

Anthony Miller (winner with Timothy Settle of top second year student in Computer Imaging)

Keong Truong (Jennings Industries award to the outstanding first year student in Mathematics in the BAppSci (Multidiscipline) – \$100) was not present.

Business Dean waits on students

Following a fund-raising auction by the Student Union, the Dean of Business, Mr Peter Chandler, found himself in an unusual role recently – as cocktail waiter for five students. The Dean's Cocktail Party was the highest bid item at the auction, and required Peter to not only serve the cocktails but to mix them as well. Staff of the David Syme Business Schools are hoping that this is not the shape of business education to come.



In Brief

Minister visits Chisholm

The Minister Responsible for Post-Secondary Education, the Hon. Evan Walker, recently visited Chisholm to discuss the directions of the Institute. He accompanied the Director, Dr Vaughan, on a tour of the Caulfield campus, including the new Student Union facilities and the Technology Tower.

The Union and Tower building is a unique venture undertaken jointly by the Institute and the Student Union, providing top-class student facilities and funding it through student contributions and commercial tenants.

The Minister met with Deans to discuss the forthcoming merger with Monash University, and the continuation of the diversity ethos of Chisholm's courses.

Another visitor to Chisholm was Prof. Don Aitken, Chairman of the Australian Research Council, who met with Deans of Faculties and Schools and Directors of Chisholm's research Centres including the Water Studies Centre, the Computer Imaging Group and the Acoustics Research Group.

Prof. Aitken stressed his commitment to ensure that the government's new funding system will provide funds to colleges of advanced education such as Chisholm, which are part of the Unified National System and

are involved in mergers with universities.

Chisholm ex-staff member models physics

Retired technician from the Caulfield Institute of Technology, Bob Marshall, has been helping students of Sacre Coeur Girls School learn the basics of physics using demonstration models. Bob visualises the model to illustrate a particular principle of physics and then builds it out of odds and ends. To make a harmonic motions generator, for instance, he used an old gramophone turntable. The staff and students are delighted with Bob's work.

More women needed in engineering

The Review of the Discipline in Engineering has said that Australia lags behind other major countries in attracting women into the field. Only seven per cent of engineering students in Australia are women, compared to the UK, where the percentage is now around twelve per cent, France with fifteen per cent, and the US, where in some states it is twenty per cent. Chisholm Engineering has about nine per cent women students, and the Institute is trying to bring more women into the science and engineering field with bridging mathematics and science summer schools.

Art history book published by Chisholm lecturers

A history of art designed to bridge the gap between secondary and tertiary studies has been written by five present and past lecturers in Chisholm's History of Art Section in the School of Art & Design, and is published by Longman Cheshire.

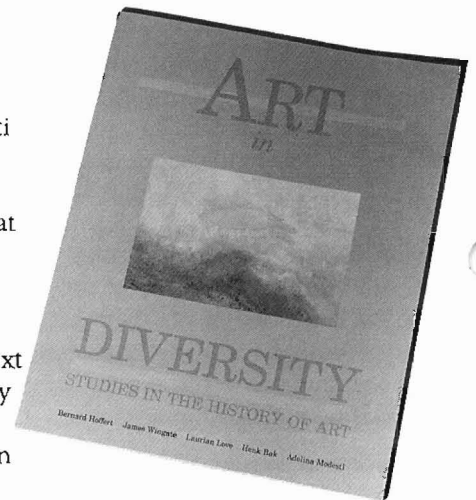
Art in Diversity, Studies in the History of Art uses a novel format and structure to provide secondary students with a knowledge of the development of modern and classical art styles, so that at the tertiary level they can assess the debates and issues in art history.

Longman Cheshire say that the work is the most ambitious and comprehensive text on general art history published in Australia in recent years, and it is in a cross-cultural format to allow comparisons

between European, Asian, and other art traditions.

The book resulted from the cooperative efforts of Bernard Hoffert, James Wingate, Laurian Love, Henk Bak and Adele Modesti over several years. It directly addresses a range of areas in teaching in accredited art courses at Chisholm and has been used as a reference in a number of these in 1989.

It is likely to become a standard text for secondary studies in the History of Art for Year 12 studies across Australia. It is lavishly illustrated in colour and black and white, and devotes a special section to Australian art. The book will retail for \$25.95.



Amalgamation News

The Minister for Employment, Education and Training, the Hon John Dawkins, recently announced grants totalling \$8.8 million for Chisholm, following its decision to amalgamate with Monash University.

Allocations were announced for the construction of a Technology Building at Frankston campus (\$7.8 million), refurbishment of the recently acquired Caulfield Technical School (\$0.5 million) for teaching space, and

new student residences at Frankston (\$0.5 million). Another \$3.51 million was allocated to Monash and Gippsland Institute.

In addition, the Department of Employment, Education and Training has granted Chisholm \$109,700 for a project related to the Second Tier Agreement through which performance appraisal and the training of supervisors in performance appraisal

is an important encouragement requirement for the future.

A combined Chisholm/Monash tender for approximately \$3 million of new computer equipment has been advertised, involving mainframe replacement hardware, including intelligent terminals, personal computers, networking facilities, and many other features to meet contemporary needs.

Due to the growing use of computing in courses at both institutions, facilities have been stretched to the limit by the age and configuration of existing equipment. The Director of Chisholm, Dr Geoff Vaughan, said that the cooperative venture is a fitting recognition of Chisholm's twenty five years of activity in Computing and Information Science.

Chisholm shows off at Open Day

Chisholm held its annual – and last – Open Day on Sunday 13 August. It is the last Open Day for Chisholm because the 1990 Open Day will be held as part of the enlarged Monash University.

Thousands of prospective students, their parents, and just curious visitors saw demonstrations of the wide range of areas that Chisholm teaches or researches. Those looking to undertake a course at Chisholm were able to ask questions of the course leaders and lecturers, and to find out the career prospects that will follow graduation.

Demonstrations of applied science, computers, robots, machinery, nursing procedures, art and design techniques, and even model aircraft took place at both the Caulfield and Frankston campuses.

The model aircraft, demonstrated in the School of Education, showed high school girls that with a science and mathematics background, they could take up careers that would otherwise be closed to them.

The Student Union showed off its clubs and societies and talked about life as a higher education student to senior secondary students looking to their future.

The Mayors of Frankston and Caulfield were among special visitors that included members of Parliament, headmasters of local secondary schools and colleges, and community leaders.



Above: staff of the David Syme Business Schools give advice to young hopefuls looking to a career in business. Below left: visitors arrive on a beautiful sunny Sunday. Below right: discovering the physics of rotating wheels.



A new Solar Vehicle team points the way to Adelaide

Chisholm has again entered in the Solar Vehicle Race from Darwin to Adelaide, to be run in 1990. In the 1988 inaugural race, Chisholm took second place in the College and University section and sixth overall, in a vehicle built by students and staff.

Following Chisholm's placing, out of 23 starters, in the 1987 World Solar Challenge, it was decided that a broader skills base was needed to develop a higher performing vehicle for the 1990 race. Accordingly, a team of staff and students from four institutions and six departments

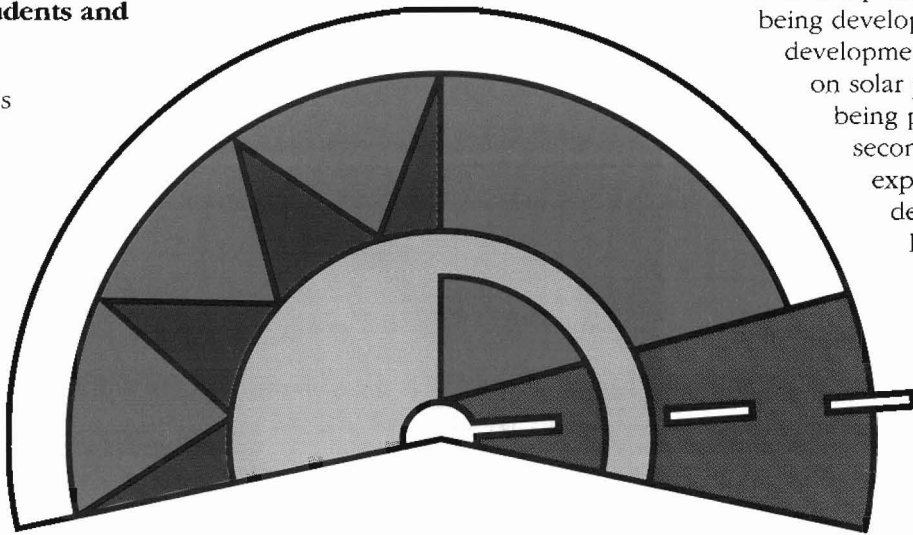
within Chisholm was established at the start of 1989. The Materials Engineering department at Monash has designed the body structure; the Plastics Skills Centre at Dandenong TAFE are manufacturing the composite shell and the Engineering Division at Moorabbin TAFE is fabricating the trailer and machining components.

To build an effective race team requires more than just design and manufacturing skills, however. Chisholm Marketing are taking

much of the responsibility for raising sponsorship and Graphic Design and the Chisholm Design Group are helping mount an extensive promotion campaign. The major design responsibilities and

"Parhelion" which means "points of the sun" and is a visual phenomenon which occurs under some atmospheric conditions in which the sun appears to be surrounded by points of light.

Part of the promotional plan being developed is the development of a project kit on solar powered vehicle being prepared for secondary schools. An expert curriculum development team has been established to write appropriate curriculum materials aimed predominantly at science and technology students from Years 9 to 12. This project has been granted \$27,500 by Energy Victoria



PARHELION

team management are again based within the School of Engineering with fifteen students from Mechanical, Industrial and Electrical Engineering currently involved.

In view of the new team structure, it was obvious that a new logo and team identity needed to be developed. A logo competition among third year Graphic Design students was held in July and the design by Lisa Hawkins was judged the winner. To fit in with the logo, the team was given the name

to design and print the materials and to send schools a starter kit of solar cells and components. The vehicles built will be eligible for a competition based at Chisholm in May 1990 with the winning team joining the Parhelion team during testing at Alice Springs in July. Mr Paul Wellington, leader of the Project, recently arranged a grant for \$40,000 from the Department of Industry, Technology and Resources to ensure that the new design will increase performance.

Disasters on computers!

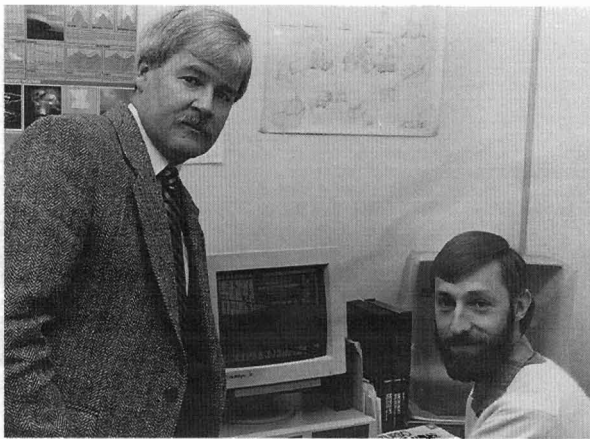
A revolutionary new computer model developed by the Centre for Applied Mathematical Modelling (CAMM) is helping Melbourne's emergency services prevent a major chemical spill disaster.

Developed by Dr Graeme Ross and Dr Graeme Lorimer of CAMM for the Displan committee – which includes planners from the Melbourne and Metropolitan Fire Brigade, the CFA, the EPA, State Emergency Services, Police, and ambulance services – the computer model aims to assess the seriousness of toxic spills on the local community.

Growing concern about such spills, brought about by near-disastrous chemical fires and accidents in the Western suburbs and the Ash Wednesday fires, led Displan to develop a local model to assess the implications of toxic chemicals after a fire, spill or leakage.

CAMM was already working on mathematical models of the pollution from the Latrobe valley power stations and the effect different winds have on the smoke plumes, and the work was adapted to the problem of a toxic spill. Emergency officers arriving at a spill will be able to enter in the computer the name of the chemical, its volume and the weather data and a map will be generated which shows the direction and area of a toxic plume. The model may also include an expanded chemical reference base.

Dr Lorimer says that there are already serious gaps in the abilities of emergency services to assess the impact of spills, and that there are accidental releases of chemicals into Melbourne's air every few weeks. He says that in most cases we do



Dr Graeme Ross, left, and Dr Graeme Lorimer

not know the effects these have on human health.

"Bodies such as the EPA simply do not have adequate tools to fully cope with and assess these incidents," he said.

A CAMM model developed in consultation with the emergency services would help to fill the gaps.

The Displan Committee is considering a grant of \$36,000 to assist in the development of the system, to provide Victoria with a more consistent and coordinated approach to disaster management. Displan members have shown considerable enthusiasm for the project.

New course in Manufacturing Management

Chisholm has introduced a Bachelor of Business (Manufacturing Management) to produce graduates for the manufacturing sector.

ICI Teaching Fellow in Manufacturing Management at Chisholm's School of Management, John Marshall, said "The underlying philosophy of the course is to produce graduates who can integrate broad-based business backgrounds with specialised manufacturing knowledge, so as to be able to respond to the changing needs of the Australian manufacturing sector."

The course has been developed by a group of industry leaders together with staff of the David Syme Business Schools, integrating contemporary management and manufacturing philosophies to become what will be a most prestigious qualification. It has also gained significant funding support from industry, with ICI Australia and the Ford Motor Company leading the way. John Marshall was Vice-President (Manufacturing) at Ford prior to his appointment at Chisholm as ICI Teaching Fellow.

The degree is both full- and part-time, commencing in 1990 (VTAC Course Code CCAD-157) and is open to VCE graduates and those working within manufacturing, as well as those wanting a career change. Enquiries should be directed to (03) 573 2615.



Caulfield from the Air

The Caulfield Racecourse is a green oasis in the neighbourhood of the Caulfield campus. The main buildings of the campus are visible at the lower left of the photograph, and the new Technology Tower and Student Union facilities stand out opposite Caulfield Railway Station.