



UNESCO International Centre
for
Engineering Education



Newsletter

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From the Director

Looking back over the last five years of the Centre's operation allows us to reflect on the achievement of its mission and on those things that have impeded the Centre's progress.

An ethos of economic rationalism has infiltrated the policies of many governments, infecting our policy makers and distorting their vision of the long term value and importance of education and replacing it with a penurious myopia that considers only the costs involved. The consequences of this misguided quest for quick profits or huge savings at the expense of infrastructure and human resources development will surely be felt in many countries in the not too distant future. Education is the most fundamental investment in a country's citizens, and without it, country's are assured only of failure. This begs the question: when government policy threatens the opportunity of citizens to acquire an adequate education, is this not in fact an infringement of the basic human right to education that is guaranteed by most national constitutions?

The global economic crisis, with its origins in Asia and Russia in particular, has only compounded the problem of funding for education. Combine this with the blackhole of military spending that, despite the conclusion of the Cold War, has continued to grow due to the *interventionist* military activities of some countries and the hostilities of others, and the future does not look good for the vital infrastructural spending that will promote growth.

In this context, the serious lack of financial backing, coupled with the unwillingness of industry to support collaborative ventures, has seen a number of academic research centres cease to operate, in Australia for instance, in 1998. The UICEE's survival, and indeed its growth, in such an environment are therefore all the more pleasing. Despite the dearth of funds and the preoccupation of academics mostly with survival, the Centre has been able to expand its core activities and to attract numerous academic institutions and individuals to its cause of engineering education.

To a great extent, the UICEE's position has in fact been strengthened by the policies and activities of the Victorian State Government, a liberal government that has demonstrated foresight and progressive policy making, proving itself willing and able to support education and infrastructural development. The Centre has strong relationships with two Victorian Government organisations under the umbrella of the Department of Infrastructure (DoI), the DoI Urban Design Unit and Roads Corporation, Victoria. The DoI has initiated an important project through the Centre for the promotion of sustainable urban design, a forward thinking initiative that reaffirms the Victorian Government's pre-eminence in this area (see article below). We are delighted to welcome Mr Andrew Olszewski, seconded to the UICEE to lead the project.

Continuing in this more positive vein, a recent highlight has been the establishment of a partnership with Glasgow Caledonian University, Glasgow, Scotland, United Kingdom, and the creation of the Caledonian Centre for Engineering Education, a satellite centre of the UICEE.

All things considered, we look forward with excitement and optimism to the next five years of operation.

Urban Design

The strong relationship between the UICEE and the Victorian Government's Department of Infrastructure, evolving from the Centre's 1997 partnership with Roads Corporation, Victoria (VicRoads), has been significantly strengthened and extended through the establishment of a joint project on urban design and sustainable development. The UICEE is delighted to announce



The Honourable Robert Maclellan, Minister for Planning and Local Government.

UICEE Partners



the awarding of a grant by the Honourable Robert Maclellan, Minister for Planning and Local Government, to support the project.

The project, titled the UICEE Urban Design and Education Programme (UICEE/UDEP), is an initiative of the Department and reinforces the Victorian Government's commitment to quality urban design in the best interests of the entire Victorian community. It is anticipated that the project will be a catalyst for change and will seek to achieve a balanced approach to development. The objective of the project is then to establish urban design standards, to promote better procedures and world best practice, and to act as a source of independent advice for governments and the community.

With an impressive track record in quality urban design already, it is anticipated that the project will further strengthen Victoria's leading position, nationally and internationally, in this field.

The Minister is pictured on the front cover.

Auckland Conference

The 2nd UICEE Annual Conference on Engineering Education, held at the Auckland Institute of Technology (AIT), Auckland, New Zealand, between 10 and 13 February, built on the success of last year's inaugural Conference in Melbourne and was felt, by all concerned, to be a very effective and enjoyable meeting of UICEE members and sympathisers. Over ninety participants from twenty countries attended the Conference to present their papers and participate in the panel discussions on issues of importance for the future of engineering education. Many of the papers were very good and make a valuable contribution to the debate about, and information on, engineering education. Copies of the Conference Proceedings are available from the UICEE on request.

A highlight of the conference was the excellent after-dinner speech by Dr John Hinchcliff, President of AIT and a philosopher by profession, who argued eloquently and convincingly for the liberalisation and contextualisation of science and engineering (to be published in Vol.3 No.3 of the *Global Journal of Engineering Education*).

We are grateful to our host, the Faculty of Science and Engineering, for their generous hospitality and support, and for the memorable opportunity of running a conference in a new building with all modern equipment and facilities. Continuing the theme of novelty, we learned during the conference that our host and supporter member will be changing its name to Auckland University of Technology,

and we wish our friends and colleagues good fortune and success in the future.

Annual General Meeting

The annual meeting of the Centre's Academic Advisory Committee during the Auckland Conference was the climax of many deliberations concerning engineering education and the future direction of the UICEE. Close to twenty members of the Committee attended and discussed the present status and activities of the Centre, examining key issues of importance raised by the Committee Chairman, Professor Peter LePoer Darvall. Future directions and activities were considered, including the expansion of the Centre's Internet activities, such as the organisation of an electronic conference.

Badge of Honour Awards

As well as a celebration of good food, wine and company, the Conference Banquet was an opportunity to celebrate the excellence of three academics, who were awarded the UICEE Silver Badge of Honour

for distinguished contributions to engineering education, outstanding achievements in the globalisation of engineering education through the activities of the Centre, and, in particular, for remarkable service to the UICEE.

The first award was presented to Professor Roy Geddes, Dean of the Faculty of Science and Engineering, and an outstanding New Zealand academic. The second was presented to Professor John Buckeridge, Associate Dean of the Faculty and the driving force behind R&D in engineering education in New Zealand. The third award went

to Mr Erich Reindel of the Fachhochschule Mannheim, University of Applied Sciences Mannheim, Federal Republic of Germany. Mr Reindel represents the new generation of engineering educators and has published numerous papers, and also organised and staged an extremely successful conference on engineering education in Mannheim last September.

The staff, students and associates of the Centre wish to congratulate the awardees.

UICEE Paper Awards

The Centre's now well-established celebration of academic excellence, the presentation of UICEE Paper Awards, took place during the Closing Ceremony



Professor Roy Geddes (l), Dean of the Faculty of Science and Engineering, receiving the UICEE Silver Badge of Honour from the Centre's Director, Associate Professor Zenon J. Pudlowski.

of the Auckland Conference. The democratically determined awards are presented for papers included in the proceedings that are felt by registered participants to make the most significant contribution to engineering education. Voting was made difficult by the generally high standard of contributions, and it is to the credit of the awarded papers that the final margins were so convincing. In theory, five awards, in the categories diamond, platinum, gold, silver and bronze, are presented, but with joint third place shared by two papers, the bronze award was omitted on this occasion.

The five papers were:

- Diamond *Engineering the new millennium: an opportunity for universal change in engineering curricula*, by J. Buckeridge, Auckland Institute of Technology, Auckland, New Zealand.
- Platinum *Effective integration of multimedia courseware as an enhancement of learning experiences in engineering education*, by M.S. Zywno, W.J.G. Brimley and W.E. White, Ryerson Polytechnic University, Toronto, Ontario, Canada.
- Gold *Strategic planning for the education process in the next century*, by H.P. Jensen, Technical University of Denmark, Lyngby, Denmark.
- Gold *An international vehicle design project involving the University of New South Wales, Monash University, the Pforzheim School of Design and Musashino University*, by L.N. Green and R. Bernabei, University of New South Wales, Sydney, Australia.
- Silver *A seminar within a subject hones communication skills*, by A.L. Simcock and J.A. Chlond, Victoria University of Technology, Melbourne, Australia.

The UICEE congratulates the authors of these excellent papers. It is envisaged that revised and expanded versions of these papers will appear in Vol. 3, No. 3 of the Centre's *Global Journal of Engineering Education*.

3rd UICEE Annual Conference

It has been decided that the 3rd UICEE Annual Conference on Engineering Education will be hosted by the University of Tasmania, Hobart, Australia, with Professor Don McNichol, Vice-Chancellor and Principal of the University, as Conference Patron. The Conference, which will be held from 9-12 February 2000, will

be the first engineering education meeting of the new millennium.

At the 2nd UICEE Annual Conference in Auckland, Professor Thong Nguyen, from the University of Tasmania's School of Engineering, made an excellent presentation about his University and gave an open invitation to attend. A Call for Papers is currently in circulation.

After Conference Meeting

On Monday 15 February, following the Auckland Conference, a half day meeting attended by some members of the UICEE Academic Advisory Committee was held at Monash University, Melbourne, Australia. Discussion focused on the Centre's future bilateral activities, especially in relation to the Caledonian Centre for Engineering Education, Glasgow, Scotland, United Kingdom.

The meeting concluded with a working dinner at an excellent Italian restaurant in Carlton, Melbourne's Little Italy.

Scottish Conference

We are delighted to report on the progress of the first activity of the UICEE's satellite centre, the Glasgow based Caledonian Centre for Engineering Education (CCEE). The 1st CCEE Conference on Life Long Learning for Engineers, under the theme *Work Based Learning and Continuous Professional Development*, will be held at the Glasgow Caledonian University, Glasgow, Scotland, United Kingdom, from 22-25 May 1999. So far the Conference has received close to 50 paper proposals from all over the world, and there is still time for late proposals to be accepted.



Mr Erich Reindel (l) receiving the UICEE Silver Badge of Honour from the Centre's Director.

As a truly collaborative venture, it is envisaged that some

of the organisational work involved in the preparation of the Conference will be undertaken by the UICEE.

UICEE members and other interested parties are encouraged to propose a paper and attend the Conference in Glasgow.

2nd Asia-Pacific Forum

Preparations are in full swing for the 2nd Asia-Pacific Forum on Engineering and Technology Education, to be hosted by the School of Electrical and Information Engineering, The University of Sydney,

from 4-7 July 1999.

Over one hundred paper proposals have been submitted, with over 200 expressions of interest from 35 countries worldwide. Late paper proposals will be considered as they come in until March 31.

2nd Global Congress

It is our pleasure to be able to announce the staging of the 2nd *Global Congress on Engineering Education* by the Centre in collaboration with our Supporter Member, the Hochschule Wismar, Wismar University of Technology, Business and Design, Federal Republic of Germany. The Congress will be held between 2 and 7 July 2000. In a similar fashion to the 1st *Global Congress* last year, a number of local and international conferences will be held in preparation for this Congress.

The host institution has spared no effort in attracting the support of German academic and industrial organisations and individuals with a stake in engineering education. Furthermore, the Congress has the support of the State and Federal Governments.

A brochure is currently in circulation, and additional copies can be obtained from the Centre.

3rd Baltic Region Seminar

Building upon the earlier effort and success with raising the profile of engineering education in the Baltic Region, the 3rd *Baltic Region Seminar on Engineering Education* will be held at Chalmers University of Technology, Göteborg, Sweden, from 3-5 September 1999. The Swedish National Group for Engineering Education has offered to co-sponsor the Seminar.

The host organisation has made funds available to cover the Seminar fee and provide local hospitality for some participants whose papers have been accepted and judged to be of a particularly high standard.

Membership Drive

Enclosed with this edition of the Newsletter, UICEE members will find a letter of renewal of their membership. A large membership drive is also underway in order to attract more individuals and organisations to the UICEE and its cause of engineering education.

A special effort is being made to attract institutional members from developing countries and countries in social, economic and political transition, as these members can particularly benefit from the range of activities that the Centre has to offer.

The electronic database of UICEE members is being handled by Mr John Zakis of Monash University, a UICEE Associate. All members are encouraged to submit their biography and photograph directly to John at john.zakis@eng.monash.edu.au

The Centre is also keen to attract more individual members, and is therefore proposing to waive the annual fee for one year for any individual member who can attract five new members.

GJEE

Again in 1999, the *Global Journal of Engineering Education* will be expanding its publication from the nominal two issues per year to three issues. Vol.3, No.1, consisting of papers by members of the UNESCO International Committee on Engineering Education, is already in circulation.

Editorial plans for 1999 include the publication of a special edition dedicated to the 1998 *Global Congress on Engineering Education*. Thus, Vol. 3, No. 2, will present revised and expanded versions of selected keynote addresses and award winning papers presented at the Congress.

Vol.3, No.3, will be a collection of regular papers and revised and expanded award papers presented at the 2nd *UICEE Annual Conference* in Auckland.

It should be mentioned that the journal is fully available on the Internet, with a delay of one issue so as to advantage subscribers.

12th ILG-EE Annual Meeting

The 12th *ILG-EE Annual General Meeting* will be held in conjunction with the 3rd *Baltic Region Seminar on Engineering Education*, in Göteborg, Sweden. A wide range of activities will be discussed, including the organisation of the 5th *World Conference on Engineering Education*, to be held in September 2001. Several institutions have already indicated their interest in holding the Conference.

Minutes of the 11th *ILG-EE Annual General Meeting*, held in Cracow, Poland, in September 1998, in conjunction with the *Global Congress on Engineering Education*, have been distributed to members of the ILG-EE.

Homepage

We would encourage members to visit and make use of the Centre's Homepage (address below), which presents the wide range of our activities, as well as our publications. An excellent way of introducing other engineering educators to the Centre and its work is to disseminate the Centre's Internet address. The number of visits to the site has steadily increased to about thirty per day, and feedback regarding the usefulness of information has been encouraging.

A comprehensive list of the UICEE's publications available for purchase by libraries and individuals can be found through the Centre's Homepage at the following address: <http://www.eng.monash.edu.au/uicee/publicat/publicat.htm>