



UNESCO International Centre for Engineering Education



Newsletter

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From the Director

Members of the so-called *UICEE Global Family of Engineering Educators* will find it exciting to learn that the UICEE has entered a new era of its existence, and indeed its activities, as spectacular events have occurred in the first three months of 2002. With the signing of a Memorandum of Agreement with Aalborg University, Aalborg, Denmark, on 19 February 2002, the establishment of a parallel office and the *UICEE European Headquarters* in Aalborg can be regarded as the significant breakthrough in our commission to globalise engineering education and assist less privileged countries in their struggle to improve their engineering education.

Moreover, with the signing of new agreements, resulting in 11 partnerships with academic organisations, the UICEE has become, really and truly, a global player and the world's hub in engineering and technology education. The institutional membership of the UICEE spans almost all continents with the exception of South America. It is, therefore, our immediate objective to remedy this situation, as we all recognise the importance of South America, and specifically the Spanish-speaking world, in our endeavour to globalise engineering education.

The new initiatives of the UICEE have been reinforced by the establishment of our new journal, appropriately called *World Transactions on Engineering and Technology Education* (WTETE). It is our strong objective to complement the wide range of UICEE publications, including the *Global Journal of Engineering Education* (GJEE), by expanding the publication of quality articles to be included in the

WTETE and providing members of the extensive UICEE network with both a source of information and the opportunity of publishing their research papers in a high quality journal. A call for papers is made for papers to be considered for inclusion in the second issue of the WTETE elsewhere in this issue of the Newsletter. I would certainly encourage our readers to consider responding to this call.

This issue of the UICEE Newsletter documents a large number of exciting activities and ventures carried out in the first quarter of 2002. The absolute highlight of the period

was the 60th birthday celebrations of our respected colleague, mentor and beloved friend, Chairman of the UICEE Academic Advisory Committee, Prof. Peter LePoer Darvall. It was a special occasion with almost weeklong festivities, as well as time for reflection on what a single person can achieve over a short period of time. I believe that the UICEE staff, students, associates and all members of the UICEE Global Family will be delighted to join me in wishing Prof. Darvall good health, happiness, prosperity and many more returns.



Cementing the international relationship with a glass of champagne are Prof. Finn Kjærdsdam (c), Prof. Michael L. Brisk (r) and Prof. Zenon J. Pudlowski, raising a toast for the UICEE operation in Europe.

UICEE European HQ

An Official Ceremony of the signing of a Memorandum of Agreement between the UNESCO International Centre for Engineering Education (UICEE), based at Monash University, Melbourne, Australia and Aalborg University (AAU), Aalborg, Denmark was held on Tuesday, 19 February 2002, at the Monash Staff Club, Monash University.

The purpose of this Memorandum of Agreement is to further expand the relationship already established between

UICEE Partners



the UICEE and the AAU through the foundation and development of the UICEE European Headquarters (UICEE EHQ). Aalborg University is a prime European academic establishment and is an international leader in the development of higher education, with about 12,000 students and over 25 years of academic achievements, so that the AAU is well suited to host the UICEE EHQ.

This is a significant breakthrough for the UICEE as the European Headquarters of the UICEE will provide the focus for the development of academic and research related activities in engineering education with particular emphasis on the European scene, in order to further the globalisation of engineering education and, in particular, to provide assistance to institutions in Central and Eastern Europe. It is envisaged that the UICEE European HQ will be officially opened on Thursday, 27 June 2002, at a gala ceremony to be held at Aalborg University.

The Agreement was signed by Prof. Finn Kjærdsdam, Dean, Faculty of Engineering and Science, at Aalborg University on behalf of Aalborg University and the UICEE Director in the presence of Prof. Peter LeP. Darvall, Deputy Vice-Chancellor of Monash University and Chairman of the UICEE Academic Advisory Committee, and Prof. Michael L. Brisk, Dean, Faculty of Engineering at Monash University.

Under the Agreement, Prof. Kjærdsdam has been appointed Deputy Chairman of the UICEE Academic Advisory Committee.

Pictured on the first page, cementing the relationship with a glass of champagne, are Professor Finn Kjærdsdam, Professor

Michael L. Brisk and the UICEE Director, raising a toast for the new UICEE operation in Europe.

UICEE Annual Conference

The 5th UICEE Annual Conference on Engineering Education, under the theme of *Student-centred Engineering Education*, was held over the Internet and in person at Anna University, Chennai, India, between 6 and 9 February 2002. It was hosted and supported by Anna University, which is a Partner member of the UICEE.

Conference participants had the opportunity to discuss issues of importance to engineering education, the activities of the UICEE and satellite centres, as well as the main Conference theme.

Although current political unrest held back some participants from attending directly due to travel and safety concerns, conducting part of the Conference over the Internet helped overcome many problems.

UNESCO was represented at the Conference by Dr M.S. Alam, Senior Programme Specialist in Science, based at the UNESCO Regional Office in New Delhi. The photo shows Prof. A. Kalanidhi, Vice-Chancellor of Anna University, opening the Conference.

Copies of the volume of Conference Proceedings are now available for purchase from the UICEE, and cover a rich variety of papers, demonstrated in the 46 collected papers taken from the Conference.

Meetings in India

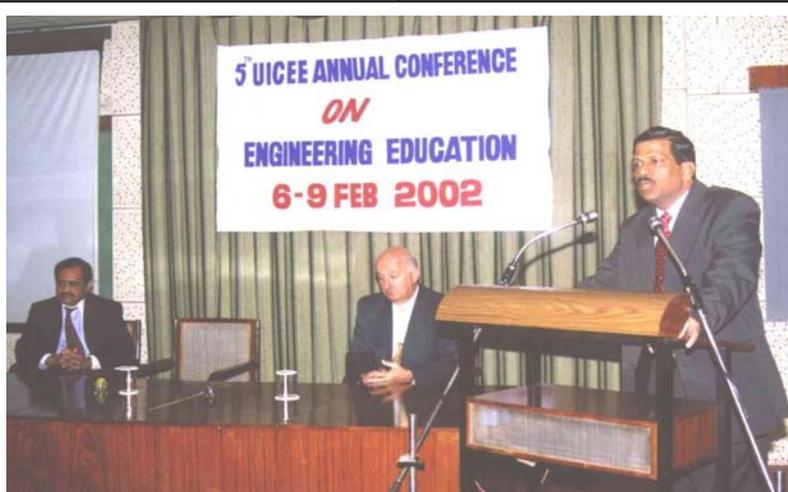
After the 5th UICEE Annual Conference in Chennai, India, the UICEE Director had the opportunity to meet with several distinguished academics in Mumbai, India, to discuss potential future collaboration and partnership with the UICEE.

The Director met initially with the Maharashtra State Board of Technical Education (MSBTE), including the Chairman, Prof. C.Y. Mowade and other officials. The MSBTE concentrates on diploma level engineering and technology education, particularly with regard to its administration, including examinations, curriculum design, publications, etc.

The second meeting held was with the Director of Technical Education Maharashtra State (DTE), Prof. N.B. Pasalkar, Joint Director, Prof. A.A. Ghatol and other senior academics. The DTE focuses on undergraduate and postgraduate courses in engineering and technology. The DTE is interested in developing a centre that would focus on information technologies and multimedia in engineering and technology education, preferably to be located in one of its leading academic institutions.

Silesian Partnership

The Silesian University of Technology (SUT), Gliwice, Poland, signed a Memorandum of Agreement on partnership with the UICEE on 14 January 2002 at a gala ceremony held at the Monash University Staff Club.



The photo shows Prof. A. Kalanidhi (r), Vice-Chancellor of Anna University, opening the Conference in Chennai, India, with Dr M.S. Alam, Senior Programme Specialist in Science from the UNESCO Regional Office in New Delhi (l) and Prof. Z.J. Pudlowski (UICEE) (c).

The SUT is an international leader in the development of engineering education, with about 30,000 students and over 50 years of academic achievements. Under the Agreement, a *Centre for Engineering Education in Mechatronics* (CEEM), a satellite centre of the UICEE, is being established at the SUT. This satellite centre will provide a focus for academic and research activities related to the work in mechatronics engineering education in the *UICEE Global Network of Engineering Education*.

The photo shows the exchanging of the Agreement by the Rector of the SUT, Prof. Bolesław Pochopień and the UICEE Director, with Prof. Remigiusz Sosnowski (far left), Vice-Rector for Science of the SUT and Prof. Krzysztof Kluszczyński (far right), Director Designate of the CEEM, witnessing the signing of this Agreement on Partnership.

World Transactions

The inaugural issue of the UICEE's *World Transactions on Engineering and Technology Education*, which presents a range of papers from across the spectrum of engineering and technology education and from around the world, including 30 very interesting and insightful representations from many countries worldwide, is presently in circulation.

A call for papers is made for the next issue of the *World Transactions*, Vol.1, No.2, with the deadline being 30 September 2002. More information for prospective authors is available at the UICEE Web site.

GJEE Update

The first issue of 2002 for the *Global Journal of Engineering Education* (GJEE), Vol.6, No.1, is a high quality issue that features primarily award papers from past UICEE-run Conferences, as well as an overview of the outcomes and achievements of the UICEE's Urban Design and Education Programme.

It is envisaged that the next issue of the GJEE, Vol.6, No.2, will focus on *Engineering Education in Denmark* and present papers from across Denmark. The Guest Editors of this issue will be Prof. Finn Kjærdsdam and A/Prof. Flemming K. Fink of Aalborg University in Aalborg, northern Denmark.

3rd Global Congress

Arrangements are being finalised for the forthcoming *3rd Global Congress on Engineering Education*, to be held at the Glasgow Caledonian University (GCU), in Glasgow, Scotland, UK, from 30 June to 5 July 2002. The Congress is a key UICEE activity, with the GCU being the host and principal co-sponsor.

More information can be found on the UICEE Web site, under *Conferences and Meetings*. Colleagues are encouraged to attend to facilitate enhanced international exchange in engineering and technology education in what promises to be a picturesque and friendly city.

6th Baltic Seminar

Preparations are underway for the *6th Baltic Region Seminar on Engineering Education*, to be held at Hochschule Wismar – University of Technology, Business and Design in Wismar in northern Germany from 23-25 September 2002. It is envisaged that part of the Seminar will involve a trip to Warnemünde to conduct some Seminar activities, as well as inspect the marine simulator there.

The Seminar's emphasis will be on maritime engineering education, its impact and future for the Baltic region and, indeed, globally.

The Seminar will also be significant in that it will also be in conjunction with the 10th anniversary of the establishment of Hochschule Wismar.

Also, it should be noted that the Baltic Seminar is being held in conjunction with the *2nd German Seminar on Engineering Education* and will provide the venue and organisational support for the German Seminar.

A call for papers and further information can be found at the UICEE's Web site.

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3rd Russian Seminar

The *3rd Russian Seminar on Engineering Education* is scheduled to be held from 12-14 September 2002 at the Taganrog State University of Radio Engineering (TSURE) in Taganrog in Russia near the Black Sea. The Seminar will form a part of the celebrations of the 50th anniversary of the establishment of the TSURE.

The Seminar's main theme of *Engineering Education*



The photo shows (l-r): Prof. R. Sosnowski, Vice-Rector for Science at the SUT, Prof. B. Pochopień, Rector of the SUT, Prof. Z.J. Pudlowski (UICEE) and Prof. K. Kluszczyński, Director Designate of the soon-to-be-established SUT's satellite centre.

in the 21st Century may be considered as an extension of the themes of the two previous Russian seminars in Tomsk and Tambov. Seminar participants will have the opportunity to meet their colleagues and discuss problems with the purpose of establishing international contacts and new relationships.

Further information can be found at the UICEE's Web site.

Bangkok Partnership

A Memorandum of Agreement on partnership was signed by Dr Krissanapong Kirtikara, President of King Mongkut's University of Technology Thonburi (KMUTT), Thonburi, Bangkok, Thailand and the UICEE Director on 13 March 2002 in Bangkok.

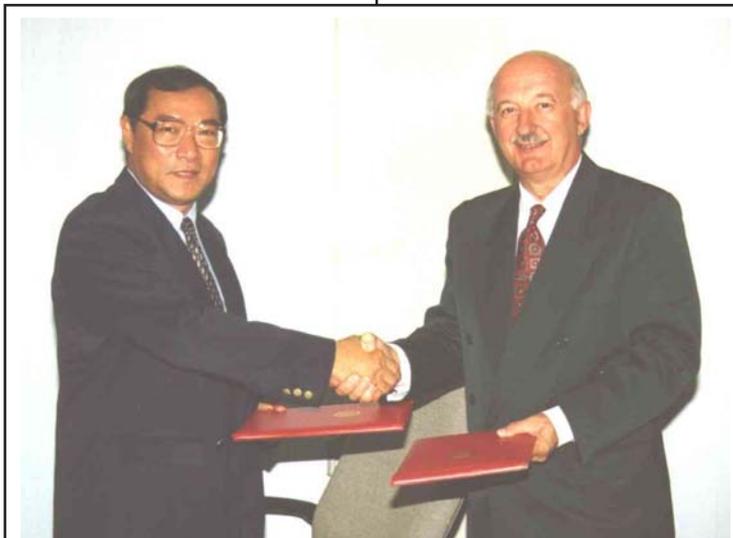
The KMUTT is the first university of Thailand that changed its status to a government autonomous university. It has maintained a tradition of excellence since its inception in 1960. The KMUTT caters for around 9,000 students and offers a comprehensive range of degree courses, which includes industrial education, information technology, sciences, energy and materials, architecture and engineering.

Under the Agreement, the KMUTT will set up a *South-East Asia Centre for Engineering and Technology Education* (SEACEE), a satellite centre of the UICEE. The satellite centre will

provide a focus for academic and research activities related to the work on engineering and technology education in the *UICEE Global Network of Engineering Education*, and in particular on the transfer of information on engineering and technology education to developing countries worldwide.

The progress of the KMUTT as a member is interesting as the KMUTT was initially a Contributing Member before upgrading to Supporter status and now Partner.

The picture shows Dr K. Kirtikara and Prof. Z.J. Pudlowski exchanging the signed Agreement.



The photo shows Dr K. Kirtikara, President of King Mongkut's University of Technology Thonburi (KMUTT), Thonburi, Bangkok, Thailand and Prof. Z.J. Pudlowski exchanging the signed Partnership Agreement.

TPU-GCU Understanding

From 28-31 January 2002, Dr Bryan Temple, Director of the Glasgow Caledonian University's (GCU) Caledonian Centre for Engineering Education,

a UICEE satellite centre based in Glasgow, Scotland, UK, and Dr David Ross, also from the GCU, visited the Tomsk Polytechnic University (TPU), Tomsk, Russia, and conducted a seminar on problems in the effective use of project work methods in order to carry out interdisciplinary exercises by engineering and technical students. Seminar students attended a two-day workshop on teaching through group projects and were awarded certificates on the completion of a business group project.

Both GCU academics were fully satisfied with the TPU students and expressed their admiration concerning the students' erudition and abilities.

During this visit, the guests became acquainted with the TPU and the areas of its activities. On 31 January, a Memorandum of Understanding was drafted and is planned to be signed in July 2002.

Visitor from Purdue

Prof. Mirosław Skibniewski, Interim Dean of International Programs and Associate Provost at Purdue University, West Lafayette, USA, visited the UICEE on 5 March 2002. The purpose of the visit by Prof. Skibniewski was to become acquainted with the wide range of activities of the UICEE and on how Purdue University would become involved with the UICEE in jointly pursuing new, as well as existing, UICEE projects. Purdue University is a respectable academic institution in

the USA and, according to Prof. Skibniewski, it seeks to increase its involvement in global engineering education activities.

The two parties were largely satisfied with the discussion on potential collaboration and it is hoped that this visit will create a new dimension in the relationship between the UICEE and academic institutions in the USA. It should be mentioned at this point, with regret, that the USA is presently not a member state of UNESCO.

International Conference in Tomsk

The 5th International Conference on *Problems and Practice of Engineering Education* under the theme *International Accreditation of Educational*

Programmes will be held at the Tomsk Polytechnic University (TPU) between 24 and 26 May 2002. Objectives of this Conference are to discuss problems concerning the quality of educational programmes and the internationalisation of higher education.

It should be mentioned that the UICEE is one of the principal co-sponsors of this Conference.

St Petersburg Partnership

A new Partner Member was established with the signing of a Memorandum of Agreement on Partnership with the St Petersburg State Electrotechnical University "LETI" on 19 March 2002 at a special ceremony held at Monash University. Rector of the LETI, Prof. Dmitry V. Puzankov and the UICEE Director signed the Agreement, with Prof. Sergei O. Shaposhnikov, Vice-Rector for International Affairs and Prof. Yuri S. Tatarinov, General Director of the Centre for Information Technologies at the LETI, witnessing the signing.

The LETI, established in 1886, is one of the prime academic establishments in Russia with over 8,000 students and is the leading academic institution in research and teaching activities in the area of electrical and electronics engineering. It is envisaged that a *Centre for Electrical and Electronics Engineering Education (CEEEE)* will be created at the LETI as the most immediate outcome of the Agreement.

The picture shows Prof. D.V. Puzankov and the UICEE Director, exchanging the Agreement, accompanied by Prof. S.O. Shaposhnikov and Prof. Y.S. Tatarinov.

2003 Annual Conference

The 6th UICEE Annual Conference on Engineering Education, to be held in 2003, will commence the celebrations of the 10th year of operations of the UICEE. The Conference is planned to be held in Cairns, Queensland, Australia. With its famous *Barrier Reef* and the *rainforest* it will provide a spectacular environment for Conference participants. It is envisaged that *Educating for the Right Environment* will be the Conference's theme.

Those many members and followers of the UICEE born in 1943 are especially invited to get together in order to celebrate year-long festivities related to their 60th birthday.

Those colleagues wishing to take up this opportunity should contact the coordinator and happy celebrant, the UICEE Director.

Joint Grant with Monash Asia Institute

The UICEE, in a joint application with Monash Asia Institute at Monash University, Melbourne, Australia, has been successful in receiving a Monash University grant (MRF) of \$A90,000 for 2002. This will

facilitate the establishment of an interfaculty research activities and the setting up of a *Research Unit on Cultures and Technologies in Asia*. Also, it is anticipated that a series of publications on research into the impact of new cultures and technologies on countries in the Asia-Pacific region will emerge from this activity in the near future.

Professor Marika Vicziany, Director of the Monash Asia Institute and a close associate of

the UICEE, was instrumental in preparing the successful application. Work is underway on the preparation of applications to other relevant granting bodies for financial assistance in order to sustain the operation of the new Unit.

Deputy Chairman

In line with the historic Agreement signed by Aalborg University for the establishment of the European HQ of the UICEE in Aalborg, Denmark, Prof. Finn Kjærdsdam, Dean of the Faculty of Engineering and Science at Aalborg University, has been appointed Deputy Chairman of the Academic Advisory Committee of the UICEE. It is anticipated that Prof. Kjærdsdam will complement the excellent work done by Prof. P.LeP. Darvall as Chairman of the AAC.

Polish Discussions in Melbourne

A meeting was held on 28 November 2001 between the UICEE Director and several representatives of the Polish academic community. This included Prof.



The photo shows at the exchange of the Agreement on partnership between the UICEE and the St Petersburg State Electrotechnical University "LETI" (l-r): Prof. Y.S. Tatarinov, Prof. D.V. Puzankov, Rector of the LETI, Prof. Z.J. Pudlowski and Prof. S.O. Shaposhnikov.

Tadeusz Burczyński from the Silesian Technical University of Gliwice, Gliwice, Prof. Leonard Ziemiański from the Technical University of Rzeszów, Rzeszów, and Prof. Zenon Waszczyszyn from the Technical University of Cracow in Cracow. This meeting looked at future collaborations between the institutions and the UICEE, as well as opportunities for formal relationships.

Badges of Honour

Prof. Dieter Schott from Hochschule Wismar, Wismar, Germany, was awarded the 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*. Prof. Schott was presented his Badge on the occasion of the 5th UICEE Annual Conference in Chennai, India.



The photo shows Prof. D. Schott (l) from Hochschule Wismar being presented with his Silver Badge of Honour during the 5th UICEE Annual Conference on Engineering Education in Chennai, India. Prof. Pudlowski wears a ceremonial shawl typical of Indian tradition.

Mr Andrew Olszewski, of the Urban Design and Education Programme, and Mr Stephen Axford, of the Department of Infrastructure in the Victorian State Government in Australia, each received the Silver Badge of Honour. The Chairman of the UICEE's Academic Advisory Committee, Prof. Peter LeP, Darvall presented these on the occasion of the signing of the Aalborg Agreement.

2001 Annual Report

The UICEE's 2001 Annual Report gives comprehensive information regarding the diverse and extensive activities undertaken by the UICEE over the past year. Readers will be able to see that 2001 was a year of continued growth and expansion of the UICEE network of engineering educators, with new institutional members and satellite centres being established from around the world.

The 2001 Annual Report is available on the UICEE Web site under *Reports*.



The photo shows (l-r) Mr Andrew Olszewski and Mr Stephen Axford after having each received their Silver Badge of Honour.