



# UNESCO International Centre for Engineering Education



## Newsletter

Volume 12, Issue 3

November 2005

### From the Director

Knowing my previous involvement with UNESCO, as a member of the then UNESCO International Committee for Engineering Education (ICEE), which successfully functioned between 1992 and 2000, as well as my understanding of the UNESCO administrative processes, many international colleagues frequently ask me questions concerning the operation of this famous UN organisation and the way in which they might become involved with UNESCO, basically through proposing new activities and projects.

It should be pointed out that UNESCO has earned itself an enormous reputation over the last 50 or more years of its existence, especially in developing countries, which grossly benefit from UNESCO's actions and activities. Like any other organisation, UNESCO has been evolving in order to cater for the needs of Member States, the contemporary demands of developing countries, as well as modern management practices.

It is the nature and beauty of this organisation that it is governed by its Member States, and the activities undertaken are the reflection of the needs of the States through the democratic process of governance. For this very reason, the Member States have established the so-called National Commissions for UNESCO, to create an active link between the Member States and the UNESCO management. Also, it is the General Conference of UNESCO, attended by country representatives (usually members of the National Commission for UNESCO), where Member States debate and accept UNESCO policies, activities and a biannual budget. The UNESCO HQ in Paris, UNESCO Regional Offices and other relevant bodies, are then obliged to execute the decisions reached at the General Conference.

Apart from devising and recommending

certain policies and activities, the paramount role of the National Commission is to facilitate their execution, and oversee the activities carried out within their national boundaries. The National Commissions also receive modest budgets to realise their objectives and activities. It should be emphasised that the financial resources provided to UNESCO as a whole, would not drive this organisation very far. It is a huge number



Prof. M. Vicziany, Director of MAI, addressing the 4<sup>th</sup> Asia-Pacific Forum in Bangkok, Thailand.

of volunteers, who believe in the UNESCO gospel to assist developing countries in their struggle to improve education and science, and share and exchange their cultures with others in an organised manner, who make things happen. Without those active National Commissions and the multitude of volunteers, UNESCO would have not been able to achieve what it has successfully accomplished so far. The UNESCO International Centre for Engineering Education (UICEE), and its global network, provide the best example of this dedicated pool of volunteers.

We are, indeed, very fortunate that, in our persistent efforts to raise the awareness and develop quality global engineering education over the last 12 years, we have been strongly supported by the Australian National Commission for UNESCO, which consists of the best experts available in the country, who have been selected and appointed by the Australian Federal Government. Therefore, on behalf of the members of the entire UICEE global network of engineering educators, staff and students of the UICEE and, indeed, myself, I would like to express our sincere gratitude to the Management of the Australian National Commission for UNESCO and its Members for all the support received.

In conclusion, I wish to advise our international colleagues to establish contacts with their relevant National Commissions for UNESCO, in order to make them aware about your activities and work closely with them on potential programmes and projects for the benefit of the global community of engineering education.



### UICEE Partners



## 4<sup>th</sup> Asia-Pacific Forum

Another successful UICEE-organised activity was the 4<sup>th</sup> Asia-Pacific Forum on Engineering and Technology Education, which was held in Bangkok, Thailand, between 26 and 29 September 2005. It attracted close to 60 participants, representing 18 countries worldwide, and was carried out at Menam Riverside Hotel.

The Forum saw a considerable debate over local and international issues related to engineering and technology education, and attracted numerous interesting papers by academics from the Asia-Pacific region and beyond.

It should be pointed out that, despite several recent upheavals (eg SARS, bird flu), the Asia-Pacific region is developing rapidly, with increased interest towards engineering and technology education, being quite rightly seen as the key components for rapid and harmonious development.

This Forum was yet another cooperative venture, which, on this occasion, was co-sponsored by the Research Unit on Cultures and Technologies in Asia (RUCTA), a joint enterprise between the UICEE and the Monash Asia Institute (MAI) at Monash University, Melbourne, Australia.

Several interesting and engaging presentations were made during the Forum, including the Opening Address by Prof. Marika Vicziany, Director of the MAI, pictured on the first page, while delivering her insightful address.

At the Gala Banquet of the Forum, the Silver Badge of Honour was awarded to Mr John D. Zakis of Monash University, Melbourne, Australia, on the occasion of his retirement, for his considerable level of support provided to the UICEE, particularly during the Centre's inception and its formative years. The photo shows Mr Zakis receiving his award from the UICEE Director.

At the Closing Ceremony of the Forum on 29 September 2005, the UICEE Director announced the winners of the UICEE Best Paper Awards, specifically those papers that were considered to have offered the greatest contribution to the field of engineering and technology education, and were delivered at the Forum. Importantly, the papers were selected by registered Seminar participants on the basis of the greatest frequency of recognition in a popular vote. Two papers were awarded on this occasion.

The UICEE Diamond (First Place) Award was presented to M.Y. Khairiyah, Z. Tasir, J. Haron & S.A. Helmi of

Universiti Teknologi Malaysia, Johor Bahru, Malaysia, for their Opening Address entitled *Promoting Problem-Based Learning (PBL) in engineering courses at the Universiti Teknologi Malaysia*.

The UICEE Platinum (Second Place) Award was accorded to Ö. Göl, A. Nafalski, K. McDermott, S. Sathasilvam & D. Chan from the University of South Australia, Adelaide, Australia, for their paper called *A liberal approach to teaching advanced engineering courses*.

Staff, students and associates of the UICEE wish to congratulate the distinguished awardees on their outstanding efforts.

A volume of Proceedings was published after the Bangkok Forum, incorporating 45 peer-refereed papers presented there. Copies of these Proceedings can be purchased from the UICEE.

## ILG-EE Meeting

As announced earlier, the 17<sup>th</sup> General Meeting of the International Liaison Group for Engineering Education (ILG-EE), was carried out on Sunday,

25 September 2005, and was organised in conjunction with the 4<sup>th</sup> Asia-Pacific Forum on Engineering and Technology Education, which held at Menam Riverside Hotel in Bangkok, Thailand, between 26 and 29 September 2005.

The meeting was originally scheduled for 16 June 2005, to coincide with the 9<sup>th</sup> Baltic Region Seminar on Engineering Education, held in Gdynia, Poland, but was unfortunately postponed due to a lack of attending members.

Several issues of importance for the efficient operation of the ILG-EE were on the agenda, including the support

of, and the engagement in, the UICEE-organised international conferences and seminars, as well as the possibility of recruitment of new members from various countries, especially those active in engineering education, such as the UK, Denmark, Canada and Germany. The item concerning the possibility of holding the elections of its new executive in the near future was also brought to the attention of the meeting.

One of the immediate resolutions of the meeting was that 18<sup>th</sup> General Meeting of the International Liaison Group for Engineering Education (ILG-EE), should be held in conjunction with the 5<sup>th</sup> Global Congress on Engineering Education, which is scheduled to take place in Athens, Greece, between 17 and 21 July 2006.



The photo shows Mr J. Zakis (r) receiving his award from the UICEE Director.



## 3<sup>rd</sup> Balkan Region Conference

A Partner institution of the UICEE, *Lucian Blaga University of Sibiu (LBUS)* in Sibiu, Romania, organised the *3<sup>rd</sup> Balkan Region Conference on Engineering Education*, held on its premises between 12 and 16 September 2005. Like in 2003, this

was a successful venture that was well attended, this time by over 60 participants, including 40 international delegates, representing about 10 countries worldwide.

The Opening Ceremony was addressed by Prof. Constantin Oprean, Rector of the University, in which he expounded on the history and present achievements of the LBUS, as well as visions and plans for the future.

The picture taken during the Opening Ceremony, chaired by A/Prof. Claudiu V. Kifor, shows (l-r) Prof. Vasile Nastasescu, representing the Ministry of Education and Research in Romania; Prof. Zenon J. Pudlowski, UICEE Director; Prof. Constantin Oprean, Rector of the LBUS; Prof. Norbert Grünwald, Rector of Hochschule Wismar, Germany; and Prof. Galaftion Sofonea, Dean of the Faculty of Engineering, LBUS.

The Conference incorporated an excellent academic programme and engaging social events, which included a field trip to the delightful *ASTRA Outdoors Folk Museum*, situated in *Dumbrava Forest*, plus a visit to the historically rich and beautiful medieval town of *Sighisoara*.

At the Conference Gala Dinner, a University folk dance and music ensemble gave a stunning performance of rich Romanian culture. There was also a contemporary fashion show, mostly performed by University students.

The UICEE Director later presented two 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 recipients of these awards were A/Prof. Claudiu V. Kifor



The picture shows (l-r): Prof. V. Nastasescu, Prof. Z.J. Pudlowski, Prof. C. Oprean, Prof. N. Grünwald and Prof. G. Sofonea.

and Prof. Nicolai Georgescu, both of whom are very active members of the UICEE and the two Vice-Directors of the *Balkan Region Centre for Engineering Education (BRCEE)*, a satellite centre of the UICEE. The picture at the bottom of this page shows the proud awardees holding their certificates.

## 9<sup>th</sup> UICEE Conference

Organisation of the *9<sup>th</sup> UICEE Annual Conference on Engineering Education*, to be held in Muscat, Oman, between 11 and 15 February 2006, is in full swing. Papers are currently coming in and are being processed by the UICEE.

The 2006 Annual Conference of the UICEE is a joint venture with the Muscat-based *Caledonian College of Engineering (CCE)*, a Partner institution of the UICEE in the Sultanate of Oman, as the host as principal co-sponsor.

It is envisaged that there will be a strong level of representation by academics of the CCE, which will celebrate the 10<sup>th</sup> anniversary of its foundation in 2006. This strong participation should provide a significant input to the Conference, with numerous issues of importance to CCE's higher education being aired and discussed.

There will be a range of exciting tourist attractions and social engagements. We have been recently informed that it is likely that the highlight of this associated programme will be a Cocktail Party in the residence of the CCE's Principal and Dean, Prof. Frank McInstosh.

UICEE members may still wish to propose a very late paper for presentation in Muscat, Oman.

## 5<sup>th</sup> Global Congress

The advertising and promotion campaign is well in progress for the forthcoming *5<sup>th</sup> Global Congress on Engineering Education*, to be held in Athens, Greece, between 17 and 21 July 2006, with the *Technological Education Institute of Piraeus (TEI-Piraeus)*, Piraeus-Athens, Greece, as the principal co-sponsor and co-organiser.



The photo shows (l-r): Prof. N. Georgescu and A/Prof. C.V. Kifor displaying their awards.

It is hoped that the Congress will stimulate further international discussion on issues of importance for global educational affairs, and the Greek and Mediterranean region in particular. It is important to note that Greece, as a very active country of the European Union (EU), has a special role to play in this region in its effort to stimulate progress in regional development, particularly engineering and technology education.

The Congress is, indeed, very fortunate to be strongly supported by local institutions, including the Management of the Olympic City of Athens, with the Mayor of Athens, Mrs Dora Bakogianni, likely to be hosting the Congress' cocktail party at the roof garden of the Town Hall.

Other excellent arrangements have been made by the host institution to facilitate the attendance of Congress delegates and their spouses at formal activities, as well as to plan their extended stay in Athens or holidays in other beautiful places in Greece at absolutely competitive prices.

Athens obviously, and indeed Greece as a whole, offer fantastic opportunities for holidays and tourist attractions, both historical and recreational. Members and readers of the Newsletter are encouraged to submit a paper proposal at their earliest convenience, and take advantage of this exciting opportunity.

## World Transactions

The latest issue of the UICEE's *World Transactions on Engineering and Technology Education*, Vol.4, No.2, is at the printers and caps off a successful year for this latest journal of the UICEE. This issue comprises 31 internationally peer refereed articles from authors representing 13 countries, covering a diverse field of topics in engineering and technology education. This issue should be in distribution in late November 2005.

Readers should be aware that a Call for Papers for Vol.5, No.1 of the *World Transactions* has already been made, with the closing date set for 31 March 2006. The electronic kit for authors can be obtained from Mr Marc Riemer via [marc.riemer@eng.monash.edu.au](mailto:marc.riemer@eng.monash.edu.au)

Readers are invited to browse the UICEE's *World Transactions* Web site, which includes the full papers from the first volume, at: <http://www.eng.monash.edu.au/uicee/worldtransactions/wtete.html>

## GJEE Update

Preparations are underway for the release of the next issue of the *Global Journal of Engineering Education* (GJEE), Vol.9, No.2, which is expected to be in circulation in early December 2005. This regular issue will feature mostly articles that were awarded the UICEE Best Paper Awards at the UICEE organised international conferences and meetings in 2005, as well as some invited contributions.

As far as the future publishing plans of the GJEE are concerned, an invitation to contribute to a Special Edition of the GJEE, tentatively titled *The UICEE and its pillars in engineering education*, to be issued as Vol.10, No.1, in order to commemorate the 10<sup>th</sup> anniversary of the foundation of the GJEE, has been sent to about 30 of the most prominent and active members of the UICEE global network of engineering educators, who have so far demonstrated their particularly enthusiastic cooperation with the UICEE.

## Director

## Visits

## UICEE-EHQ

While in Wismar, Germany, in early September 2005, the UICEE Director had the opportunity to talk with Prof. Norbert Grünwald, Rector of the Hochschule Wismar – University of Technology, Business and Design (HSW), a Partner institution of the UICEE and host to the UICEE's European Headquarters (UICEE-EHQ), who is also a Co-Director of the UICEE satellite centre based at the HSW, called the *Gottlob Frege Centre for Engineering Science and Design* (GFC).

Many issues of importance to the UICEE network, as well as the operation and activities of the UICEE-EHQ, were aired and discussed during the meetings.

The picture shows Prof. N. Grünwald and Prof. Z.J. Pudlowski engaged in the discussions in the office of the UICEE-EHQ in Wismar.

## Director Visits Katowice

Katowice in Poland was an important destination in the UICEE Director's itinerary of business trips scheduled for August/September 2005. Katowice, the capital city of the Upper Silesian region, is the powerhouse of Polish industry, and is also famous for its numerous



The photo shows Prof. N. Grünwald (l) and Prof. Z.J. Pudlowski seated at the UICEE-EHQ.



higher education institutions located in this city. So the UICEE Director paid a brief working visit to Katowice on Monday, 29 August 2005.

The UICEE has been able to develop excellent professional and friendly relationships with academics in the Faculty of Transport and the Faculty of Materials Science and Metallurgy, both located in Katowice. The two Faculties are an integral part of Silesian University of Technology (SUT), a Partner institution of the UICEE, which has its home in Gliwice.

This time, Prof. Sylwester Markusik, Vice-Dean for Research of the Faculty of Transport, was the host of the UICEE Director. The discussions of the two academics covered a wide range of topics of common interest, including potential joint activities to be undertaken in the most immediate future. The conduct of joint postgraduate projects was high on the agenda, as was the visit to Australia by a delegation of senior academics, representing the Faculty of Transport, scheduled for December this year.

The picture shows Prof. Sylvester Markusik and Prof. Zenon J. Pudlowski, UICEE Director, engaged in productive and cordial discussions at a meeting in the Faculty of Transport at the SUT.



The photo shows Prof. S. Markusik (l) and the UICEE Director.

new and enhance existing contacts between delegates, as well as members of the UICEE global network.

Tours that are being organised include various tourist attractions in Taiwan, particularly a visit to the current world's tallest building, *Taipei 101*, and the spectacular National Palace Museum.

The call for participation can be found on the UICEE Web site under *Conferences and Meetings*.

## Celebrations in Tomsk

Sixteenth of September 2005 saw a special event at Tomsk Polytechnic University (TPU), Tomsk, Russia, a Partner institution of the UICEE. For the first time, an academic research paper in engineering education written by members of the staff of the TPU received an international award for its excellence. We are referring to the UICEE Diamond Award (First Place) for the best paper presented at the 9<sup>th</sup> *Baltic Region Seminar on Engineering Education*, held in Gdynia, Poland, between 17 and 20 July 2005.

The paper was co-authored by Prof. Alexander I. Chuchalin and Mrs Elena A. Danilova, and was titled *Integrating the Web into ESP teaching at Tomsk Polytechnic University*. This insightful paper covers a new and exciting project undertaken by Mrs Danilova regarding English for Specific Purposes (ESP) under the supervision of Prof. A.I. Chuchalin, Vice-Rector for Strategic Management at the

TPU. It should be pointed out that the paper was selected by Seminar participants in a popular vote to identify those papers presented at the Seminar that were considered to have offered the greatest contribution to the field of engineering and technology education.

It was for these reasons that the Rector of the TPU, Prof. Yuri P. Pokholkov, decided to present the best paper certificates, issued by the UICEE, to the authors at a special ceremony

## Conference in Changhua

Taiwan provides an ideal and beautiful venue for the 2<sup>nd</sup> *North-East Asia Conference on Engineering and Technology Education*. The Conference is set to be held at the National Changhua University of Education (NCUE), Changhua, a Partner institution of the UICEE, between 11 and 15 December 2005.

The Conference is being organised by Prof. David W.S. Tai, Dean of the College of Technology at the NCUE, and his highly experienced team. It is believed that this Conference should facilitate



The photo shows Prof. Y.P. Pokholkov (r) handing the certificate to Mrs E.A. Danilova (photo by Y.S. Gorchakov).

held at the University. The picture on the previous page shows Prof. Yuri P. Pokholkov presenting Mrs Elena A. Danilova with a certificate confirming the UICEE best paper award.

Staff, students and members of the UICEE wish to congratulate the awardees on this momentous occasion.

## Sabbatical Visitor

Prof. Jürgen Sieck of Fachhochschule für Technik und Wirtschaft (FHTW), Berlin, Germany, is currently spending his three-month-long sabbatical leave at the UICEE. He is presently a professor of computer science at FHTW Berlin and teaches algorithms and data structures, multimedia, virtual reality and telecommunication in traditional classes, as well as in tele-teaching classes.

Prof. Jürgen Sieck received his degree in mathematics in 1981 and his PhD in computer science in 1989 from the Humboldt University, Berlin, Germany. Between 1989 and 1994 he worked in two research institutes, *Zentralinstitut für Kybernetik und Informationsprozesse* and *Gesellschaft zur Förderung angewandter Informatik*.

His research interests are in multimedia, computer graphics, virtual reality and wireless communication. He is currently working on several research projects, such as *FAMULUS - construction of a Wireless-LAN for the facility management and multimedia education*, *eTrain - techniques for the development of interactive multimedia teaching courses* and *IKAROS - information and communication with mobile devices*, to name a few.

## Visit by Chinese Delegation

A delegation of senior members of the Management Team of the East China University of Science and Technology (ECUST), based in Shanghai, People's Republic of China, visited the UICEE on Tuesday, 22 November 2005.

The delegation, which was led by Prof. Yulu Ma, Vice-President of the ECUST, included Prof. Yongdi Liu, Dean of the Faculty of Resources and Environmental Engineering, A/Prof. Huifeng Wang, Deputy Dean of the Faculty of Information Science and Technology and Prof. Xiaosong Ye, Director of the International Cooperation and Exchange Office.

It should be mentioned that the ECUST is vigorously pursuing education, research and development activities in engineering and technology fields, and sees the importance of international exchange and collaboration in conducting modern engineering education.

In a cordial atmosphere, both parties briefed each other

on the current status and activities of their respective institutions, and then discussed a multitude of topics of mutual interest that would lead to potential future cooperation and partnership in particular.

Of high priority were such issues as the placement of undergraduate and postgraduate students within the UICEE, as well as the mobility of staff.

It has been decided that the further exchange of ideas and information will be carried out electronically in the near future.

## Farewell to Prof. F-M. Lee

It is with great sadness that we have to inform UICEE members that Prof. Fong-Ming (Franklin) Lee, Dean of the College of Engineering at Chinese Culture University (CCU), Taipei, Taiwan, a Partner institution of the UICEE, passed away in the USA on 25 September 2005.

Prof. Lee received his BS in mechanical engineering from National Taiwan University, MS in metallurgical engineering from NC State University, and, in 1968, he received his PhD in materials science and engineering from Stanford University.

Dr Lee had a long and outstanding career as an engineer and academic, both in the USA and Taiwan, working for such companies as IBM and Litton Industries. For more than 30 years, he devoted himself to electronic connector and interconnection technology, and authored many papers and several patents in this field. In 1993, he founded the Taiwan Electronic Connector Association (TECA), which is now an organisation of more than 80 corporate members.

He also served as a Research Member of the Science and Technology Advisory Group under the Executive Yuan of the Government, and as a Consultant Member for the Industrial Technology Research Institute (ITRI).

Prof. Lee's association with the UICEE went back to 1999, and culminated in a partnership between the UICEE and Chinese Culture University, signed in November 2002. Dr Lee contributed several papers to UICEE-run conferences and UICEE journal publications. For his exceptional achievements in the process of globalisation of engineering education and support of the UICEE, he received the UICEE Silver Badge of Honour in July 2000 at the 2<sup>nd</sup> *Global Congress on Engineering Education*, held in Wismar, Germany. On this occasion, he also won the UICEE Best Paper Diamond Award (First Place) for his keynote address on cultural differences and unity in engineering education.

Staff, students and associates of the UICEE wish to pass our sincere condolences to his wife Martha, family, friends and staff at the CCU.

Prof. Lee will be remembered for his experience and wisdom, fantastic sense of humour, honesty and friendliness.

Farewell Franklin, we will miss you greatly!



The late Prof. Fong-Ming Lee.