



# UNESCO International Centre for Engineering Education



## Newsletter

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### From the Director

Throughout the ages, academia has always rejected any kind of extremism and has endeavoured to preserve academic tradition, culture and democracy, freedom of speech and expression, and good relationships with the population for which its mission has been to serve. We academics have conscientiously accepted the situation that we are being grossly underpaid and undervalued but continue the mission of being the guardians of academic traditions and the responsibility to uphold human values and cultures – often against changing trends and fashions.

I remember in 1968 when there was leftist propaganda and interference in university politics, which caused enormous upheavals and a lot of disturbances in universities throughout Europe and other continents. However, the academic community basically

rejected this unwelcome interference, thus preserving the deep traditions entrenched in this vocation.

This new Millennium has seen the imposition of far right philosophies and culture on academia, which have had the objective to transform universities into some dubious corporations where there would be reduced democracy, job security, academic debate and freedom of expression. This has been compounded by the unhealthy intervention of university administration and management in

academic affairs and the introduction of culture that is alien to academia. It is within this context that the communities for whom universities have been established to serve have rejected this model of academia by voting in more socially responsive governments.

This happened on 24 November 2007 in Australia where, in a landslide victory, the Australian Labor Party (ALP) took over power to govern Australia. One of the main reasons for this spectacular win by the ALP was the imposition by the previous conservative government of draconian industrial relations laws and other regulations introduced in

academia to curb academic freedom and the life of universities.

A few weeks before the election took place, there was a survey conducted by the National Tertiary Education Union (NTEU) – Victorian branch to canvas and gauge the opinions of university employees about the present status and future views of higher education. Several thousand university employees

responded to this survey. The picture obtained was extremely gloomy with the large majority of academics and non-academics expressing their strong concerns about the direction that Australian universities were heading.

It is in this context that the UICEE is particularly happy that the ALP is going to conduct the so-called *education revolution* and we hope that this reform will reinstate the fundamental rights and objectives of academia, and will put higher education and commercialisation in a proper



The picture shows (l-r) Prof. K. Allia, Prof. S. Barhoumi, Mr M.S. Manaa, Mr S. Mimoum, Prof. H.P. Sjursen and Prof. B. Benzaghoul at the Opening Ceremony of the 2<sup>nd</sup> North African Region Seminar on Engineering Education. (Photo by Kathryn Sjursen)



UICEE Partners



balance at tertiary education institutions. Part of the ALP's reform is to terminate the highly divisive Research Quality Framework (RQF) controversially initiated by the previous government.

We, indeed, wish to congratulate the Hon. Kevin Rudd, Prime Minister-elect of Australia, and his team on their impressive victory, and look forward to their support of our mission and operation, and express our willingness to contribute to this educational reform.

## 2<sup>nd</sup> North African Region Seminar

The 2<sup>nd</sup> North African Region Seminar on Engineering and Technology Education (NARSETE2) was held at the University Mohamed Boudiaf in M'sila, Algeria, from 12-14 November 2007. There was a good number of participants and the debate around the topics was very fruitful. Importantly, a North African community focused on education in the engineering field (such as initial training, continuing education and research) has been identified, and growing networks established and reinforced.

The Seminar was addressed by the President of the Seminar, the Rector of the University Mohamed Boudiaf, Prof. Slimane Barhoumi. Also present was the Wali (Governor) of M'Sila, Mr Mohamed Salah Manaa, who is also the Minister for Fishing and Fishing Resources, and the higher education and scientific research representative, Mr Smain Mimoum. Also attending was Prof. Harold P. Sjursen, who represented and read a message from Prof. Zenon J. Pudlowski, the UICEE Director and a Seminar Chairman. It should be recognised that Prof. Sjursen, who is the Associate Provost at the Polytechnic University, Brooklyn, New York, USA, is the Chairman of the UICEE Academic Advisory Committee. The photo on the next page shows Prof. Sjursen delivering his speech.

The photo on the front page shows the Opening Ceremony of the Seminar featuring Prof. K. Allia, Prof. S. Barhoumi, Mr M.S. Manaa, Mr S. Mimoum, Prof. H.P. Sjursen and Prof. B. Benzaghrou.

Various speakers at the Seminar gave highly informative addresses about the history of engineering in Algeria,

their vision, industry perspectives and new Wilaya trends, plus future requirements regarding engineering and technology education. Interesting discussions also covered current industry requirements of engineering graduates and educational institutions, as well as engineering education and the environment.

Seminar participants came mostly from Algeria, but with regional and international attendance also apparent, with nine countries represented. Teachers and students at the University Mohamed Boudiaf were also encouraged to attend, expanding the reach of the Seminar, as well as the number of participants, yielding impressive attendance figures of over 100. A volume of Seminar Proceedings was produced showcasing 30 Seminar papers.

The University of Science and Technology Houari Boumediene (USTHB), a Partner member of the UICEE since 2002, and specifically the North Africa Centre for Engineering & Technology Education (NACETE), the UICEE satellite centre there, were the sponsors and organisers of this Seminar. This successful initiative was driven by Prof. Khedidja Allia, Director of the NACETE and a longstanding supporter of the UICEE. Of note is that this is the fourth conference on engineering education facilitated by the UICEE in this region.

Another aspect considered and discussed during this Seminar was the role and future activities of the NACETE, including expanding the accessibility of the NACETE, and forging strong links with industry, chambers of commerce and trade, as well as government ministries.

The next NARSETE meeting is likely to be targeted at identifying market demands and actual offers regarding engineering education, as well as the place of entrepreneurial training for engineers.

The picture on this page shows Prof. H.P. Sjursen, Prof. S. Barhoumi, Prof. B. Benzaghrou and Prof. K. Allia standing before the NARSETE2 banner.



The photo shows (l-r) Prof. H.P. Sjursen, Prof. S. Barhoumi, Prof. B. Benzaghrou and Prof. K. Allia at the North African Seminar. (Photo by Kathryn Sjursen)

## GJEE Update

Vol.11, No.2 of the *Global Journal of Engineering Education* (GJEE), which is now in circulation, is a regular issue that features 11 research papers consisting mostly of revised and expanded versions of the

UICEE Best Paper awards presented at the two most recent UICEE international meetings for engineering educators, specifically the 10<sup>th</sup> UICEE Annual Conference on Engineering Education, held in Bangkok, Thailand, and the 11<sup>th</sup> Baltic Region Seminar on Engineering Education staged in Tallinn, Estonia, and elaborated on in the past two Newsletters.

This Issue of the GJEE also features four contributions from staff and students of the UICEE, presenting their research efforts. Three of the articles are revised and expanded versions of award papers, demonstrating the quality of the research carried out in the Centre.

It should be noted that the GJEE is the world's only journal dedicated to engineering education available on the Internet free of charge, along with the *World Transactions on Engineering and Technology Education* (WTE&TE), which is also published by the UICEE. Both journals can be easily accessed via the UICEE Web site.

## World Transactions Update

The next issue of the *World Transactions on Engineering and Technology Education*, that is Vol.6, No.2, has been finalised and distributed. This Issue comprises 37 informative articles from researchers in 17 countries from all over the world.

In completing this sixth Volume of the WTE&TE, we have been impressed by the variety of topics, issues and ideas presented by the authors of the articles included in this Volume. Particular emphasis is being placed on research, development and promotional activities concerning the application of modern technologies in the teaching/learning process. Also, considerable interest is being noted in the problem and project-based methods now more often used in engineering and technology education, which facilitate the student-centred approach to education.

Under the editorial policy of the WTE&TE, we also endeavour to promote a broad scope of articles, tackling such current issues and problems as new and critical developments in science, the application of the Internet for the search, storage and retrieval of information, the impact of new technological advances on societies, the development and cultivation of engineering and technology teachers, plus other areas. This is in order to facilitate the

preparation of high school students for their future ventures with modern technologies and production processes.

We here at the UICEE are proud of the fact that we have been able to establish and maintain the WTE&TE as an important source of information through which recent research, development and promotion of academic achievements can be documented, presented and transmitted to a broad international audience. Hence, the WTE&TE editorial policy is that all submitted articles undergo a strict and rigorous refereeing process in order to ensure the highest possible outcome.

Readers should note that the first five volumes of the WTE&TE are now available for free access on the UICEE Web site. The abstracts of later issues have also been posted. This reinforces the fact that the UICEE is committed to the dissemination of information and research on engineering and technology education by offering refereed published information in this diverse but vital field. Providing free access via the Web to this information

enhances the availability of such education materials for every educator and student, as well as other interested parties, around the world.

UICEE members should be aware of the deadline of 31 March 2008 for the anticipated next issue of the WTE&TE, that is Vol.7, No.1, and are encouraged to take up this opportunity to publish their original material in the *World Transactions*.

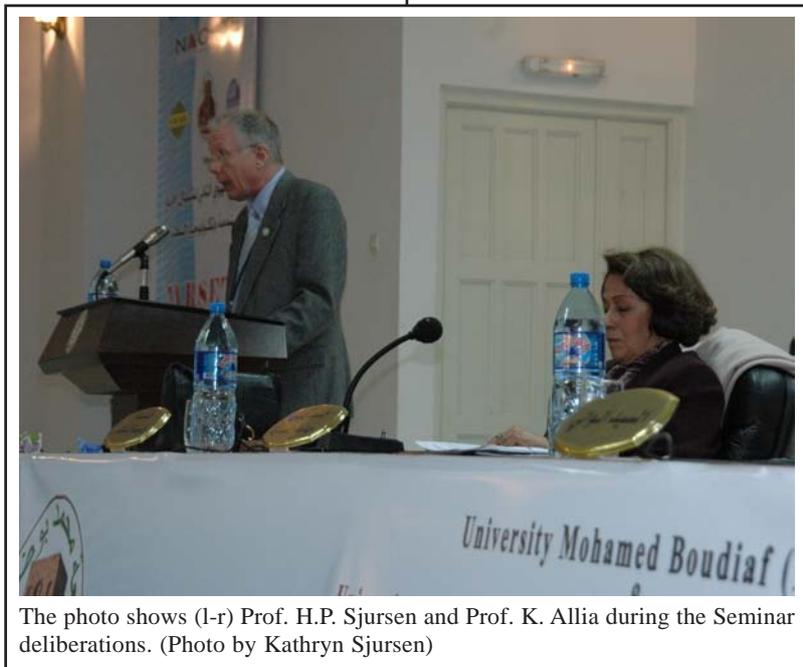
The electronic kit for authors will be sent on request from

the UICEE on: [uicee@eng.monash.edu.au](mailto:uicee@eng.monash.edu.au)

Further details can be found at the UICEE Web site under *World Transactions on Engineering and Technology Education*.

## Upcoming UICEE Annual Conference

We are pleased to announce that the 11<sup>th</sup> UICEE Annual Conference on Engineering Education is scheduled to be held between 14 and 18 April 2008 at the University of Pannonia (UP) in the beautiful city of Veszprém, rich with historic and cultural significance, in western Hungary. Many paper proposals from around the



The photo shows (l-r) Prof. H.P. Sjørusen and Prof. K. Allia during the Seminar deliberations. (Photo by Kathryn Sjørusen)

world have already come in for this landmark event and UICEE Newsletter readers are encouraged to attend and present their original research at the Conference.

The Conference theme of *Opportunities and Challenges in Engineering Education* was chosen to facilitate discussions and personal interaction between academics representing different cultures, who are involved in engineering education. To identify and present best collaborative programmes and projects, as well as examples relevant to the main theme, address issues of concern, and to discuss the status and quality of global engineering education, are also important objectives of the Conference. This will include issues related to the internationalisation of engineering and technology education, as well as opportunities for collaboration and cooperation at the academic and institutional levels.

More details of this upcoming Conference, including significant deadlines, can be found on the UICEE Web site.

## Masters Completion

Since its inception, the UICEE has pursued its multi-disciplinary research and development activities in order to build bridges between engineering and

other disciplines, such as the humanities, sciences, architecture, agriculture, etc, hence exchanging new ideas, concepts and experiences across different fields.

Along this line, we are delighted to inform our readers that Mr Marc J. Riemer, the Administrative Officer at the UICEE and the Assistant Editor of its publications, has formally submitted his Masters of Arts (Research), which has already gone through the formal process of examination and was positively assessed with some excellent feedback.

He was enrolled at the Faculty of Arts via the Monash Asia Institute (MAI) at Monash University, the UICEE host institution. The UICEE Director was the Main Supervisor of this research work with the MAI Director, Prof. Marika A. Vicziany, acting as the Associate Supervisor.

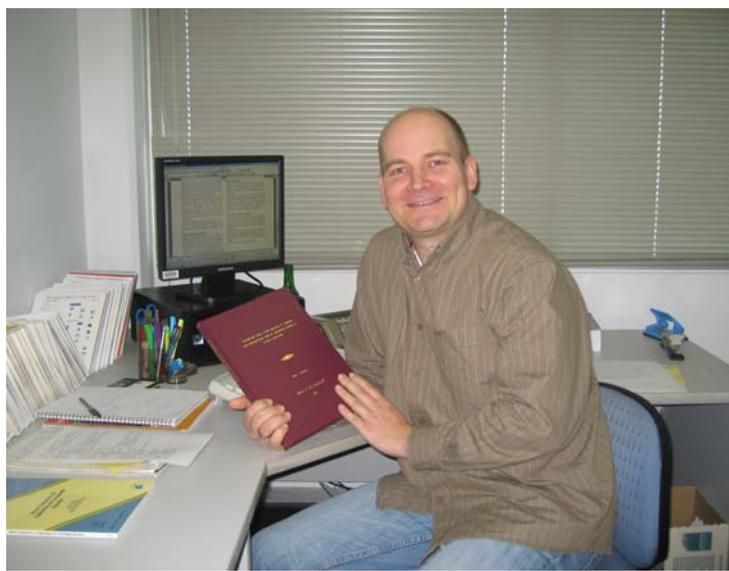
The thesis topic covered international issues in the acquisition of language and communications skills by engineering students in tertiary institutions. This incorporated several subject areas including various aspects of communication, notably intercultural considerations in this respect, plus language regionalisation and hegemony in this current era of globalisation, as well as looking at issues in emotional intelligence and its contribution to

communication skills acquisition.

Mr Riemer was engaged in this postgraduate research on a part-time basis since 2003 and has authored or co-authored over 30 publications in total, comprising numerous articles in UICEE-run international journals and many papers included in UICEE conference proceedings on subject areas related to his thesis topic.

The picture on this page shows Mr Marc Riemer proudly displaying his thesis during the work in his UICEE office settings.

Staff, students and associates of the UICEE wish to congratulate Marc on his achievement and look forward to his future engagement in humanising engineering education.



The photo shows Mr Marc J. Riemer proudly presenting his Masters thesis in his UICEE office.

## DEng hc for UICEE Director

We are delighted to inform our readers that the UICEE Director, Prof. Zenon J. Pudlowski, has been awarded an Honorary Doctorate in Engineering (Hon DEng) in recognition of his outstanding contribution to international engineering education by Kingston University,

London, England, United Kingdom.

This is the third honorary doctorate awarded to the UICEE Director; with the first being Honorary Doctor (Dr hc) by Donetsk National Technical University, Donetsk, Ukraine, in 1996, followed by Honorary Doctor of Technology (DTech hc) from Glasgow Caledonian University in Glasgow, Scotland, UK, received in 1998.

The presentation of this highly regarded award will take place during the Graduation Ceremony of the ninth cohort of postgraduate students, graduating with the awards of Master of Science, scheduled for Saturday, 23 February 2008, at the Technological Education Institute of Piraeus (TEI-Piraeus) in Athens, Greece.

This Master Degree programme is offered jointly by Kingston University and the TEI-Piraeus in three disciplines, namely: Management in Construction, Structural Design and Construction Management and Advanced Industrial and Manufacturing Systems.

In the case of the TEI-Piraeus, the programme is carried out in the Civil Engineering Department, headed by the Sub-Dean, Prof. Dr George Metaxas, an active member of the UICEE, and Prof. Dr-Ing. Constantinos Stergiou, from the Mechanical Engineering Department.

Those UICEE members and friends of the UICEE, who may wish to participate in this Graduation Ceremony and celebrate this award with the UICEE Director, should contact Prof. G. Metaxas on his e-mail address: gmeta@tee.gr

Staff, students and associates of the UICEE wish to congratulate Prof. Z.J. Pudlowski on this award recognising his hard work in advancing global engineering education and look forward to seeing many of his esteemed colleagues at the Ceremony in Athens.

## Prof. Marshall Retires

Prof. Ian H. Marshall, an active member and close associate of the UICEE, retires at the end of 2007. Prof. Marshall commenced his employment in the Department of Mechanical Engineering at Monash University in 1998, where he has held the rank of full Professor and Chairman of the Department throughout 2007.

In his involvement in international engineering education through the UICEE, Prof. Marshall has held the position of a member of the Editorial Board of the *World Transactions on Engineering and Technology Education* (WTE&TE), contributed several papers to UICEE-organised international conferences, acted as a referee of conference and journal papers, and co-supervised together with the UICEE Director one UICEE PhD and one UICEE Master of Engineering Science (Research) candidate enrolled in the Department of Mechanical Engineering.

Of note is that Prof. Marshall was awarded the UICEE Silver Badge of Honour for his *...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*. This was accorded to him at the 8<sup>th</sup> UICEE Annual Conference on Engineering Education, held in Kingston, Jamaica, in early 2005.

We have been informed that Prof. Marshall intends to return to his beloved Scotland. In wishing him a long, healthy and happy retirement, the UICEE staff, students and associates would like to express their appreciation of the support and cooperation over the last ten or so years and hope that he will retain some contact as he will be missed here at the UICEE very much.

## UICEE Publications for Sale

The UICEE wishes to advise its members that several copies of proceedings of recent UICEE conferences held in 2006 and 2007, all of them dynamic, memorable, inclusive and informative, are still available for sale. These include the 5<sup>th</sup> Global Congress on Engineering Education, the 9<sup>th</sup> and 10<sup>th</sup> UICEE Annual Conferences on Engineering Education, and the 10<sup>th</sup> and 11<sup>th</sup> Baltic

*Region Seminars on Engineering Education*.

The UICEE makes an appeal for members to recommend these recent publications to their libraries for the wider international dissemination of research in engineering education and the greater recognition of this vital field.

Importantly, all papers in UICEE publications are internationally peer-refereed so as to ensure their quality of research and relevance to engineering education, as well as provide excellent future sources of information in diverse areas of engineering education.

## Forum Cancelled

We regret to advise readers that the 5<sup>th</sup> Asia-Pacific Forum on Engineering and Technology Education, intended to be held in Agra, India, in November 2007, had to be cancelled due to the low number of proposals received. This is indeed an unfortunate outcome as there are so many civil engineering sites and developments in engineering in India, as well as opportunities for international collaboration and the exchange of ideas.

Nevertheless, the UICEE will continue to provide opportunities for engineering and technology educators in the Asia-Pacific Region to present their research work and activities so that they can interact with likeminded educators from the region and beyond at international conferences in an atmosphere that facilitates the exchange of ideas, discussion and collaboration.

## 2007 Annual Report

The 2007 Annual Report of the UICEE will soon be available on the Centre's Web site. This details the international efforts and achievements of the UICEE for 2007, including those of the Director and UICEE staff and students. It incorporates information on the UICEE conferences staged in 2007, the various publications and research undertaken by UICEE staff and students, plus UICEE awards conferred on outstanding engineering educators.

## OAC Appointment - Correction

In the previous UICEE Newsletter, Vol.14, No.2, we presented an item concerning the Oman Accreditation Council (OAC), in which we incorrectly stated that *the OAC is being chaired by His Excellency Dr Hamed Al-Dhahab, Minister for Higher Education in the Sultanate of Oman*.

The correct statement should be as follows: the OAC is being chaired by Dr Hamed Al-Dhahab, with HE Dr Rawya Saud Al-Busaidia, Minister for Higher Education in the Sultanate of Oman, being a member of the OAC Board.

We wish to apologise for this oversight.

## Engineering Education in Africa

Since being established, the UICEE has recognised the importance of the global advancement of engineering education around the world that is not limited to particular regions determined by the level of economic and social development.

UNESCO is especially concerned about Africa and the development of this increasingly important region, where the population experiences particular hardships due to prevailing regional conflicts, environmental degradation, lack of food and clean water, and more importantly, foreign political and corporate interference.

Since the involvement of the UICEE Director in UNESCO activities going back to the beginning of the 1990s, Prof. Pudlowski has made several efforts to assist African nations in their endeavours to establish an African body to cater for regional needs in engineering and technology education.

In line with this continuing conviction, the UICEE Director has been asked to be a member of the International Advisory Committee for the 4<sup>th</sup> African Regional Conference on Engineering Education, to be held in Dar es Salaam, Tanzania, between 22 and 24 April 2008. He is indeed honoured to be a part of this high-ranking team.

This Conference is being organised by the African Engineering Education Association (AEEA) and has the theme of *Capacity Building in Engineering Education for Sustainable Development*. Apart from this main theme, the principal sub-themes of this Conference will address *Issues in Engineering and Technology Education*, *Regional and International Collaboration in Engineering and Technology Education*, and *Academia-Industry Collaboration in Engineering Education*.

The UICEE would definitely encourage its members to consider participating in this important meeting and

assisting African academic colleagues in their efforts to advance the cause of engineering and technology education. Interested colleagues should contact the Conference organisers by e-mail on [principalcoet@udsm.ac.tz](mailto:principalcoet@udsm.ac.tz)

## Visitor from Wismar

Prof. Norbert Grünwald, the Rector of Hochschule Wismar – University of Technology, Business and Design (HSW), a longstanding Partner institution of the UICEE based in Wismar, Germany, visited the UICEE on 27 November 2007. In a cordial conversation, Prof. Grünwald and the UICEE Director discussed various issues of importance relating to engineering education and international collaborative ventures. High on the agenda was also the issue of new joint developments in engineering and technology education, which would be sponsored by agencies within the European Union (EU), including such projects

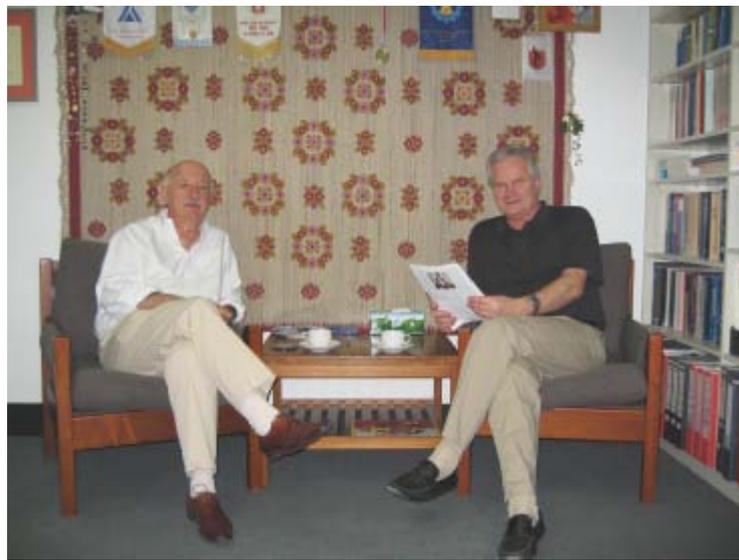
as educational research, conferences and publications to facilitate better teaching/learning strategies and methodologies.

The HSW has been recently extremely active in linking engineering with business activities, and promoting educational developments across these two disciplines. It should be pointed out that next year the HSW will celebrate 100 years of engineering education in Wismar. The celebration will start on 9 May 2008 with the so-called

*Foundation Day*, when the ceremony of the University Act will take place.

During the following six months, the University will showcase its best academic practice and collaboration with the local community, including local industry. Also, a range of cultural events is planned to take place during this period.

The picture shows Prof. N. Grünwald and the UICEE Director, Prof. Z.J. Pudlowski, engaged in conversations concerning the collaborative activities achieved so far and formulating further ventures.



The photo shows (l-r) Prof. Z.J. Pudlowski and Prof. N. Grünwald.